MALAWI GOVERNMENT

The Agriculture Sector Wide Approach (ASWAp)

Malawi's prioritised and harmonised Agricultural Development Agenda

MINISTRY OF AGRICULTURE AND FOOD SECURITY
REPUBLIC OF MALAWI

3 September 2010

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FOREWORD

Efforts of the Malawi Government (GoM) are currently focussed on wealth creation through various strategies including increasing agricultural productivity. The people's desires are to see increased agricultural productivity in all commodities and service areas by doing things differently, better, and more efficiently than it has been done in the past. The formulation and implementation of the Agriculture Sector Wide Approach (ASWAp) is one of such strategies.

The Government of Malawi agreed with its Development partners to formulate the Agriculture Sector Wide Approach (ASWAp) aimed at increasing agricultural productivity, contributing to 6% growth annually in the agricultural sector, improving food security, diversifying food production to improve nutrition at household level, and increasing agricultural incomes of the rural people. The ASWAp is, therefore, a priority investment programme in the agricultural sector and is based on the priority agricultural elements of the Malawi Growth and Development Strategy (MGDS). It is also consistent with the Comprehensive African Agricultural Development Programme (CAADP) under the umbrella of the New Partnership for Africa's Development (NEPAD).

The ASWAp has been formulated based on the principles that it:

- is result oriented and supports priority programmes in the agricultural sector. It is spearheaded by the government through the Ministry of Agriculture and Food Security;
- encourages steady and consistent harmonization and alignment of government and donor financial support;
- encourages the involvement of private sector, farmers organizations and civil society in its implementation
- is a single comprehensive programme and budget framework;
- has a formalized process for donor coordination and harmonization of management systems and procedures;
- supports capacity building of both public and private sector institutions and systems;
- allows increased control of resources by the beneficiaries; and
- is linked to the MGDS and CAADP agricultural strategies.

The ASWAp has three focus areas and their associated components, two key support services and mainstreaming of cross cutting issues as follows:

> *Focus Areas*: a) Food security and Risk management, b) Agri-business and market development and c) Sustainable land and water management.
>
> *Key-support Services:* a) Technology generation and dissemination and b) Institutional strengthening and capacity building.
>
> *Cross-cutting Issues:* a) HIV and AIDS pandemic and b) Gender disparities.

In order to have significant impact in the agricultural sector, the ASWAp emphasizes the following activities:

- Increasing maize productivity to attain food security, reduce the cost of food to the poor, and build food self-sufficiency at household and national levels;
- Diversifying food production to improve nutrition at household level.
- Managing risks to ensure food stability at national level;
- Promoting agro-processing for value addition and import substitution;
- Developing the domestic market for import substitution;
- Expanding the export market to increase foreign currency earning potential of the country;
- Generating technologies to increase agricultural productivity and to support agricultural diversification;
- Improving extension services and technical services to improve efficiency of production;
- Building capacities of the various public and private institutions and implementers of the ASWAp;
- Promoting good land husbandry practices for soil conservation and improving soil fertility;
- Developing irrigation systems and promoting efficient use of water; and
- Mainstreaming gender, HIV and AIDS in the ASWAp focus areas and key support services.

The ASWAp document is a contribution of multidisciplinary teams of state and non-state actors, together with other local and international experts in the agricultural sector. I know there will be many challenges as we implement the ASWAp. However, there is need for all individuals and institutions in the agricultural sector to play their role i.e. creating an enabling environment, enhancing capacity of all implementing institutions,

making the markets work, providing assets to the poor people such as fertilizer, seeds and livestock to ensure meaningful engagement in farming as a business.

Finally, the government and development partners have to work in a harmonized and consultative manner. As Government we are committed to supporting the process. I therefore appeal to our development partners to allocate adequate resources to the agricultural sector in order for the ASWAp to achieve its objectives. I further appeal to all public and private sector actors in the agricultural sector for their support and commitment in the implementation of the ASWAp in order for the country to achieve its vision.

Let us make poverty, hunger and malnutrition a thing of the past. Let us transform Malawi from an importing and consuming country to a producing and exporting country. This vision can be achieved with commitment by all of us.

God bless you all.

Ngwazi Professor Bingu wa Mutharika
STATE PRESIDENT OF THE REPUBLIC OF MALAWI

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May God bless you all.

Andrew T. Daudi, PhD
SECRETARY FOR AGRICULTURE AND FOOD SECURITY

ACRONYMS

ADMARC	Agricultural Development and Marketing Corporation
ADD	Agricultural Development Division
ARV	Antiretroviral Therapy
ASWAp	Agriculture Sector Wide Approach
AU	African Union
CAADP	Comprehensive African Agriculture Development Programme
CGE model	Computable General Equilibrium model
CoC	Code of Conduct
CTC	Community Therapeutic Centers
DEC	District Executive Committee
DPP	Department of Public Procurement
DFID	Department For International Development
EU	European Union
FAO	Food and Agricultural Organization
GDP	Growth Domestic Product
GoM	Government of Malawi
HIV/AIDS	Human Immune Virus/Acquired Immuno Deficiency Syndrome
IEC	Information, Education and Communication
IFPMIS	Integrated Financial and Planning Management System
MASIP	Malawi Agriculture Sector Investment Programme
MGDS	Malawi Growth and Development Strategy
MDG	Millennium Development Goals
MoAFS	Ministry of Agriculture and Food Security
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
MoF	Ministry of Finance
MoIWD	Ministry of Irrigation and Water Development
MoTID	Ministry of Trade and Industry Development
MoLGRD	Ministry of Local Government and Rural Development
MDPC	Ministry of Economic Planning and Development
MPSRP	Malawi Poverty Reduction Strategy Paper
NAC	National AIDS Commission
NGO	Non-Governmental Organisation
NEPAD	New Partnership for African Development
NRU	Nutrition Rehabilitation Units
NSO	National Statistical Office
OPC	Office of the President and Cabinet
PBA	Programme Based Approach
PIU	Programme Implementation Unit
PER	Public Expenditure Review
PLHA	People living with HIV and AIDS
PPP	Public Private Partnerships
SWAp	Sector Wide Approach
UNDP	United Nations Development Programme

EXECUTIVE SUMMARY

1. INTRODUCTION

The Malawi Government (GOM) agreed with development partners to formulate the Agriculture Sector Wide Approach (ASWAp) as a means for achieving the agricultural growth and poverty reduction goals of the Malawi Growth and Development Strategy (MGDS). The MGDS has targeted agriculture as the driver of economic growth and recognizes that food security is a pre-requisite for economic growth and wealth creation. The ASWAp, therefore, offers a strategy for supporting priority activities in the agricultural sector in order to increase agricultural productivity to make Malawi a hunger free nation, enable people access nutritious foods and increase the contribution of agro-processing to economic growth.

The ASWAp is unique in that it is a program led by the Malawi Government. It also envisages a single comprehensive programme and budget framework; has a formalized process for better donor coordination and harmonization of investment and alignment of funding arrangements between GoM and donors; promotes increased use of local procedures for programme design, implementation, financial management, planning and monitoring.

It is essential to note that the ASWAp is being implemented against a background of various challenges particularly high poverty amongst rural people, food insecurity and malnutrition, low agricultural incomes, limited GoM financial resources, extensive land degradation, underdeveloped irrigation system, rampant deforestation, adverse effects of climate change, low agricultural growth rates (currently at an average of 3% annually), underdeveloped supporting infrastructure (road and telecommunication networks), donor-led programmes, un-harmonized priorities for investment by GoM and donors, un-coordinated funding to projects, un-harmonized systems for programme implementation, low levels of technology utilization, weak research and extension services, low capacities to implement programmes effectively, HIV/AIDS pandemic and finally, gender disparities.

2. PRIORITY FOCUS AREAS AND SERVICES

The ASWAp is a priority investment program that has targeted three focus areas, two key support services and two cross-cutting issues as summarized below.

a) Focus areas
   - i) Food Security and risk management
   - ii) Commercial agriculture, agro-processing and market development
   - iii) Sustainable Agricultural Land and Water management

b) Key support Services
   - i) Technology generation and dissemination
   - ii) Institutional strengthening and capacity building

c) Cross-cutting issues
   i) HIV prevention and AIDS impact mitigation
   ii) Gender equity and empowerment

3. ASWAp STRATEGIES

Various strategies were recommended by stakeholders and only high impact strategies will be employed to achieve the objectives of the ASWAp. The strategies are summarized below by focus area.

a) ***Food Security***: This will be achieved by increasing maize productivity, reducing post-harvest losses, diversifying food production, managing risks associated with food reserves at national level. Malnutrition will be reduced by agricultural diversification that includes legumes, vegetables, fruits, small stock (Goat meat and milk), pigs, rabbits, chicken and guinea fowl meat and eggs, and fish.

b) ***Commercial agriculture, agro-processing and market development*****:** This will entail promoting commercial agriculture production involving smallholder farmers, agricultural diversification, agro-processing for import substitution and value addition, developing the domestic and export markets for inputs and outputs, and finally developing more public private partnerships involving producers, buyers, input dealers, service providers, and policy makers in the value chain.

d) ***Sustainable management of natural resources*****:** The strategy will focus on sustainable land and water utilization. Emphasis will be on conservation farming, afforestation, protection of fragile land and catchment areas, and rehabilitation of degraded agricultural land. Activities on water will focus on water use efficiency and expanding the area under irrigation through the Greenbelt Initiative.

e) ***Key Support Services:***

(i) Research and Extension Services.

ASWAp will improve research services with a focus on result- and market-oriented research on priority technology needs as well as technical and regulatory services needs of the stakeholders complemented with efficient farmer-led extension and training services.

(ii) Capacity building

Efforts under the ASWAp will focus on strengthening public institutions, building capacity in public management systems and improving resource allocation for effective implementation of agricultural programs.

f) ***Cross Cutting issues***

(i) HIV/AIDS pandemic:

The HIV/AIDS issues will be mainstreamed in the ASWAp program with the aim to minimize morbidity and mortality attrition, enhance resilience and household coping mechanisms and also reduce HIV infection risks and vulnerability.

(ii) Gender Disparities:

Gender issues are mainstreamed in the ASWAp document in order to reduce gender disparities and enhance capacity of the youth, women and men to contribute to agricultural productivity.

g) ***Attainment of 6% agricultural growth*.**

Attainment of a minimum of 6 % growth in the agricultural sector will depend on the ASWAp encouraging broad-based agricultural growth supported by at least allocation of 10% of the National budgetary resources to the agricultural sector. Maize and tobacco are the two main commodities that will bring significant additional growth in the agricultural sector resulting from small-scale and large-scale farmers respectively. Further additional growth will come from the following commodities: cotton, sugar, coffee, groundnuts, pulses, vegetables, fruits, spices (chillies and paprika), macadamia, cassava, rice and dairy products. However, the performance of the agricultural sector during the past two years has been impressive with an average growth rate of 11.4% (Annual Economic Report, 2008)

4. IMPLEMENTATION ARRANGEMENTS

Governance: The ASWAp will be implemented by the Malawi Government under the umbrella of the MoAFS through the ASWAp secretariat. The implementation of ASWAp will be governed by the Malawi CAADP Compact to be signed by all participating stakeholders.

Annual Work plans*:* Annual work plans will be prepared by the MoAFS and the implementing agencies up to District Assembly level according to the approved activities. The work plans will show among other things activities, objectives, required inputs, expected outputs, roles and responsibilities of state and non-state actors, and budget estimates.

Monitoring and Evaluation *(M&E):* M & E will be based on annual joint reviews involving all stakeholders under the ASWAp using agreed targets and indicators of performance. Furthermore progress reports will be prepared by the implementing agencies on a regular basis.

Financial Arrangements: The total budget over a four year period for the ASWAp is estimated at US$1.3306 billion or approximately US$332.65 million per annum. The funds will be sourced from both the GOM and Donors.

***Funding Modalities*:** This involves the use of three systems namely pooled funding, earmarked funding and discrete funding. The GOM has indicated its strong preference for the pooled funding modality in the long term. At district level, the ASWAp funds will be disbursed directly from the Treasury to the District Assemblies on monthly or

quarterly basis according to agreed procedures. Effective financial management systems will be put in place and will be characterized by the principles of accountability and transparency at all levels of the implementation process.

5. ROLL-OVER OF THE ASWAp

A small proportion of activities (less than 20%) outlined in the ASWAp are non-traditional to the Ministry and partners e.g. the risk management (weather insurance, village banks, call option contracts) and subsidy on cotton and maize pesticides. The larger proportion constitutes on-going activities being implemented by the Ministry and have been taken on board for continuity purposes. However, targets for such activities are up-scaled in line with the aspirations of the ASWAp.

It should be emphasized that in its present form, the ASWAp framework does not exhaust all activities to be implemented in the sector in the next four years. Some activities are outside the ASWAp but they need to be integrated into the framework in the course of implementation. In this respect, the current budget for the ASWAp is not the entire resource package to be spent by the agricultural sector in the next four years taking cognizance of activities still outside the framework.

For activities that presently address issues outside the ASWAp, the implementing departments and institutions are strongly encouraged to start discussions towards aligning those to the vision and aspirations of the ASWAp. The aspiration of the Ministry is to ensure that all activities in the agricultural sector are fully aligned to the ASWAp and that resources spent outside the framework are considerably minimized or wiped out all together by the end of the ASWAp first phase.

The ASWAp Secretariat will be required to work closely with the Finance Department of the Ministry in monitoring the flow of resources to ASWAp targeted activities and that the Treasury will clearly indicate ASWAp resources in any funding disbursements to the Ministry. For discretely funded priority areas (mainly being implemented through NGOs, Civil Society, Private Sector) the Secretariat will be required to take note of those and monitor progress with the relevant implementers.

CHAPTER ONE

ASWAP BACKGROUND INFORMATION

1.1 INTRODUCTION

Agriculture is the most important sector of the Malawi economy. It employs about 80 per cent of the total workforce, contributes over 80 per cent to foreign exchange earnings, accounts for 39 per cent of gross domestic product (GDP) and contributes significantly to national and household food security. The agricultural sector has two main sub-sectors - the smallholder sub-sector (contributes more than 70 per cent to agricultural GDP), and the estate sub-sector (contributes less than 30 per cent to agricultural GDP) (GoM, 2007). Smallholders cultivate mainly food crops such as maize (the main starchy staple), cassava and sweet potatoes to meet subsistence requirements. Estates focus on high value cash crops for export such as tobacco, tea, sugar, coffee and macadamia. Smallholder farmers cultivate small and fragmented land holdings under customary land tenure with yields lower than in the estate sector.[1]

Since Malawi's independence, development resources, strategies and policies have been heavily biased towards agricultural development. Malawi has benefited from substantial donor programmes over many years but, until very recently, has suffered from chronic food insecurity at both household and national levels. Agricultural exports have remained undiversified, with little value addition. Most Malawians are poor, with 52.4 per cent of the population living below the poverty line (MK44 per person per day). Of those below the poverty line, some 22.4 per cent are barely surviving. Socio-economic indicators illustrate the depth and intractability of poverty. For example, the levels of malnutrition remain high, with 43.2 per cent of under-five children stunted and 22 per cent underweight in 2004 (NSO, 2005). The infant mortality rate and morbidity remain high with 104 deaths per 1,000 live births in 2004/05 and 1984 deaths per 100,000 births in 2004, respectively (NSO, 2006). There is also high prevalence of HIV and AIDS, currently estimated at 12 per cent.

Crop yields have been too low to provide adequate national growth. The growth in per capita agricultural output averaged 1.9 per cent in the 1970s, compared to -2.3 per cent in the 1980s, 5.5 per cent in the 1990s and 0.36 per cent between 2000 and 2005. However, these aggregate figures disguise the fact that growth was narrowly confined to the estate sector and to smallholders with larger landholdings. Furthermore there has been low uptake of improved farm inputs by smallholders and smallholder agriculture remains unprofitable. This is exacerbated by weak links to markets, high transport costs, few and weak farmer organizations, poor quality control and inadequate information on markets and prices. Due to high risks in agricultural production and poor access to credit, investment and re-investment have been poor. Most studies show that the performance of the Malawi economy and the agricultural sector was much better in the first fifteen years of independence, a period that was characterized by active state interventions in markets.

[1] GOM (2001) notes that owing to population pressure, resulting in the fragmentation of land, the national mean land holding size has fallen from 1.53 hectares per household in 1968 to 0.80 hectares per household in 2000.

But the poor have been excluded from many development programmes – leaving a legacy of poverty.

The prevailing poverty is a serious constraint to agricultural growth. The track record of past development programmes has dramatically changed with the introduction of broad-based initiatives which began with the 1998 starter pack programme and has been further developed into the bold Input Subsidy Programme introduced in the 2005/06 season, and refined and expanded in subsequent years. These programmes have explicitly recognised that the dominating factor in holding back adoption of more productive and diversified agricultural technologies is the absence of purchasing power amongst the 52% of Malawians who are classified as poor. Farmers have been crying out for access to the inputs that they need to lift themselves out of poverty. As will be outlined in subsequent sections, there is now incontrovertible evidence to show that where Malawians can get the inputs they so desperately need, their response to production technologies is fast and substantial.

The country's macroeconomic performance has been strong for the past three years due to sound economic policies pursued by the government and good performance in the agricultural sector. Malawi registered a real GDP average growth of 8% and average inflation rate of 10.9% for the years 2005/06 and 2006/07. By 2009, inflation had fallen to 8.4%, and was forecast to fall to 7.8% by 2011. The 2010 growth figure is estimated at 6.5%, and for 2011 at 6.2%.

Building on this success will provide a reliable and cost-effective route out of the chronic food insecurity and dependence on food aid that has held back Malawi's development over the past decade. The Agriculture Sector Wide Approach (ASWAp) will achieve this by harmonising the investment and support programs in agriculture which have the highest potential for contributing to food security and agricultural growth in the next five years. The ASWAp is therefore a prioritised results-oriented framework for implementing the agricultural components of the Malawi Growth and Development Strategy (MGDS), providing Government and donors with a common framework on which to harmonize and gradually align their investments.

The ASWAp identifies key constraints of the agricultural sector and required investments within the context of national and regional strategies, policies and targets set for agricultural development and food security. Within the planning horizon of the ASWAp, the MGDS and the Agricultural Policy Framework provide the national policy context, while the Comprehensive African Agricultural Development Programme (CAADP) provides the regional context of achieving sustainable agricultural growth and development when translated into actions at the national level. The ASWAp identifies five broad areas of focus as priority pillars in achieving sustainable agricultural growth and development. These pillars comprise food security and risk management; commercial agriculture, agri-business and market development; sustainable land and water management; research, technology and dissemination; and institutional development and capacity building. In addition, there are cross-cutting issues that interact with the five pillars of the ASWAp including mainsteaming gender and HIV and AIDS.

The ASWAp will, endeavour to address the challenges posed by the HIV/AIDS pandemic by implementing activities that will reduce high risk behaviour, provide adequate nutrition support services to those taking Anti-retroviral drugs, improve access to drugs to treat opportunistic infections and establish focal points for HIV/AIDS. Furthermore the implementers of the ASWAp will ensure that women and the youth have access to financial markets, participate in decision making processes, are not overburdened with labour and have access to agricultural resources, benefits, and opportunities and that gender focal points are established to address gender issues in all departments of the ministry.

1.2 THE NATIONAL POLICY FRAMEWORK

1.2.1 The Malawi Growth and Development Strategy

The ASWAp operates with the MGDS in the areas of agriculture, food security, irrigation and disaster risk reduction. The MGDS is the government's overarching medium term strategy (2006/07 – 2010/2011) to attain the nation's *Vision 2020*. The main thrust of the MGDS is to create broad-based wealth and reduce poverty through sustainable economic growth and infrastructure development. This is expected to transform the country from being a predominantly importing and consuming economy to a predominantly producing and exporting economy.

The MGDS represents a policy shift from social consumption to sustainable economic growth and infrastructure development and places emphasis on six key priority areas of a) agriculture and food security; b) irrigation and water development; c) transport infrastructure development; d) energy generation and supply; e) integrated rural development; and f) prevention and management of nutrition disorders, and HIV/AIDS. These six key priority areas are expected to accelerate the attainment of the Millennium Development Goals (MDGs) in the areas of health, education, gender, environment, and governance.

The MGDS is expected to rejuvenate the rural economies and transform them into potential engines for economic growth that translate tobroad-based wealth creation throughout the economy. Furthermore, the MGDS also identifies five thematic areas in which progress must be made if the overall strategy is to be successful. These thematic components of the MGDS are sustainable economic growth, social protection, social development, infrastructure development, and improved governance.

The emphasis in agriculture is to increase the contribution of the agricultural sector to economic growth through production of food crops and value added agricultural products for domestic and export markets. The MGDS aims at increasing agricultural productivity and food varieties by; (i) increasing value addition to agricultural products by smallholder farmers and orienting smallholder farmers to greater commercialization; (ii) strengthening the linkages of farmers to markets through infrastructure development; and (iii) enhancing irrigation and water development. Table 1.1 shows the key priority areas and expected outcomes as articulated in the MGDS. It is evident that food production and income generation from agricultural activities are key in achieving food security through own production and/or incomes realized from sales of agricultural outputs. Such

agricultural activities need to ensure that natural resources are used in a sustainable manner.

Table 1: Key Priorities for Agriculture, Food Security and Irrigation in the MGDS

Key Priority Area	*Long and Medium Term Goals*	*Expected Outcome*
Agriculture and Food Security	• Increase agriculture productivity. • No food shortages even in times of disasters (e.g. drought and floods). • Increased exports of food staples. • Increase the contribution of agri-processing to economic growth, move up the value chain in key crops, and increase exportation of agri-processed products. • To open up the linkages to the sea.	• Increased value added to agricultural products by rural farmers and orient smallholder sub-sector to greater commercialization and international competitiveness. • Food is available in sufficient quantities and qualities and supplied through domestic production or imports; • All Malawians have at all times physical and economic access to sufficient nutritious food required for leading a healthy and active life. • Increased contribution of agri-processing to GDP. • An active inland network in local and international shipping that facilitates trade and tourism in a safe manner.
Irrigation and Water Development	• To ensure that water resources are well protected and managed to meet agricultural, domestic and industrial demands.	• Increased agricultural land under irrigation. • Reduced dependence on rain-fed agriculture. • Basic water requirements of every Malawian are met while the country's natural ecosystem is enhanced. • Household access to safe water within 500m.
Integrated rural development	• To promote the growth and development of rural growth centres.	• Broad-based wealth creation amongst all citizens. • Reduced negative consequences of rural-urban migration.

Source: GOM (2006)

1.2.2 The Agricultural Policy Framework and Strategy

In an attempt to harmonize policies, the Government has recently reviewed the various national development strategies, agricultural strategies and agricultural-related legislation and policies and produced a National Agricultural Policy Framework (NAPF). The NAPF is a synthesis and summarizes the objectives of agricultural development, strategies and policies that will be pursued to achieve both stated and commonly perceived agricultural objectives (MoAFS, 2006). The purpose NAPF is to increase agricultural productivity so as to ensure food security and sustainable agricultural growth and development. This is

envisaged to be attained through increased food and cash crop production, horticultural production, livestock production, fisheries production, and agro-forestry production..

1.2.3 Other Sectoral Policies and Issues

There are several other sectoral policies and on-going reforms that will have significant bearing on the achievements of outputs and outcomes of the ASWAp. These issues include HIV and AIDS, gender, the rule of law, macro-economic management, decentralization and Aid harmonization.

HIV/AIDS and Gender: The Ministry of Agriculture and Food Security has developed a gender and HIV/AIDS policy that focuses on gender and HIV/AIDS mainstreaming; economic empowerment; community-based support; food and nutrition security; expanded HIV/AIDS communication; human resources protection and management; workplace support; and HIV/AIDS action research. The policy recognizes that women and the youth are responsible for a significant proportion of work in agriculture and the rural sector.

Decentralization: Through the decentralization programme, some central Government powers, functions and resources have been devolved to Malawians through their local authorities. The progress towards decentralization has however been slow. There remain important unresolved issues including ineffective linkages between decentralization policy and other public policy reforms; persistent power struggles and conflicts of roles between elected members such as Members of Parliament, Councillors and Traditional Authorities; weak institutional capacity, high turn-over of key staff like accountants, economists and other specialists; ineffective participation of the local communities due to lack of information, knowledge and skills; and inadequate financial resources among others.

Macroeconomic Management: Macroeconomic stability in a stable political and economic environment is a prerequisite for sustainable economic growth and wealth creation. In the past few years, there has been substantial progress in macroeconomic management – the results of which are reflected in better use of resources, stable exchange rates, declining inflation and declining interest rates. The current macroeconomic stability through prudent fiscal management and public sector management, transparency and accountability, and reduction in corruption is likely to provide a conducive macroeconomic environment for sustainable agricultural development. It is worth noting that growth of GDP estimated at 2.2% in 2005 has been increasing and is projected to stabilize at 6% by 2011, the average inflation rate dropped from 16.9% in 2005 to 9.8% in 2006 and is projected to stabilize at 5% by 2011. Commercial banks base lending rates have fallen from 25% in 2005 to 13% in 2009. Among others, these are some indicators of good macroeconomic management.

Rule of Law: The creation of a strong legal system that safeguards the interest of both the nation and the individual is a fundamental factor for achieving sustainable economic growth and development. This, among others, is envisaged to create an enabling legal and regulatory framework that provides incentives for economic activities. In the agriculture sector, a strong legal and regulatory framework covering areas such as credit, property

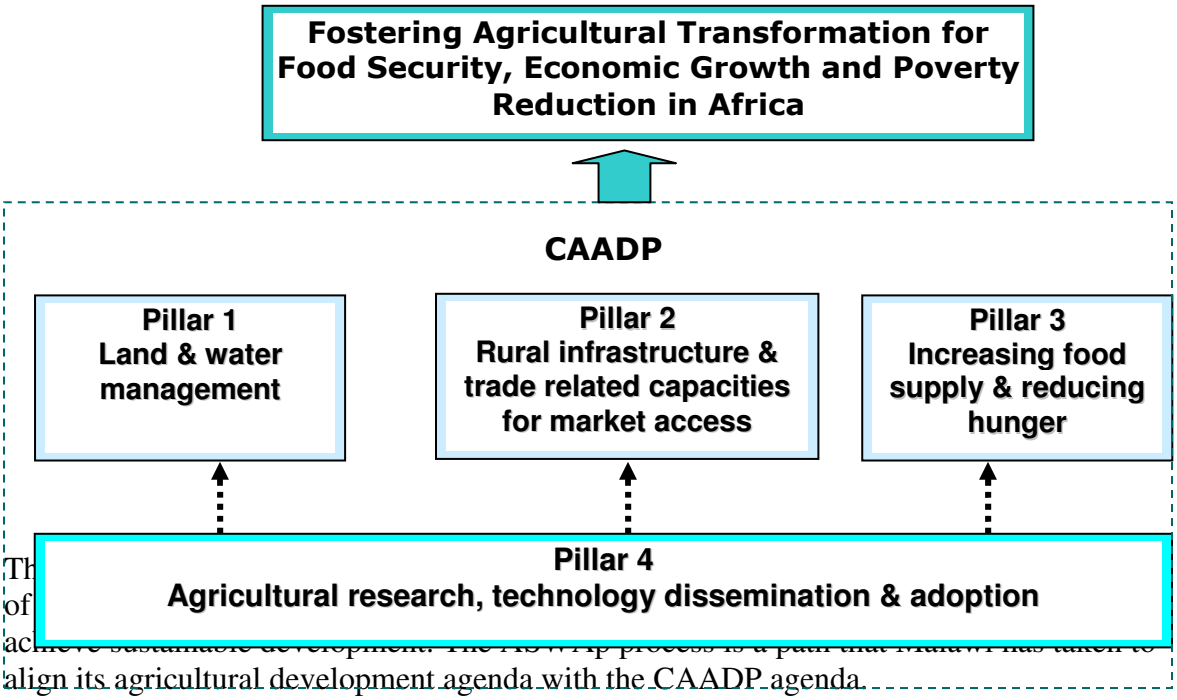
rights, patent rights and enforcement of contract farming and out growers' schemes, cooperatives and public/private partnerships would be instrumental in the development of the sector through private sector involvement.

1.3 THE REGIONAL POLICY FRAMEWORK

Malawi, as a member of several regional economic groupings, has to align its development activities to be consistent with achieving the development targets set at regional level. Under the New Partnership for Africa's Development (NEPAD), Africa's Heads of State and Government have recognized the critical importance of agriculture as the cornerstone of sustained growth and poverty reduction through adoption of the Comprehensive African Agricultural Development Programme (CAADP) - a strategy to put African agriculture on the path of strong and sustained growth. The principles of CAADP include achieving a 6 percent agricultural growth and allocating at least 10 percent of budgetary resources to the agricultural sector. The Malawi ASWAp shares the principal elements and priorities of CAADP and closely mirrors its emphasis on agricultural productivity.

African Heads of State and Government have recognized the importance of research, technology generation and dissemination as prime movers of agricultural development. It is in this context that Pillar 4 of CAADP was formulated. CAADP comprises four mutually reinforcing pillars: (1) sustainable land and water management; (2) improved market access and integration; (3) increased food supplies and reduced hunger; and (4) research, technology generation, dissemination and adoption, with Pillar 4 being a cross-cutting pillar which supports and reinforces the other three pillars (Figure 1.1).

Figure 1: The four pillars of CAADP



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align its agricultural development agenda with the CAADP agenda.

As the Agriculture Sector Wide Approach and the CAADP are rolled out, there will be need for close collaboration in three areas: (i) Mainstreaming NEPAD principles and targets in pursuit of development, poverty alleviation and food security objectives; (ii) Supporting Malawi's thrust to build and strengthen policy and institutional capabilities, and (iii) Supporting Malawi's efforts to build a knowledge management system around agricultural development issues supportive to national and regional development agenda and also embracing peer review mechanism in enhancing collective responsibility and local ownership.

1.4 AID HARMONISATION AND ALIGNMENT

The Development Assistance Strategy (DAS) sets out the policy and strategies for increasing efficiency and effectiveness in the mobilization and utilization of Aid in achieving the development results set out in the MGDS. The DAS seeks to achieve these outcomes through the operationalisation of the norms of the Paris Declaration on Aid Effectiveness. The five norms are: (i) National ownership of the development agenda; (ii) Alignment of Development partners to the National Development Strategy and Government systems; (iii) Harmonization of Development partner's systems and activities; (iv) Managing resources and decision-making for results; and (v) Mutual accountability for development results.

The ASWAp seeks to operationalise the DAS policy framework through the development and enforcement of the Malawi CAADP Compact. In addition, the Government took the lead in the development of this programme which has a strong element of institutional capacity building so that all future sector development programmes are developed and implemented with full Government leadership.
ASWAp seeks to provide a framework to which external partners can align, by reducing the number of individual projects, increasing co-financing of larger projects, ensuring that projects support specific components and sub-components of the ASWAp and that they contribute to key output and outcome indicators identified in the results framework

CHAPTER TWO

PERFORMANCE AND KEY CHALLENGES OF THE AGRICULTURAL SECTOR

2.1 PERFORMANCE OF THE AGRICULTURAL SECTOR

Since independence, there have been several major policy changes in the agricultural sector. The early post-independence policy stance involved significant government intervention in the smallholder agricultural sector in production, extension, technology development and marketing of agricultural produce. However, growth across the agricultural sector in the first two decades of independence was highly uneven, with smallholders largely marginalised. The result was widespread poverty and environmental degradation. By the mid 1980s there was compelling evidence that, despite the well-stocked ADMARC retail maize markets, many Malawian households were too poor to buy this maize - with chronic malnutrition afflicting nearly half of Malawian children.

In response to a deteriorating macroeconomic situation, the Malawi Government introduced a Structural Adjustment Programme (SAPs) in late 1979 with support from the World Bank and International Monetary Fund (IMF). A series of such programmes continued through the 1980s and 1990s supported by successive IMF standby arrangements and World Bank financed Structural Adjustment Loans (SALs). The aim was to redress the policy bias against smallholder agriculture. The production of smallholder exportable cash crops (tobacco, groundnuts and cotton) was encouraged by increasing the producer prices offered by ADMARC. Maize prices were held down as a further incentive to farmers to shift to export crop production. The existing maize fertiliser subsidies, which failed to reach the poor, were targeted for removal. An agricultural adjustment credit approved in 1990 included the partial liberalisation of burley tobacco production to allow smallholders to grow the most lucrative export crop.

Under the SAPs in the 1980s, the policy shifted to withdrawal of government intervention in agriculture and the encouragement of market-led private sector development to generate growth. However, largely due to the low level of purchasing power of most of the Malawi poor (and thus their difficulty in accessing markets), the performance of the sector has not significantly improved. The outcome has been that market reform has not realised its potential, agriculture still produces inadequate food and growth in agricultural output has been low and erratic. Many farming families remain exposed to high risks and vulnerability. In analyzing performance of the agricultural sector we examine trends in agriculture growth, food production and security, livestock production and trade agreements.

The structural adjustment exercises were intended to remove market distortions that encouraged too many resources being devoted to maize production and inhibited smallholders from participating in crop markets. However, price incentives alone were not sufficient to generate the needed supply response. The need to develop complementary but essential policies to address technological, land and credit constraints

faced by smallholder households remained largely ignored. The basic causes of food insecurity and stagnation in Malawi lay in the failure to implement reforms to address basic questions of declining land availability, fragmentation of land holdings, and the decline in soil fertility in the smallholder sector.
But there was an important change in the late 1980s. Outstanding innovative technology development by a team of Malawi and CIMMYT scientists produced improved maize varieties that were fertiliser efficient, stored well under smallholder management, and produced *nsima* of the quality and taste that Malawian families preferred. This work was then followed up by developing location specific fertiliser recommendations that took account of the financial and other constraints of the poor.

Adoption of these materials remained poor. National survey data from the early 1990s showed that less than 60 per cent of smallholder farmers used hybrid or improved maize varieties and less than 35 per cent of farming households used fertilizers. The reason was not a reluctance to adopt improved technologies but the poor profitability of their use. A good indicator of the value of fertilizer to the farmer is the ratio of the price of nitrogen to the price of grain. In Europe, the US, and India, this ratio is in the range of 2-4:1. The Soil Fertility Network for Maize-based Cropping Systems for Southern Africa, drawing on data from wide range of researchers uses a figure of 17:1 for Malawi. At this ratio, unless maize prices rise to levels that would create widespread starvation, fertiliser is simply unaffordable.

If grain prices cannot rise to create a more favourable ratio – and it is patently obvious that the worn cliché of the rural areas subsidising the urban elite does not apply in Malawi as most rural families are net purchasers of maize - there are only three options:

- Increasing fertiliser use efficiency,
- enhancing the fertiliser value chain, and,
- subsidising the cost of fertiliser

These are not mutually exclusive. Malawi has an impressive record in addressing the issue of fertiliser use efficiency. In the late 1980s, two improved maize hybrids (MH17 and MH18) were released to the farming community. These hybrids had a harder, semi-flint grain type with good storage and household processing characteristics. But, as importantly, these hybrids were combined with fertiliser and management recommendations that markedly improved the nitrogen: grain price ratio – but not sufficiently to result in widespread uptake (without subsidy – which led directly to the Starter Pack Programme). Therefore, the ASWAp now focuses on helping improve the implementation and effectiveness of the existing subsidy programme and develop a more efficient value chain for fertiliser and other inputs (including improved seed, pesticides and herbicides).

The first initiative to make these improved and economically viable technologies accessible at a nationwide scale was the 1998/9 Starter Pack which gave all farmers in Malawi enough improved seed and fertiliser to produce a crop sufficient to take them through the 'hungry season'. The impact was immediate; evaluation data showed that the starter packs raised maize production on average by about 125-150kg per household, which was significantly more than was estimated in the project design. Production in the

two years the programme was implemented in its original form, production in each of those two years was approximately 2.5 million tons, 500,000 tons higher than ever before and 67% higher than the twenty-year average. Variations aimed at improving the targeting of the starter pack (the Targeted Input Programme – TIP) were introduced in following years but targeting proved difficult to implement fairly and remained the subject of much controversy. The ending of the TIP in 2003 was followed by three years of severe food shortages, with some 5 million Malawians needing feeding during the 2005 famine.

At this point, the Malawi government reintroduced measures to improve the availability of the core food security technologies of improved maize seed and fertiliser through the Farm Input Subsidy Programme – which continues to this day. Food security at national and household levels has been restored and Malawi also earns additional revenues through the export of maize to neighbouring countries. The subsidy has been extended to include crops other than maize (especially legumes which can, when planted in improved combinations with maize, improve fertiliser use efficiency substantially).

2.1.1 Agricultural Growth

The performance of the agriculture sector in terms of output has not been consistent. It is important to disaggregate data to get a clear perspective on changes in the agriculture sector. Between independence and the late 1970s, the estate sector (farming leasehold land) was the engine of growth, exporting tobacco, tea and sugar. The smallholder sub-sector (farming customary land) focused on food production – especially maize for national food self-sufficiency. The estate sub-sector grew at an average of 17 percent per annum over the period 1964-1977, while the smallholder sub-sector grew at an average rate of 3 percent per annum (well below the rate needed just to maintain food needs) (Conroy et al, 2007).

The bias in favour of estates at the expense of smallholders took many forms: customary land was annexed from the smallholder sub sector; smallholders were legally prevented from growing important high value crops (burley tobacco, tea and sugar were reserved for the estate sub sector); smallholder producers of export crops were paid less than the export parity price by the state marketing board the Agricultural Development and Marketing Corporation (ADMARC) with most of the resulting profits channelled into the development of the estate sub sector. The smallholder sector was relied upon to provide a marketable surplus of the staple food, maize, to feed estate and urban workers. Today, as a result, many smallholders' land holdings are too small to support the families that live on them and some rural households are effectively landless.

Nevertheless, the 1970s were characterized by substantial support by the government to the agricultural sector and consistency in policies with respect to subsidization of agricultural inputs, access to agricultural credit administered by the government through farmers' clubs, availability of produce markets through the state marketing agency (ADMARC), farmers' access to extension services and increased investments in research and development. The consistent weakness was in the failure to create broad-based change across the smallholder sector.

The aggregate agricultural growth during the period 1970-2005 agricultural output was 4.35 per cent per annum, much lower growth rates were registered in the 1980s and in the 2000-2005 period (Table 2). Recent figures show that agricultural output just grew by 2.16 per cent per year between 2000 and 2005, much lower than in the 1970s, when the average annual growth rate was 5.35 per cent[2]. The growth rates in GDP per capita and agricultural GDP per capita were generally negative during the 1980s and early 1990s, with some improvements in the late 1990s. The late 1990s actually registered higher growth rates in GDP per capita and agricultural GDP per capita than during the 1970s. The high growth rate in agricultural GDP in the 1995-1999 period is probably an anomaly and can be partly attributed to a reported (but probably overstated) estimate of the increase in production of root crops for home consumption such as cassava and sweet potatoes.[3]

The smallholder agricultural sector had the worst growth rates, with a decline of 1.8 per cent per annum between 2000 and 2005 – these were the years when financial support for farm inputs was withdrawn. From 2006 – 2009, Malawi has experienced positive agricultural growth (9.23%) largely due to the successful implementation of the Farm Input Subsidy Program and favourable weather patterns in the period.

Table 2: Trends Growth in the Agriculture Sector Output, 1970 - 2009

Indicator	1970-79	1980-84	1985-89	1990-94	1995-99	2000-05	2006-09
Gross Domestic Product	5.9	1	3.03	0.61	6.4	1.55	7.28
Agricultural GDP	5.35	0.36	1.28	2.15	15.06	2.16	3.63
GDP per capita	2.4	-2.08	-0.2	-2.66	3.17	-0.28	13.63
Agricultural GDP per capita	1.9	-2.7	-1.89	-1.19	11.55	0.36	4.99

Source: Chirwa et al; 2006 - 2009 Updated using data from Annual Economic reports, IMF, Resakss

2.1.2 Food Production and Food Security

Malawi is a small land-locked country with difficult transport routes. It has one of the highest population densities in Sub-Saharan Africa, with only 0.23 hectares of land per person living in the rural areas - compared to 0.86 in neighbouring Zambia and 0.40 in Sub Saharan Africa as a whole. It has a unimodal rainy season unlike other densely populated nearby countries such as Uganda and Rwanda - which serves further to constrain agricultural productivity, unless farmers have access to irrigation. These factors combine to make the country particularly vulnerable to food crisis. Achieving national

[2] As noted earlier, the impressive growth rates in the 1970s were achieved through a very narrowly based policy environment. The lower growth rates today reflect the drag inflicted on the economy by the increasing poverty consequent upon those earlier policies.

[3] World Bank (2003) notes the estimates for root crops (cassava and sweet potatoes) tend to be overstated and understate the potential food shortages

food security has, therefore, been one of the objectives of agricultural strategies since independence.

In Malawi, national food security is mainly defined in terms of access to maize, the main staple food. Thus, even if the total food production is above the minimum food requirement, but maize supply is below the minimum food requirement, the nation is deemed to be food insecure. The nation therefore faces a food crisis if the production and supply of maize falls below the minimum required levels. Despite the fact that other food crops such as rice and cassava are alternatives to maize in some parts of the country, maize has remained the main staple food for Malawians[4]. This is not an irrational choice – maize is a potentially highly productive crop which stores well under Malawi smallholder conditions and has considerable resistance to pest (especially bird) damage.

Measured against the minimum maize requirement of 185 kilograms per capita[5], Malawi was, in aggregate terms, self-sufficient in maize production in the 1960s and 1970s (Figure 2) when there were fewer people and larger farms. Even so, the nutrition data show that the distribution of available food was highly uneven, indicating significant household food insecurity. Maize production was heavily dependent on a blanket maize fertiliser subsidy programme. Blanket subsidies of this type were recognised as an inefficient way of helping the poor and were, therefore, targeted early on in Malawi's reform process.

The period of economic reforms which started in the 1980s were accompanied by increased imports of maize to satisfy domestic demand[6]. While, in part, poor weather conditions, low maize productivity and high population growth were factors in causing the growth in maize imports, the major influence as the withdrawal of subsidised fertiliser. There was a further factor at play. The smallholder credit system delivered the subsidised seed and fertiliser to the larger smallholders was implemented with draconian penalties against those who failed to repay their debts.

After the severe 1991-2 drought, there was an entirely reasonable moratorium on credit repayments – it was impractical as well as inequitable to demand credit repayments from families on the edge of survival. But farmers learned fast that credit did not always have to be repaid. A policy of post-drought credit expansion to boost fertilised hybrid maize and restore grain reserves also brought in new and less credit-worthy borrowers. What was intended to be an expanded credit programme in reality became a large free inputs programme for the final round of credit recipients.

While the credit system was collapsing, international fertiliser prices rose sharply – these twin events combined fertiliser drastically to affect national food security. Once

[4] In a study of recipients of the free farm inputs in 1999/00 season, 96.4 percent reported that maize was the staple food for the household, while cassava is a staple only for 2.8 percent and rice for 0.5 percent of the sampled households (NSO, 2000)

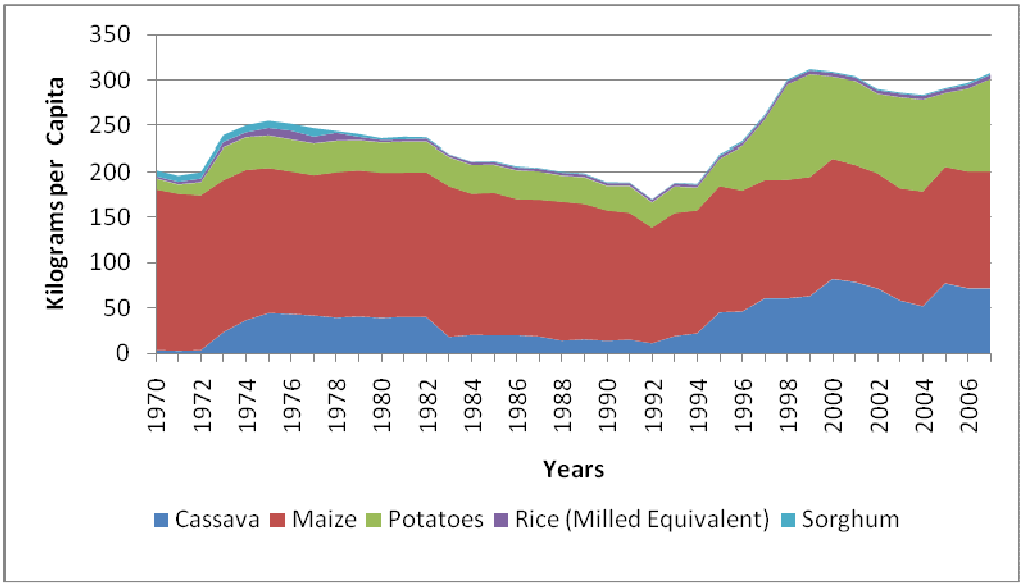
[5] In fact, this excludes losses between harvest and consumption, a more valid figure allowing for such wastage is 220 kilograms.

[6] Other food crops such as rice, cassava, sorghum and potatoes are bridging these shortages in maize production and supply and there were substantial reported increases in cassava production in the late 1990s. However, production statistics for sweet potatoes and cassava appear unreliable with these crops accounting for a small fraction of consumption.

improved maize seed and fertiliser technology were priced beyond the cash means of most smallholders, the outcome was disastrous. The 1996/7 supply of marketed maize (after a good growing season) fell precipitously, the village level purchase price of maize quadrupled, and there was widespread hardship amongst the majority poor section of the population. The liberalisation of markets (agreed generally as essential to Malawi's future growth) was rapidly becoming discredited amongst the public by the high consumer price of maize and by the conspicuous rents evidently being extracted by private traders. The economy was experiencing all the downside effects of liberalisation, but few of its benefits. The first of the recent food crises was looming in 1998.

Other food crops, such as rice, cassava, sorghum and potatoes, can serve to bridge these shortages in maize production and supply and there were substantial reported increases in cassava production in the late 1990s (but, as noted previously, production statistics for sweet potatoes and cassava appear unreliable).

Figure 2: Trends in Main Food Staples per Capita, 1974 – 2007



Source: Computed using FAOSTAT data

The outcomes were that per capita maize production since the early 1990s has fluctuated between 170 and 220 kilograms, with sharp declines in 1992 (67 kilograms) and in 1994 (105 kilograms) (World Bank, 2003). At household level, recent surveys indicate that the average months of food security for rural households from own production in a normal year is between 6 and 7 months. Food supplies in Malawi fluctuated between 1.6 and 1.7 kcal per capita per day from 1996-99 compared to the minimum requirement of 2.2 kcal per capita per day. The increase in food production in 1999 and 2000, and from 2005 to 2009 has been largely attributed to good weather and the implementation of the agricultural safety net programmes, including the free 'starter pack', the targeted input program and the input credit facilities from the Malawi Rural Finance Company and the Government Farm Input Subsidy Program.

There is, therefore, a critical link between food security, and maize inputs availability and the relevance of a policy focus on these key areas in addressing poverty in Malawi. The underlying fact is that unless Malawi farmers have access to improved inputs for both food production and diversification, unacceptably large numbers of the poor are exposed to hunger or worse. It is in recognition of this central fact that the Malawi Government has added a significant emphasis to investment in agriculture as a prerequisite for economic growth and resulted in the successful implementation of the fertilizer subsidy programme. Recent government support towards the smallholder sector through the agricultural input subsidy, combined with good rains, has led to significant increases in maize production from 1,2 million metric tons in 2004/05 to 3.7 million metric tons in 2008/09.

The renewed emphasis on agriculture sector has transformed Malawi from a net importer to a net exporter of maize and allowed the majority of households to attain food security since 2005/06. It has also led to low and stable maize prices – very important in a country where the majority of households are net consumers and where food accounts for over 60 per cent of household income.

Agricultural policy has not had a single focus on maize. Agricultural diversification has been widely sought so as to provide resilient income streams to Malawi farmers. But the obstacles are substantial - there have been several recent highly qualified missions to Malawi tasked with finding opportunities for new market development that are accessible to large numbers of farmers. All these missions have reported failure. Typically the local buying power is too low to support expansion in local consumption and overseas markets are too costly to reach.

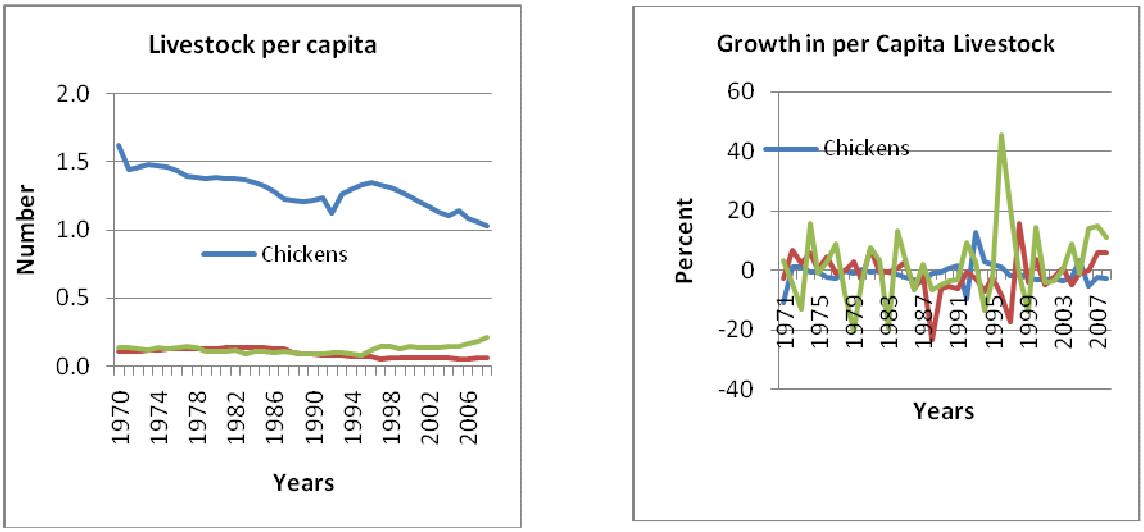
The first step in the agricultural transformation of Malawi, as recognised in government policy, is, therefore, the establishment of broad-based food security at the household level through improving access to essential inputs. The logic is compelling. The average family of 5 people grows a crop yielding around 800 Kilograms per hectare on their land holding of 0.65 hectare. This gives them a harvest of 520 kilograms. Around 75% of calories consumed come from maize. At a calorie demand of 2200 calories/day/person, each individual will need 220 kilograms of harvested grain (or a total for the household of 1100 kilograms). The deficit therefore is 580 kilograms per household. A kilogram of nitrogen fertiliser will create a further 16 kilograms of maize (if improved fertiliser and efficient varieties are used) – thus 36 kilograms of nitrogen will render the family self sufficient in maize.

The data from the starter pack and the Farm Input Subsidy Programme show clearly that farmers know how to use these valuable resources once they have access to them. Once households are reliably self sufficient, then other policies to promote agricultural diversification such as encouraging cash cropping can be introduced and scaled out. The improved input availability created by the Farm Input Subsidy Programme is but the start of the long process of transformation of Malawi's agricultural economy.

2.1.3 Trends in Livestock Production

The trends in levels and growth of livestock per capita show that livestock production has been declining (Figure 2). The numbers of chickens and cattle per capita have been declining, with the average in the last past five years being lower than that recorded in the early 1970s. The per capita number of goats, however, has marginally increased. Trends in the stock of livestock are however variable with gains in the one year being almost wiped out the following year. The poor performance of the livestock sector is partially a reflection of the lack of emphasis in the agricultural strategies and policies towards the sector. Another factor is the poor performance of the cropping sector – as the demands for cropping land increase, so farmers move more into traditional grazing areas and cropping displaces livestock. Thus increases in grazing livestock in Malawi will depend on improved productivity in arable agriculture. Livestock also serve as security assets especially for the poorest households; in times of crisis, animals will be sold to raise cash for food and other needs. The dairy farming sector in Malawi is just being developed, but it faces several capacity constraints including lack of financial resources to purchase cows, poor farm management, outdated machinery in some dairy processing plants, and lack of competition in milk processing.

Figure 3: Livestock Production Trends: 1970 – 2008



Source: Computed using FAOSTAT data

2.1.4 Agricultural Trade Performance

The agricultural sector contributes more than 80 per cent of foreign exchange earnings, with exports dominated by tobacco, tea and sugar (Table 3). Maize is mainly grown to meet the subsistence needs of many farming households, with only 15 per cent of total production being marketed. Tobacco is the major export crop in Malawi accounting for about 71 per cent of total exports in the 1995-99 period from 47.7 per cent in the 1970s,

although its share in export dropped to 55 per cent recently due to declining prices. Tea has been traditionally the second foreign exchange earner, but its significance has been declining from 21.2 per cent in the 1970s to 8.8 per cent in the late 2000s. Sugar has traditionally been the third most important export commodity but is now taking over from tea, thereby accounting for 11.4 per cent of export earnings in the 2000-05 period. With the liberalization of burley tobacco production and marketing, smallholder farmers now account for about 70 per cent of the total national output.

Table 3: Composition of Export Earnings by Main Commodity (percent), 1970 - 2009

Commodity	1970-79	1980-84	1985-89	1990-94	1995-99	2000-05	2006-09
Tobacco	47.7	50.4	57.7	69.9	70.5	54.6	65.06
Tea	21.2	18.2	14.4	9.7	9	8.8	6.27
Sugar	7.1	13.3	10	6.7	7	11.4	6.66
Cotton	2.9	0.7	1.2	1.1	1.7	2.1	2.32
Other (non-agric)	13.4	11.6	8.9	9.5	6.6	19.4	19.7

Source: Chirwa et al, Updated for 2006 – 2009 using data from RBM Financial and Economic Review, Annual Economic reports

New crops such as coffee, pulses (pigeon peas, beans, soy beans), paprika and rice have emerged while groundnuts, cotton, cashew, chillies and macadamia have re-emerged as export crops in recent years. Groundnuts, traditionally one of the smallholder cash crops, used to be one of the major export crops until the late 1980s when the export market collapsed between 1990 and 1999 – due, in large part, to a change in demand for Chalimbana groundnut. Domestic trade in groundnuts is dominated by small private traders who sell to manufacturers. Organized markets are critical for the success of smallholder commercialization and participation in high value crop production (Box 1). More recently, groundnuts cultivation has been promoted and marketed by the National Smallholder Farmers' Association of Malawi (NASFAM), resulting in its re-emergence in export earnings.

Agricultural growth is special because of its multiplier effects on the whole economy. A vibrant agricultural sector frees up foreign exchange, generates capital and labour opportunities so that as incomes rise, consumption increases creating demand and a domestic market for goods and services. Trade has been a key driver of economic growth during the last 50 years. Developing countries, particularly in Asia have used trade to break into new markets and transform their economies. However, in Africa, the last three decades have seen stagnation in African countries and a collapse in their share of world trade from around 6 percent in 1980 to 2 percent in 2002. This has been caused, in part, by the fact that the composition of African exports has remained essentially unchanged (CFA, 2005).

Box 1: Organized Markets for Smallholder Agricultural Development

Groundnut Production and Marketing

Plan Malawi and the International Crops Research Institute for Semi-arid Tropics (ICRISAT) initiated collaborative work in 1999 to promote production of the improved groundnut variety CG7 in all Plan communities. ICRISAT provided technical and other assistance in CG7 groundnut production in Plan communities.

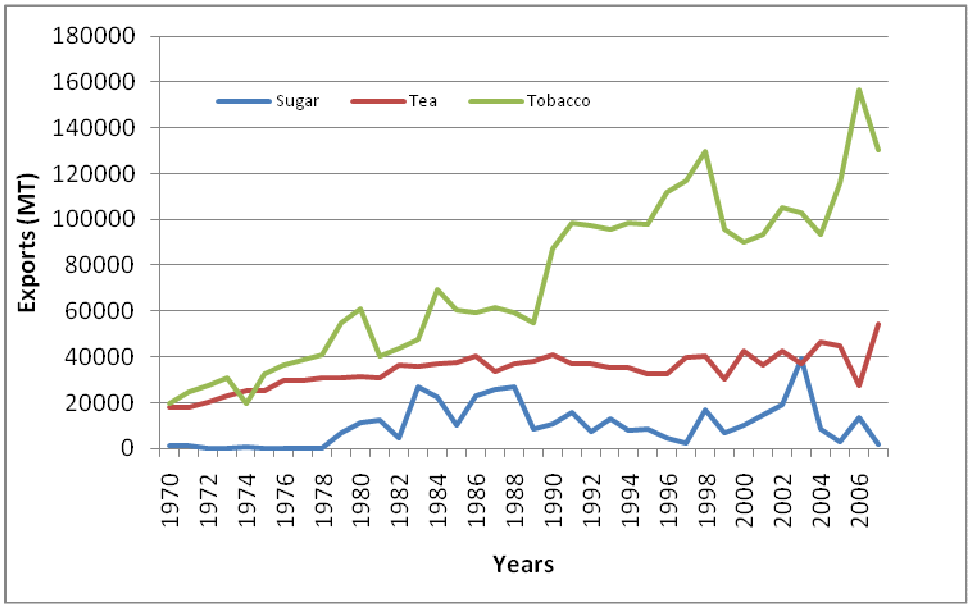
Within four years of the initiation of this work, the Plan communities realised appreciable increase in production, and therefore required an outlet for the surplus. The next phase, therefore, introduced an innovative strategy to community development by linking production to marketing through participatory methods that took full cognisance of roles and responsibilities within families and communities. The production, training, processing and utilisation components of the previous phase were retained in order to provide the necessary skills for new communities.

ICRISAT undertook to assist Plan communities in the identification of markets for groundnut and pigeon pea. A structure for marketing was developed to link the Plan communities to the National Smallholder Farmers Organization (NASFAM) - a key player in groundnut production and marketing in Malawi. ICRISAT undertook to carry out the quality assurance for NASFAM. The price to be paid for the produce was negotiated directly between NASFAM and Plan Malawi, with ICRISAT providing unbiased marketing information to both parties.

Marketing centres were established at already existing Plan unit grain banks. Farmers bring the produce to these centres, ICRISAT technical staff evaluate the quality, and then the farmers are paid on the spot by NASFAM. Dur-ing the 2004 marketing season (June – September), in some communities as much as MK1 million of produce was purchased by NASFAM within a period of ten days. The collaboration demonstrated a practical way of linking improved seed, good agricultural practices, supply chain coordination and a system of grades and standards, to benefit smallholder farmers in Malawi.

Malawi's trade problems are not entirely due to trade barriers imposed by the rich nations. Importantly, it simply does not produce enough goods to trade of the right quality and the right price. Conroy, 2007, reports that for landlocked countries such as Malawi, transport costs can be three quarters of the value of exports. This makes Malawi a high cost producer in world markets, despite the low earnings of its farmers. And, as Sachs (2005) argues, trade alone cannot enable isolated villages in Africa to escape the poverty trap.

Figure 4: Growth in Agricultural Exports, 1971 - 2007



Source: Computed Using FAOSTAT data

2.2 AGRICULTURAL GROWTH AND WELFARE OUTCOMES

2.2.1 Malnutrition Rates

Poverty is an underlying cause of malnutrition and malnourished people are neither healthy nor productive, hence retard economic growth and development of a country. Malnutrition remains a common problem in Malawi as indicated both by anthropometric indices (wasting, underweight and stunting) and missing micronutrients in poor quality diets.

Over the past decade and a half, the frequency of food security hazards in Malawi has increased, whilst the ability of the population to cope with such hazards has declined. Several studies have been conducted since the early 1990s to determine trends in nutritional status. The Integrated Household Survey (IHS) of 2004/05 showed that 52.4% of the population lives below the poverty line with the rural areas being poorer than urban areas.

Table 4 presents the trends in the nutritional status of the under-fives. Three protein-energy malnutrition indicators were used: stunting (low height-for-age) representing chronic malnutrition, wasting (low weight-for-height) representing acute malnutrition and underweight (low weight-for-age) describing the overall measure of malnutrition. The studies have shown that prior to 2005, at least half Malawi under-five children were stunted, and at least a quarter are under weight. Acute malnutrition affected from 5-10% of children. About 30% of school-aged children, 5 to 10 years, were reported as stunted in 2005 (National School Health and Nutrition Baseline Survey, 2006). Children who are

stunted fail to reach their potential physical and mental development even if their nutrition improves later in their life. But recent years, possibly reflecting the increased availability of food at household level, have seen all three indicators drop sharply.

Table 4: Trends in the Under-five Children Malnutrition, 1992 – 2009

Malnutrition (per cent)	1992 (DHS)	1998 (IHS)	2000 (DHS)	2004/05 (IHS)	2008/09 (WMS)
Stunting	48.7	59.1	49	43.2	36
Wasting	5.4	9.3	5.5	4.6	1
Underweight	27.2	29.6	25.4	22	17

Notes: DHS = Demographic & Health Survey, IHS = Integrated Household Survey. WMS = Welfare Monitoring Survey

Micronutrient deficiencies are also endemic with sub-clinical vitamin A deficiency affecting 57% of women of child bearing age, 38% of the men, 60% of pre-school aged children and 38% of the school aged children. (National Micronutrient Survey, 2001). Iodine deficiency is a problem and affects 50% of school aged children (5 to 10 years) (National School Health and Nutrition Baseline Survey, 2006). Furthermore, iodine deficiency is widespread among pregnant women living in iodine deficient areas, thereby increasing the risk of giving birth to children suffering from mental impairment (which can range from mild mental retardation to cretinism characterized by severe brain damage and dwarfism).

Nutritional anemia is another major problem in Malawi affecting 80% of pre-school aged children, 58% of school aged children, 47% of pregnant women, 46% of non-pregnant women and 17% of the men (National School Health and Nutrition Baseline Survey, 2006).

The factors associated with the prevailing high levels of malnutrition include; inadequate dietary intake; low access to food in terms of quantity, quality and diversity due to inadequate food production or low income; poor child feeding and care practices; low education and lack of knowledge in food processing and utilization; poor access to quality health care services and sanitary amenities; diseases and sometimes undesirable cultural beliefs which deny women and children consumption of high nutritive value foods; poor coordination of nutritional programs within and between institutions; and lastly limited capacity to implement nutritional programs.

The current levels of malnutrition therefore pose a challenge to the attainment of MGDS and MDGs goals. To overcome the highlighted challenges, the Malawi government developed a National Nutrition Policy with clearly articulated strategies for different key sectors including agriculture hence the need for inclusion of food and nutrition security strategies in the ASWAp.

2.2.2 Poverty Levels

Poverty studies in Malawi show that the main determinants of poverty are education, occupation, per capita land, type of crops, diversification out of maize, participation in tobacco, participation in public works programs and paid employment opportunities[7]. However, as detailed previously, the dominating factor is the inability to generate cash in order to create an adequate income stream for the household. Earning opportunities off farm are scarce; the local market for horticultural produce is limited by the tiny buying power of the majority of the population; agricultural diversification into high value export crops is elusive unless transport and other value chain blockages are effectively addressed.

The positive link between changes in poverty and agricultural growth in Malawi is not directly apparent from the data. In the period 1998 and 2005, there has been very little change in the poverty levels (Table 5). Using comparable methodologies, the proportion of the poor fell from 54.1 per cent in 1998 to 52.4 per cent in 2005. Some remarkable progress has been achieved between 2006 and 2009, with estimated poverty levels declining from 52.4% in 2004/05 to 39.5% in 2009. Households that are not spending over 60% of their income on food, will be using at least some of it for productive purposes. The creation of relatively low and stable food prices as an outcome of the broad-based agricultural input support policies now in place can be expected to have a much greater poverty alleviation effect than the more narrow policies of the past.

Table 5: Poverty Levels, 1998 – 2009

Poverty Headcount (percent)	1998	2004/05	2008/09
Poor	54.1	52.4	39.5
Ultra-poor	23.6	22.4	15

Sources: GoM (2006); Welfare Monitoring Survey (2009)

2.3 KEY ISSUES IN THE AGRICULTURAL SECTOR

There are several key issues and constraints in the agricultural sector. Agriculture in Malawi, until recently, has been characterized by low and stagnant yields, over dependence on rain-fed farming which increases vulnerability to weather related shocks, low level of irrigation development, and low uptake of improved farm inputs (GOM, 2006). In addition, low profitability of smallholder agriculture is influenced by weak links to markets, high transport costs, few farmer organizations, poor quality control and lack of market information.

2.3.1 Changing Trends in Agricultural Sector Investments

Table 6 and Figure 5 show budget allocation trends in Malawi between 1970 and 2009. It is evident that government expenditure on the agricultural sector declined after the mid 1980s when Malawi started implementing SAPs. Government budget allocation to the

[7] See NEC et al. (2001) and Mukherjee and Benson (2003).

agricultural sector declined from 32.2 per cent of the fiscal budget in the 1970s to 6.1 per cent from 1999 to 2005. The reduction in the share of agricultural budget reflected government's withdrawal of services in the sector under structural adjustment programs. After 1981, government reduced direct intervention in the sector, including reduction in extension staff through a policy of non-replacement of vacant positions, reduced funding to extension training institutions, withdrawal of input subsidies, reduced credit provision, and lower funding of agricultural research and development.

Table 6: Agriculture Sector Government Spending Trends, 1970 – 2009

Indicators	1970-79	1980-84	1985-89	1990-94	1995-99	2000-05	2006-09
Agriculture Share in Budget (%)	32.15	24.83	10.08	11.17	8.98	6.13	15.96
Agriculture Budget ($m)	21.3	43.98	29.05	41.9	36.12	37.48	233.11
Recurrent Budget ($m)	8.39	21.69	18.52	30.56	26.66	22.17	188.58
Development Budget ($m)	12.91	22.29	10.54	11.34	9.46	15.31	44.54
Agriculture Spending/Capita ($)	4.03	6.88	3.85	4.77	3.51	3.21	16.25

Source: Chirwa et al; and Compilations from Various Annual Economic Reports

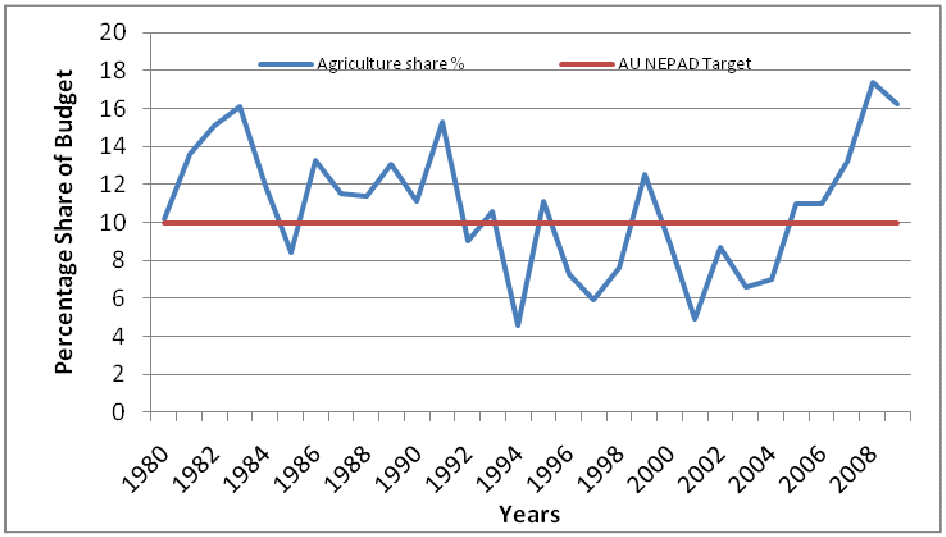
The agriculture budget has two major components – recurrent (which includes all annual items of expenditure such as salaries, but also the costs of the annual fertiliser subsidy) and development (which reflects capital investment). In terms of the allocation of agricultural spending, Figure 5 (b) shows that both recurrent and development expenditure increased in the 1970s, but a substantial decline in development expenditure is noticeable in the late 1990s. Development expenditure on agriculture reached its lowest level between 1993 and 1995. In 2001 and 2004, the withdrawal of donor aid adversely affected the agriculture budget, particularly the development budget. The declining share of agriculture in government budget has led to the erosion of core services to smallholder farmers such as extension services and research and development in agriculture.

However, with the introduction of the agricultural input subsidy programme for the 2005/06 agricultural season, the share of agriculture in the total budget increased. The agricultural input subsidy is about 43 per cent of the agricultural sector budget. In the 2006/07 fiscal budget, the allocation to the agricultural sector was US$121 million, almost double the level in the 2005/06 budget of which US$44.8 million was from the development budget. The share of the agricultural sector rose to 12 per cent of the total 2006/07 national budget and the development expenditure allocation more than doubled and constituted 13 per cent of the development budget. Another major contributor to the increase in the recurrent expenditure in agriculture has been the rebuilding of extension services. Benin et al. (2007) using a CGE model noted that in order to achieve 6 per cent annual agricultural growth, the total budgetary allocation to the agricultural sector needs

to increase by 23 per cent per annum leading to a third of total budgetary resources by 2015.

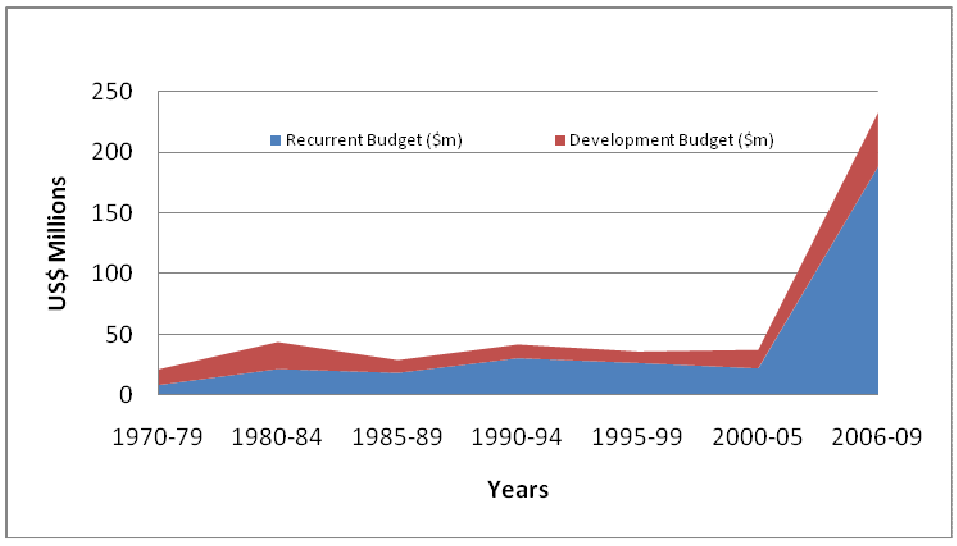
Figure 5: Trends in Agricultural Sector Expenditure 1970 – 2009

Figure 5a: Agriculture share of total government budget



Data Source: Resakss

Figure 5b: Balance between recurrent and development components of the agriculture budget



Sources: MoAFS,

In the 2006/07 budget year, the MoAFS received 14 per cent of the total national budget of MK150 billion. Approximately 70 per cent of the MK21 billion Ministry's budget was allocated to recurrent expenditures, and 30 per cent to development expenditure. The

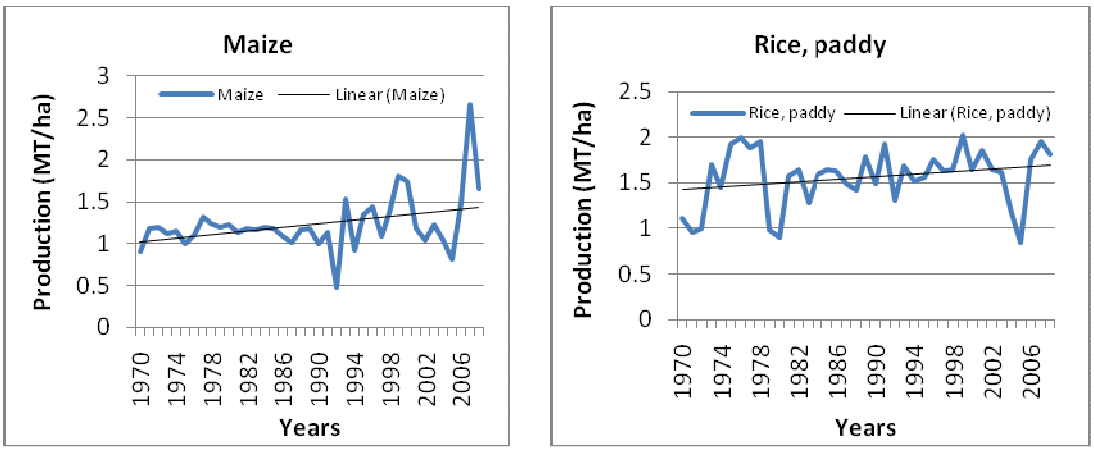
recurrent budget of the MoAFS today largely supports agricultural subsidies with two-thirds of the recurrent expenditure being used to subsidize the distribution of fertilizer and maize seed. Additional recurrent funds are allocated to ADMARC to meet its social marketing objectives, and to the National Food Reserve Agency for the purchase of maize. Only 9 per cent of the Ministry's recurrent funding is allocated to personnel costs. Donor commitments to the MoAFS account for 84 per cent of the MK6.2 billion development expenditures of the Ministry.

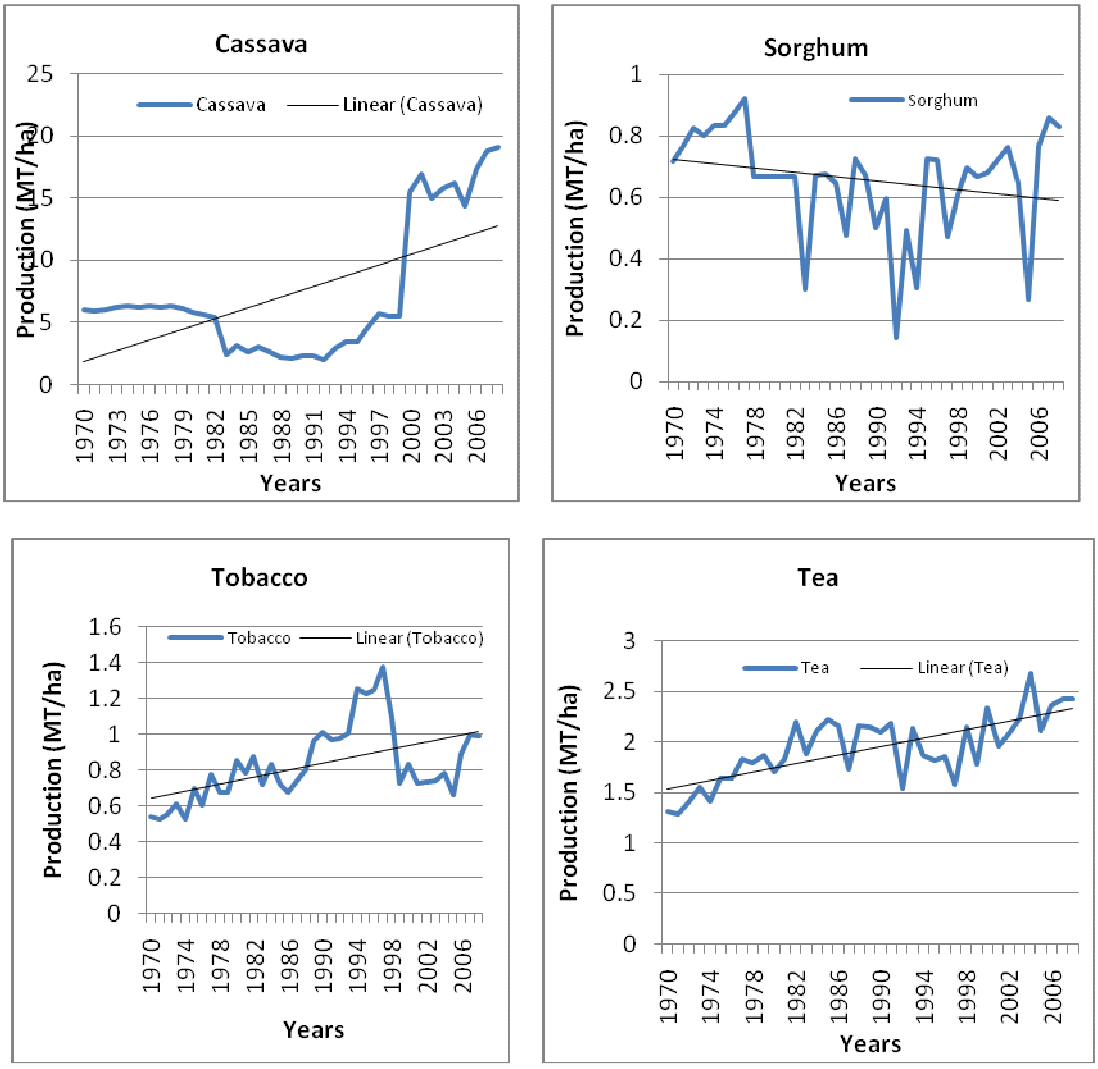
2.3.2 Low Productivity

The poor performance of the agricultural sector in Malawi is partly attributed to the low levels and growth rates in productivity. Figure 6 presents trends in productivity of main agricultural crops in Malawi between 1970 and 2005. Productivity is narrowly defined as output per hectare of land cultivated indexed to base 1970. This shows that productivity in most of the agricultural crops increased but not sufficiently to offset the effects of population growth. Particularly in the case smallholder farmers, the gap between potential yields given the available technologies and the actual yields of most crops in Malawi is substantial. The percent yield gaps range from 38 per cent to 53 per cent for cereals, and 40-75 per cent for legumes.

There have been marginal increases in maize and rice productivity, a substantial increase in cassava productivity (although there are serious reservations on the reliability of the data), and a decline in sorghum productivity. Until the early 1990s, when burley tobacco production was liberalised, tobacco farming registered steady improvements in productivity with a modest positive trend line, although there has been a reversal more recently. The period that shows declining productivity in tobacco is associated with increased involvement of smallholder farmers since the liberalization of the sector in the late 1990s. Tea is the only crop that has witnessed steady improvements in productivity since 1970. There has, however, been declining productivity in the past six years in both maize and rice production. In fact most of the crops show negative rates of productivity growth in the 2000-05 period, with the exception of beans and tea. This period includes the famine years of the early 2000s and may not represent a long term reversal of productivity growth.

Figure 6: Productivity Trends in Main Agricultural Crops, 1970 - 2005





Source: Computed from FAOSTAT data

The major contributing factor affecting productivity in the smallholder sector in Malawi, as outlined previously, is the low input use. Inadequate access to agricultural credit, output and input markets, unfavourable weather, small land holding sizes and failures in technology development and transfer further exacerbate to low productivity. Even if farmers attempt to diversify their production, the options open to many are very limited as the needed improved inputs (and the advice to go with them) are not readily available. Profitability based around fixed production recommendations has been eroded as prices for major inputs such as fertilizers and chemicals have increased substantially. Smallholders are further hampered by unfair contract farming arrangements, and by poorly representative and functioning farmer organizations.

There are some useful exceptions. In the tea sector, smallholder farmers are inter-linked with commercial tea estates in an input-market relationship without the problem of side selling[8]. In the coffee sector, smallholder farmers through their cooperative, manage savings and credit scheme that is facilitating access to inputs (Box 2). In sugar, interlinking smallholder farmers with the buyers is facilitated by the availability of a single market for sugarcane. In contrast, with cotton and tobacco, interlinked markets between smallholder farmers and buyers or investors are failing to emerge as farmers can dodge repaying their debts through side selling. Quite naturally, market buyers are unwilling to put up capital for farmers to buy needed inputs if they are unsure of being able to recover the debt.

Box 2: Market-oriented Farmer Organizations Work

One of the success stories of addressing smallholder constraints that has worked in Malawi is the reorganisation of the smallholder coffee sector. Over nine years the five coffee smallholder associations have been transformed into legal organizations as production cooperatives, with a union providing an umbrella organisation. This transformation invested in training smallholder farmers on how to manage coffee farming as a profitable business. The Union is responsible for marketing smallholder coffee and central procurement of inputs needed by the farmers. The cooperatives employ technical advisers that train contact farmers in extension services and other business skills. The Union also has created a Savings and Credit Union as a microfinance program servicing smallholder coffee growers by providing savings facilities and input credit managed by the cooperatives. The Savings and Credit Union had a fund of MK58million comprising 40 percent equity (shares by smallholder growers) and 60 percent capital grant from the European Union. This facility managed by growers themselves has improved access to agricultural credit among smallholder farmers.

Similarly, although there has been an increase in livestock in absolute terms, supply fails to meet demand. The recent trends in cattle and chicken per capita is a declining one, while for goats there is an increasing trend in per capita goat production. The livestock sector experiences problems of lack of capital to invest in herd stock and ineffective control of animal diseases. Fish production in most of Malawi's water bodies has been declining in recent years due to over exploitation, poor pre- and post-harvest handling by communities and poor enforcement of legislation and preservation of fish stocks.

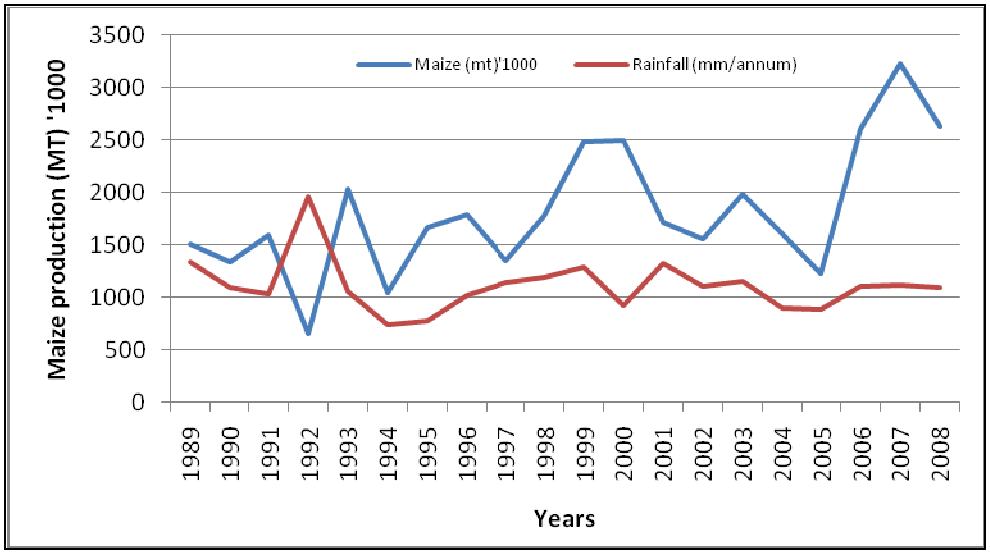
2.3.3 Farming Systems Production levels and Weather Conditions

The agricultural sector is heavily dependent on rain-fed cultivation. Malawi has 3 million hectares of agricultural cultivatable land, but more than 99 per cent of agricultural land remains under rain-fed cultivation. The rain-fed nature of smallholder farming makes agricultural production prone to adverse weather conditions such as drought and floods. The country has experienced a number of climate change-related hazards over the past decades, particularly increased incidence of drought, dry spells, intense rainfall with riverside and flash floods, poor distribution of rainfall, and pest and disease outbreaks. In

[8] Side selling is the practice of conducting marketing arrangements outside the pre-agreed contract.

1970, only 0.06 per cent of cultivatable land was under irrigation, but this has marginally increased to 0.47 per cent in 2005. More recently, government and non-governmental organisations have been promoting irrigated cropping during the rainy and dry season using low cost irrigation equipment such as treadle pumps.

Figure 7: Rainfall and Maize Production, 1970 - 2005

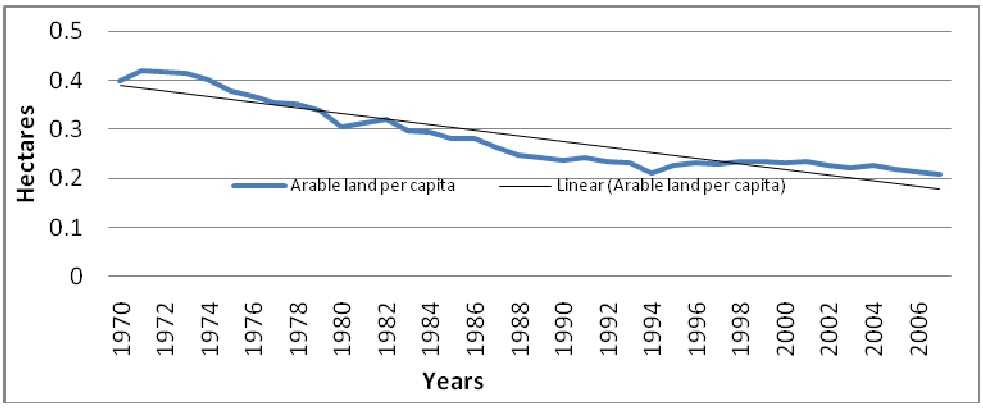


Most of the bumper harvests in maize have been in years that Malawi had good rains. But the relationship between agricultural production and rainfall is a complex one, as too little rain or too much rain both have adverse effects. Malawi has recently experienced adverse weather conditions that have affected production of both food and cash crops.

2.3.4 Land Holding Sizes, Fragmentation and Degradation

Smallholder production is on customary land, on which rights to cultivate and transfer land is conferred by traditional chiefs. With the growing population, customary land has become more fragmented and the land holding sizes have declined. Average land size holding per household in Malawi is 1.2 hectares while the average land per capita is 0.33 hectares (GOM and World Bank, 2006). In addition, per capita land holdings are highly skewed, with the poor holding only 0.23 hectares per capita compared to the non-poor that hold 0.42 hectares per capita. The small land holding sizes are reflected in Figure 8 which shows the trends in per capita cultivatable land in Malawi. Per capita land holdings have been declining since 1970s, partly due to population growth of 3 per cent per annum. The increase in cultivated land may be due to cultivation of marginal and less productive land.

Figure 8: Trends in per capita arable land, 1970 – 2007



Source: Computed based on FAOSTAT data

The methods of cultivation on these small land holdings among smallholder farmers remain traditional and non-mechanised. Several studies in Malawi have shown a positive relationship between technology adoption (e.g. fertilizer use) and land sizes among smallholder farmers. There have been several government efforts promoting the adoption of fertilizers, hybrid varieties and modern methods of farming and the provision of price incentives through progressive market reforms. However, due to partly diminishing land holdings the supply response has remained weak. An associated, but important, factor is the level of poverty. At current market prices for inputs and outputs, adoption of higher productivity technologies is simply impossible for the poor given their low purchasing power.

The absence of widespread adoption of more productive agricultural technologies has resulted in land degradation due to continuous cultivation, soil erosion, deforestation and limited technology adoption on land and water management.

2.3.5 Erosion of Agricultural Services

The liberalization of the agricultural sector witnessed the State withdrawing from direct interventions on input, output and financial markets in favour of the private sector operations. However, product markets and input markets for agricultural growth are still functioning imperfectly. With respect to product markets, most smallholder farmers are poorly organised and lack bargaining power over pricing of agricultural produce. Transaction costs remain high due to low economic activities and low traded volumes of agricultural produce, inputs and agricultural finance. In the input market, access to agricultural finance is limited among smallholder farmers, particularly since the collapse of the smallholder credit scheme within the coordinated structure of ADMARC. Commercial banks and microfinance institutions consider lending to the agricultural sector as a risky investment; preferring to lend to non-farm sectors.

There has also been erosion of extension services. The supply-driven system of training of individual farmers that used to work effectively in the 1970s has been undermined by a

growing farming population, collapse of the farmer club system, deaths and retirement of extension workers, inadequate training of new workers and retraining of existing workers and declining resources allocated to the agricultural sector. A recent national survey revealed that only 13 percent of agricultural households got advice from an agricultural adviser on crop and input management (NSO, 2005). The inadequate extension services have implications on the extent to which research and technology developed can be disseminated, adopted and efficiently be used by smallholder farmers.

2.3.6 Limited Value Addition

Smallholder agriculture is associated with lack of value addition in agricultural products. There is very little agro-processing and most smallholder farmers sell raw agricultural produce without adding value. For the main cash crops, such as tobacco, groundnuts and cotton, which are mainly grown by smallholder farmers there is no value addition by smallholder farmers. However, in some cash crops such as cotton, sugar, tea and coffee smallholder farmers are linked to commercial processing facilities and substantial value addition takes place. For example, in the coffee sector, the cooperatives have their own processing facilities and smallholder farmers are producing some of the final products such as Mzuzu coffee that is sold in retail markets both in Malawi and export markets. Mzuzu coffee has achieved a premium price of up to 47 percent which benefit smallholder farmers directly.

2.3.7 Efficiency and Effectiveness of Agricultural Input Subsidies

The experience of government increased support to the smallholder farmers, through for instance the agricultural input subsidy programme in the 2005/06 and 2006/07 seasons, combined with good weather conditions has demonstrated that the country can avoid chronic national food shortages. The price of maize has remained low and stable with limited seasonal and territorial variations, and has potentially improved the real incomes of the poor who would have struggled to purchase maize at high and variable prices. The availability of maize has also resulted in improvements in the wages that the poor receive from piece-work (ICL et al., 2007). The analysis by Benin et al. (2007) demonstrates that the strategy of focusing on improving the productivity of maize and pulses is not only for pro-growth but can also lead to significant poverty reduction. However, improvements in maize productivity will require continued support that ensures access to fertilizer and improved seed by low income smallholder farmers.

Nonetheless, in order to maximize the benefits from the agricultural input subsidy programme, there is need to improve the efficiency of implementation and the use of inputs by smallholder farmers. This, among other issues, entails efficient planning, timeliness in the procurement and delivery of inputs, greater involvement of the private sector, efficiency in targeting of beneficiaries, efficiency in delivery of input supplies to various markets and appropriate use of inputs by smallholder farmers. Addressing these issues will enhance the effectiveness of the agricultural input subsidy programme in increasing maize productivity which will in turn positively contribute to agricultural growth and poverty reduction.

2.4 OVERVIEW OF ON-GOING SECTORAL INVESTMENTS

There are a number of agricultural sector projects funded by various development partners that are being implemented by the MoAFS (Table 7). These projects support the agricultural sector in crop production (improving productivity, irrigation development, expansion of specific crops, diversification of food and cash crops, marketing of agricultural crops and value addition), promotion of livestock (breeding, income generation); provision of technical services in areas of diversification, irrigation development, research and the regulatory environment; and also provision of managerial assistance in areas of information management and fishery management. Most of the projects are concentrated in the promotion of crops grown by smallholder farmers, particularly cash crops such as sugar, cashew nuts, macadamia, cotton, wheat, cassava, sweet potatoes, and horticultural products. Most of the projects are a priority under the ASWAp and will be harmonized and aligned to the ASWAp activities. It is also worth noting that most of the projects will be completed by year 2015 which covers the first phase of the ASWAp. Any new projects after this period will have to be designed in line with the priorities and funding mechanisms of the ASWAp.

Table 7: Current Major Investment in the Agriculture Sector

Sub-sector	Project	Government Contribution (MK)	Donor Contribution	Starting Date	Closing Date
Crop Production	Promotion of Cotton Production and Wheat Development	MK 631,000,000	-	01-Jul-05	31-Dec-10
	Promotion of wheat production				
	Enhancing Food Security in Cassava-Based Farming Systems in Malawi and Zambia				
	Farm Input Subsidy Programme				
Livestock Production	Livestock Specialist Training	MK 33,129,891	-	01-Jul-06	30-Jun-11
	Farmer Artificial Insemination Technician Foster Project			01-Nov-06	30-Nov-11
	Small Stock Development Project	MK 120,000,000	-	01-Jul-06	30-Jun-12
	The Dairy Development Programme	MK 396,000,000	-	01-Jul-06	30-Jun-17
	Strengthening Institutions for the Risk Management of Trans boundary animal Diseases – SADC TAD project	-	USD 20,162,087	01-Jan-08	31-Dec-13
	Animal Health Service Improvement project	MK 528,000,000	-	01-Jul-06	30-Jun-12
	Animal Health Improvement Project	MK 190,509,320	-	01-Jul-06	31-06-11
Technical Services					
	Farm Income Diversification Programme (FIDP)		€16,200,000	18-Aug-05	31-Mar-12
	Irrigation Rural Livelihoods and Agricultural Development (IRLAD)		USD 52,500,000	01-May-06	11-Jun-11
	Improvement of Irrigation Infrastructures within Agricultural Research Stations for Breeder Seed Multiplication and Irrigation Research Programmes	MK 188,150,000	-	01-Jul-07	30-Jun-11
	Malawi Agricultural Regulatory and Advisory Services Improvement	MK 34,892,640	-	01-Sep-06	30-Sep-10
	Up-Scaling Production of Breeder and Basic Seed and Livestock to enhance adoption of improved Agricultural Technology by Smallholder Farmers	MK 230,000,000	-	01-Jul-06	30-Jun-12
	Improving Food Security and Nutrition Policies and Programme Outreach	-	USD 5,510,274	01-Apr-08	31-May-11
	Enhancing Food Security and Developing Sustainable Rural Livelihoods (GCPS/MLW/030/NOR)	-	USD 5,290,276	01-Aug-06	31-Jul-11

	ASWAp Support Project	USD 3,200,000 USD 2,300,000 (beneficiary)	USD 32 million USD 10 Million USD 5.8 Million	2006	2011
	Agriculture Infrastructure Support Programme	USD 2,406,580	USD19.47 million	January 2010	2015
	Agricultural Research and Development Programme		USD 5,300,000	2006	2010
Managerial					
	Support to Ministry of Agriculture and Food Security (MoAFS)		Mk 746,171,734	01-Mar-02	31-Dec-11
	Institutional Strengthening: Support to the Extension Delivery Systems (ISSEDS)	MK 1,580,947,250	-	01-Jul-06	30-Jun-12
	Malawi Agriculture Commodity Exchange (MACE) Project		USD521,786	01-Jan-04	31-Dec-14
	Support to GOM Inputs and Maize Markets Interventions 2007-11	-	USD 44,429,642	01-Oct-07	31-Dec-11
Fisheries	Lake Malawi Artisanal Fisheries Development		UA 9,210,000	01-May-03	31-Dec-10
	Presidential Initiative on Aquaculture Development (PIAD)	MK700,000,000	-	01-Jul-06	30-Jun-11
	Small-Scale Offshore Fisheries Technology Development	-	USD 1,760,000	31-Oct-04	31-Dec-10
	Sustainable Management of Inland Wetlands in Southern Africa: A livelihood and Ecosystems Approach	-	USD 1,455,940	01-Dec-07	31-Dec-11

2.5 AGRICULTURAL INSTITUTIONS, CORE FUNCTIONS AND CAPACITIES

2.5.1 Institutional Arrangements, Roles and Responsibilities

Institutional structures with clear roles, responsibilities, and linkages supported by adequate resources and systems capacities are essential for the delivery of development programmes. Institutional arrangements for implementation of agricultural programmes and delivery of related services involve both state and non-state actors at central and district level. At centre, emphasis has to date been on the formulation and implementation of sector policies, strategies, projects and programmes and this has largely entailed a top-down approach. However, with the advent of decentralization, emphasis has shifted to state and non-state institutions at district level, which now have a greatly increased role in planning and implementation programmes and projects as well as delivery of services.

There are currently various ongoing institutional reforms within the sector that entail changing roles especially between central and district level institutions on one hand and between state and non-state actors, on the other. These include the Core Function Analysis (CFA) Initiative by the MoAFS that aims at defining the roles of state and non-state actors in the planning and delivery of the ministry's remit. In the course of doing so, it will identify which functions the public sector should retain, which could be sub-contracted, and those that should be privatized. Key elements of the analysis include:

- National and local level responsibilities: This involves delineating the responsibilities of the MoAFS at central level (including the Agricultural Development Divisions) from those of the districts. An overarching principle, consistent with decentralisation policy, is that activities should be implemented at, and by, the lowest possible level; and

- Responsibilities outside the public sector: This comprises defining which functions can be implemented by other stakeholders. This may include implementation through sub-contracting and, indeed, one of the challenges is to identify ways to collaborate with the private sector.

At national level, key institutions in the agricultural sector comprise the Ministries of Agriculture and Food Security, Irrigation and Water Development, Trade and Industry, Local Government and Rural Development, Natural Resources, Energy, and Environment; Development Planning and Cooperation, the Office of the President and Cabinet, Department of Nutrition, HIV and AIDS, and Department of Public Procurement. There are however unclear roles and responsibilities, weak implementation arrangements, and other rigidities amongst these stakeholders hence the need to enhance coordination mechanisms so as to maximise synergies and complementarities. The MoAFS therefore plans institutional reform across the sector in response to the results of the core function analysis to ensure improved service delivery mechanism.

Activities in the ASWAp will be implemented by a range of Ministries (including Ministry of Trade and Industry, Ministry of Environment and Natural Resources Management), Local Assemblies, as well as civil society, farmers organizations and private sector enterprises.

2.5.2 Existing Capacities

Both state and non-state actors have in the past made efforts to strengthen institutional and management capacities for implementing agricultural programmes and delivery of services. The efforts have generally contributed to some improvements in implementing various agricultural reforms and initiatives. However, weak institutional and management capacities are still prevalent within the sector and pose significant challenge to the implementation of agricultural programmes.

As will be noted in the following sections, there is an issue of implementation capacity for the ASWAp at many levels. Addressing this is essential to success. Certainly there are capacity constraints but much more can be done to address these by imaginative collaboration. This is entirely achievable with sound, consistent, and enlightened management and mobilization of resources.

(a) MoAFS Capacity

The MoAFS currently has seven technical departments: Department of Crops; Department of Livestock Development and Animal Health; Department of Extension Services; Department of Research; Department of Land Resources and Conservation; Department of Fisheries; and Department of Agricultural Planning Services and Administration and Support Services. In terms of human resources, the MoAFS has a total establishment of 13,408 posts in various skill levels. Table 8 shows the number of established posts by skills and operational levels. The current establishment suggests a top heavy and administratively bloated structure. Each Head Office post supports 5 posts at ADD and district levels. Similarly, in terms of skills, there are low ratios of number of technical personnel to administrative/support personnel. For instance, at Head Office, the ratio of administrative posts to technical is 1:1.05 implying that each technical post is matched by an administrative post. Such a low ratio is also evident at the district level. At ADD level, things are somewhat better with the ratio of administrative to technical staff of 1:3.5.

There are also problems of vacant posts within the MoAFS. For example, at the end of 2009, about 31 per cent of the establishment of the MoAFS was vacant. Most of the vacancies exist at middle and operational levels of the MoAFS structure resulting in significant shortages of operational staff such as extension workers. This has created work over-loads and tremendous strain on existing staff which compromise on the quality of delivery of programmes and services. Some of the factors that have led to staff shortages include bureaucratic bottlenecks in the application of human resource policies, guidelines and procedures coupled with less attractive remuneration packages than those available in the private sector and non-governmental organizations (NGOs). Moreover, high staff turnover and inadequate availability of trained personnel on the labour market have over the years significantly worsened the vacancy situation within the MoAFS and the public sector. In the meantime, information on capacity development needs is often anecdotal and incomplete and requests for capacity building actions remain largely unsystematic resulting in marked deficiencies in key skills within the public sector.

Table 8: Current Establishment in the MoAFS

Grade and Skills	Headquarters	ADD	District	Total
Grade				
Senior	37	13	-	50
Middle	212	291	64	567
Operational	2,139	3,072	7,580	12,791
Total	**2,388**	**3,376**	**7,644**	**13,408**
Skills				
Technical	1,223	2,625	4,215	8,063
Administrative and Support Services	1,165	751	3,329	5,245
Total	**2,388**	**3,376**	**7,644**	**13,408**

Source: MoAFS Human Resources Department

Weak institutional, management and operational capacities within the agriculture sector are further reinforced by inadequate or lack of operational infrastructure and equipment and ineffective policy and technical systems and procedures. Ultimately, these constraints have contributed to weak and inadequate coordination and communication mechanisms among the various actors in the sector.

(b) Non-state Actors

The principal non-state actors are the farmers themselves who are the main beneficiaries of agricultural programmes. The main problem of smallholder farmers is that they are highly unorganised with very few cooperatives and associations in existence. As a result, smallholder farmers tend to have no or very little influence on policy developments and project activities that influence their environment. But, despite poor levels of numeracy and literacy amongst farmers (particularly amongst women as will be noted in a subsequent section on gender issues), Malawi smallholders have shown themselves fast to adopt profitable and attractive technologies when these are available.

Private firms working in agriculture and agribusiness are also key stakeholders, as well as potential beneficiaries. There have been very little linkages between farmers and private firms that provide various services to the agricultural sector. For instance, contract farming exists only in a few sectors and it covers an insignificant proportion of smallholder farmers.

Additionally, there are many strong faith communities and groups (as well as schools) who have significant capacity to play a more substantive role in fostering agricultural change in Malawi. These groups and communities often include local leaders who are influential in advising and guiding grassroots development. Members are often highly motivated and experience elsewhere in the region provides evidence of the potential of

these groups. For example, in Tanzania, an innovative seed multiplication system implemented by ICRISAT in collaboration with schools is making improved seed of 'orphan crops' such as sorghum and millet available widely. Schools benefit from the income from seed sales; children become engaged in agriculturally based income earning activities (and learn that there is more to agriculture than subsistence); and farmers get the improved seed that large scale commercial companies do not produce.

2.5.3 Past and Ongoing Support to Institutional Development and Capacity Building

Despite having substantial government and donor-funded support towards capacity in the agriculture sector, there are still capacity gaps and institutional weaknesses. The problem with most of the support has been lack of coordination and weak linkages between institutional development and capacity building with strategic sector objectives. Some of the on-going programmes that are being implemented include:

- *Public Sector Management Reform Programme*: with the objective of improved development management and this addresses capacity constraints across government, public financial management, conditions of service and work ethics, policy making, and the structure of the civil service.
- *Farm Income Diversification Programme (2010 – 2014)*: within the overall objective of improved rural livelihoods, this includes activities aimed at improved capacity in trade policy.
- *Irrigation, Rural Livelihoods and Agricultural Development Project (2006 – 2011)*: seeks to strengthen institutional capacity for irrigation development and management.
- *Institutional Development Across the Agri-food Sector (IDAF)*: includes development of state and non-state actors in the Agri-food sector.
- *Lake Malawi Artisanal Fisheries Project (2003 – 2008)*: strengthening institutional capacity for management and utilisation of fisheries.
- *The ASWAP-SP (2008-2013)*: whose objective is to support the ASWAp, in particular Focus Area 1, and to strengthen the capacity of MoAFS in view of implementing a SWAp.

2.6 HIV/AIDS AND GENDER ISSUES

2.6.1 Background

The National HIV/AIDS Policy provides technical and administrative guidelines for the design, implementation and management of HIV/AIDS interventions, programmes and activities at all levels of the Malawi society. It offers guidance on critical intervention areas, among them social and economic support for people living with HIV/AIDS (PLWAs); their full integration into the response; provision of care and support for treatment to achieve a better quality of life for all Malawians living with HIV/AIDS; and protection of their human rights and freedoms. The goals of the National HIV/AIDS Policy are: (1) to prevent the further spread of HIV infection; and (2) to mitigate the impact of HIV/AIDS on the socioeconomic status of individuals, families, communities and the nation.

Among the farming communities, especially amongst women, traditional beliefs, customs and practices regarding sex and sexuality are the main constraints to changing attitudes and behaviors (MOAFS, 2003). According to FAO, rural development institutions and activities that result in gatherings such as community day schools, rural weekly markets and trading centers and fish trading are also areas of concern for the spread of HIV infection (MOAFS/FAO, 2001).

Vulnerable populations include women, children, orphans, widows, widowers, young people, the poor, persons engaged in transactional sex (sex in exchange for cash or in-kind benefit), prisoners, mobile populations, persons engaged in same-sex relations and people with disabilities. These people, who are often underprivileged socially, culturally, economically or legally, suffer disproportionately from the economic and social consequences of HIV/AIDS.

2.6.2 Gender, HIV and AIDS and Household Food and Income Security

Institutionally HIV/AIDS is having devastating effects on the agriculture sector. A household can move from relative food security to poverty in a single season. A study in the Central Region of Malawi (Shah et al., 2002) found a significant minority of households suffer from chronic illness and are unable to provide the labour needed for even low productivity subsistence agriculture. What resources, especially cash, the household has are used to pay for health care and funerals - further depressing production and leading to lower levels of household income and nutrition. As food security deteriorates, malnutrition increases . Low crop yields and the burden of medical and funeral expenses forced many of the households affected by chronic illness to sell produce in distress or to borrow from other villagers. Households affected by chronic illness relied more on *ganyu* labour (off-farm casual work), which reduced further productivity on their own farms.

When a women falls sick, her husband is usually able to take care of her garden. The woman is also more likely to leave the household to be cared for by her parents. When a man falls sick, his wife usually remains to care for him or accompanies him to the hospital. Agricultural production plummets as the husband does not work due to illness, and his wife has to devote most of her time to caring for him. Scarce cash is diverted from purchases of fertilisers or seeds to paying for medicines, transport, food, and funerals. Profitable (but typically labour and cash intensive) crops such as tobacco are replaced by low productivity, low input cassava and sweet potatoes. Land may have to be taken out of cultivation altogether as there may not be sufficient labour to prepare and plant it, even to low labour crops. The poorest households may spend up to 60 percent of the agricultural season working off-farm. But the increasing surplus of ganyu labour (reflecting growing desperation in the countryside) is depressing already pitifully low ganyu labour rates further. The spiral of declining food security and poverty is relentlessly downwards.

2.6.3 Gender, HIV and AIDS and Agricultural Research and Extension Services

The MoAFS is the largest provider of agricultural research and extension services to rural farmers in Malawi. The Ministry has reported that the number of staff has been reduced

due to HIV/AIDS and its capacity to provide high quality research and extension services to farmers has been reduced. Other stakeholders that provide agricultural services such as microfinance; agro-input dealers, etc have also been affected. These constraints indirectly contribute to food insecurity at household level. The reduction in numbers of staff and service providers makes it difficult for farmers to access services (MOAFS, 2003). In order to address these constraints, the Ministry is emphasizing on introduction of pluralistic extension services and the promotion of lead farmers.

Support services to agriculture are strongly affected as skilled and experienced staff acquire the disease. AIDS has reduced average life expectancy by about 20 years to around 36 years. The MoAFS reports losing 2275 staff from illness in the period 1990-2006. Both civil society and private firms have lost significant numbers of key professionals. In addition, professional agriculturalists are typically ill equipped with technologies and options for highly labour constrained households, thus making poverty reduction in this important and growing section of the community difficult to achieve.

2.6.4 Other Gender Issues

There is an important link with gender as woman and girls are particularly vulnerable to HIV/AIDS. They are more likely to suffer physical abuse, including sexual abuse, than boys and men. Economically, they generally have lower levels of education and have difficulty in moving away from abusive situations. Women and girls are typically less aware of their human rights and less able to claim these rights. Women, who represent 90% of carers of PLWAs, are also nearly two thirds of the population affected by HIV/AIDS. Carriers of the virus are highly subject to discrimination and gender-based violence.

Women are disadvantaged relative to men in every sphere of activity as they are poorly protected by cultural and legal norms, typically less well educated, and are less numerate and literate than their male contemporaries. Although similar proportions of boys and girls enter primary school, 10% less girls complete the primary curriculum. Over three quarters of the male population is literate (compared to just over half the female population), and overall literacy amongst women is declining significantly.

In the broader agricultural context, gender inequality is widespread. Female headed households are more likely to be food insecure than male headed ones. Access to, and control over, agricultural assets (including land, labour, and cash) is problematic for many women, leaving them with poorer availability of advice, loans, and inputs. Few are active participants in household decision making, and most are overburdened by the daily labour of cultivation, drawing water, cooking, and running the household. Poverty is strongly related to HIV infections. Women often have to work away from home to earn food to feed their families. In this unequal situation, they may be coerced or forced into unsafe sexual activity. Woman, as the main labourers on the farm as well as the major carers, find their work load increasingly impossible if a family member becomes ill. Agricultural productivity declines and the household sinks deeper into poverty. Following the death of a spouse, a widow may lose her access to land and household resources, rendering her destitute and highly vulnerable.

2.6.5 ASWAp Actions on Gender, HIV and AIDS

The implementers of the ASWAp will therefore ensure that women and the youth have access to technologies, information, financial markets, participate in decision making processes, are not overburdened with labour and have access to agricultural resources, benefits, and opportunities and that additional gender focal points are established to address gender issues in all departments of the ministry.

The UN[9] has defined gender mainstreaming as the process of assessing the implications for women and men of any planned action, including legislation, making women and men's concerns and experiences integral dimensions in the design, implementation, monitoring and evaluation of policies and programmes in the political, economic and social spheres so that women and men benefit equally and inequality is not perpetuated. On the other hand, HIV and AIDS mainstreaming has been defined as the incorporation of HIV infection prevention and AIDS impact mitigation interventions into the external and internal development programme functions without changing the core mandate (NAC, 2006).

Although substantial progress has been made in addressing the AIDS pandemic, the key challenges remain those of reducing high risk behaviour, providing adequate nutrition for those taking Anti-retroviral drugs (ARVs), and accessing drugs to treat opportunistic infections. The ASWAp will, therefore, endeavour to address the challenges posed by the HIV/AIDS pandemic by implementing activities that will reduce high risk behaviour, provide adequate nutrition support services to those taking Anti-retroviral drugs, improve access to drugs to treat opportunistic infections.

[9] United Nations Economic and Social Council, 2003: Resolutions

CHAPTER THREE

RATIONALE AND JUSTIFICATION FOR THE ASWAp

3.1 PROGRAMME-BASED APPROACH

A programme based approach (PBA) was agreed in 2006 as a means for implementing priority projects in the agricultural sector and this led to the formulation of the Agriculture Sector Wide Approach (ASWAp). The main features of this approach are: (i) leadership by the host country; (ii) a single comprehensive programme and budget framework; (iii) a formalised process for donor coordination and harmonisation of donor procedures for reporting, budgeting, financial management and procurement; and (iv) increased use of national procedures for programme design, implementation, financial management, planning, monitoring and evaluation.

Following the first agricultural symposium on sector wide approaches and the agricultural policy framework priority setting exercise in 2006 and country wide consultations with stakeholders, it was generally agreed to organize the ASWAp in relation to five broad focus areas called priority pillars. The agreed pillars are as follows: 1) Food security and risk management, 2) commercial agriculture and market development, 3) Sustainable land and water management, 4) Research, technology and dissemination, and 5) Institutional strengthening, capacity building, and crosscutting issues. The ASWAp framework aims at achieving better coordination of existing investments and planning complementary ones.

The intention is that the programme approach will broaden ownership by government over decision-making on policy, strategy and spending; increase coherence between sectoral policies, reduce transaction costs through the use of government procedures; and strengthen national institutions.

Box 4: Lessons learned from Neighbouring Countries

The main lessons learned from neighbouring countries (e.g. Tanzania and Mozambique) which adopted similar programmes and sector-wide approaches during the last decade are: (i) ownership is a key element of the process; (ii) slow institutional reform process and lack of leadership tend to impede adoption, (iii) tensions between sector vertical programme and decentralization especially with regard to planning and financial management complicates implementation; (iv) little involvement of the private sector and civil society constitutes a challenge for a public sector programme when agriculture is mainly a private 'enterprise' activity; (v) the need for an initial focus on financial management, fiduciary aspects, setting up systems, processes, software, procedures and guidelines at the expense of programme implementation at field level; (vi) the needed changes in the Ministry leading a sector wide programme require strong involvement with cross-sectoral activities, such as public service reform, decentralisation, economic planning and public finance management; and (vii) transaction costs do not go down in the short run.

Based on key lessons learned from neighbouring countries (Box 4), the preparation of the programme has included: (i) sector analysis and review of the basic reference documents such as policy framework and implementation strategies for the agricultural sector, using working groups related to key sector pillars; (ii) definition of the ASWAp priority investment framework including objectives, components, results/outcomes/impacts and how these will

be implemented; and (iii) defining new programmes needed to achieve the result framework of the ASWAp while taking into account on-going programmes and projects.

3.2 FEATURES OF THE ASWAP

ASWAp is an innovative priority investment framework that guides the government and its development partners in the implementation of result-oriented priority programs. Led by the Malawi Government, it is a comprehensive priority programme and budget framework, implemented along a formalized process for donor coordination and harmonization. On the basis of a strong political will to use agriculture as the engine for economic growth and poverty reduction, the design and implementation arrangements for the ASWAp have the following features:

- A priority agricultural investment programme under the Ministry of Agriculture and Food Security's leadership.
- The programme is results-oriented and focused on contributing to a minimum of 6 per cent national annual economic growth, sustainable food security and sustainable natural resources management.
- Gradual harmonization and alignment of Government and donor financial support.
- A streamlined programme which will support capacity building initiatives and strengthening of institutions for effective delivery of services.
- Strong partnership arrangements between government and both traditional and new development partners[10], including farmer organizations, civil society and the private sector.
- Increased influence and involvement of beneficiaries.
- Alignment with forthcoming changes in decentralization, strengthened public private partnerships and strengthened coordination between sector line Ministries.
- Sustained and monitored mainstreaming HIV/AIDS and Gender issues.
- Strong linkage to national, regional and international policy frameworks namely MGDS, CAADP and MDG.
- Building on successes of the past

3.2.1 Justification for the 6% Agricultural growth target

Stakeholders agree that Malawi needs substantial increases in its agricultural growth rate if it is to significantly reduce poverty and lay the foundation for any kind of structural transformation that would benefit a large portion of the population. The CAADP, which is a concept of NEPAD, had set the agricultural growth target at 6% for the African continent. All African countries were tasked with finding ways to achieve this target. The ASWAP is therefore using a minimum target of 6% growth in the agricultural sector as recommended by CAADP. However, as noted previously, the agricultural sector in Malawi has been growing at an average rate of above 10% due to the good policies of government (Annual Economic Report, 2009).

In general, the ASWAp will encourage broad-based agricultural growth in order to achieve the 6 per cent annual growth rate as prescribed by MGDS and CAADP with the assumption that it will be supported with an allocation of at least 10 per cent of the national budgetary resources as per the Maputo Declaration. Benin et al (2007) in their analysis of strategic

[10] For example, the private sector has not conventionally been treated as a development partner. In the ASWAp, a clear development role is envisaged for private firms so as to create functioning and equitable markets for both inputs and outputs.

priorities for East and Central Africa noted that milk emerges as the most important commodity sub-sector for growth-inducing investment in agriculture, based on simulated cumulative contributions to overall GDP to 2015. Oilseeds, cassava, fruits and vegetables also rank highly. Viewed together, the staples sub-sector results in the largest GDP gains, followed by livestock products, fruits and vegetables, and oilseeds. The priorities for Malawi match those of the region but need further interpretation and analysis in order to achieve the 6% sector growth.

3.3 THE CGE MODEL PRIORITY OPTIONS FOR MALAWI

An economy-wide Computable General Equilibrium (CGE) model was developed for Malawi to define priority options for investment under the ASWAp using the various commodity scenarios in Table 9 (Benin et al., 2007). The model reveals that the maize-led strategy contributes about 28 per cent and 30 per cent to the CAADP growth and poverty reduction targets, respectively.

Table 9: Agricultural Commodities in the CGE Model

Maize-led	Other Cereals-led	Root crop-led	Pulses-led	Horticulture-led
Maize	Rice Millet Sorghum	Cassava Sweet Potatoes Irish Potatoes	beans, soybeans, pigeon peas Groundnuts	>Fruits (banana, mango, citrus, pineapple) >Vegetables (tomato, onion, garlic, shallot) >Spices (chillies, paprika) >Tree-nuts (macadamia, cashew)
Tobacco-led	Other export crop-led	Livestock-led	Fisheries-led	Forestry-led
Tobacco	Cotton Sugarcane Tea	Poultry cattle, goats, pigs	Fisheries (Capture fisheries & acquaculture)	Forestry

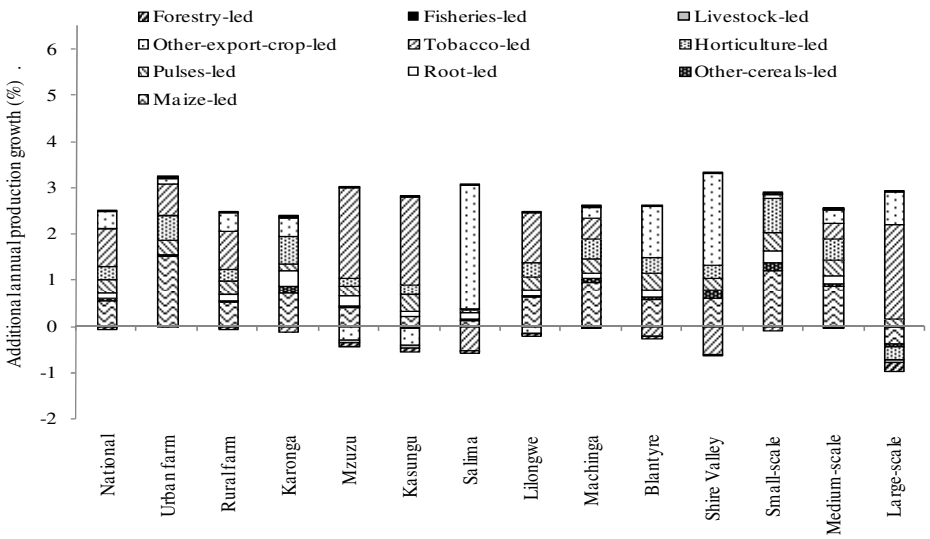
Source: Benin et al. (2007).

Figure 9 presents the extent to which specific agricultural commodities generate additional agricultural growth, above the baseline scenario. It is apparent from the model that at national level, tobacco and maize based strategies bring the most additional agricultural growth relative to other agricultural commodities. Benin et al. (2007) concluded that achieving the 6 per cent agricultural growth is feasible, but this requires additional growth in other high value crops and not only in maize or tobacco.

In terms of farm sizes, it is important to note that additional agricultural growth is likely to come from small-scale farmers particularly resulting from a maize-led strategy. Tobacco is likely to be the main commodity that will bring additional growth among large-scale farmers. It is important to note that ecological zones matter in the importance of commodities in agricultural growth. Maize is an important contributor to additional growth in Machinga, Lilongwe, Blantyre and Karonga ADDs. On the other hand, other export crops, particularly cotton, is the dominating commodity that will lead to additional growth in Salima and Shire Valley ADDs while tobacco dominates in Lilongwe, Mzuzu and Kasungu ADDs.

Figure 9: Sources of Additional Production Growth by Farm Household Groups In

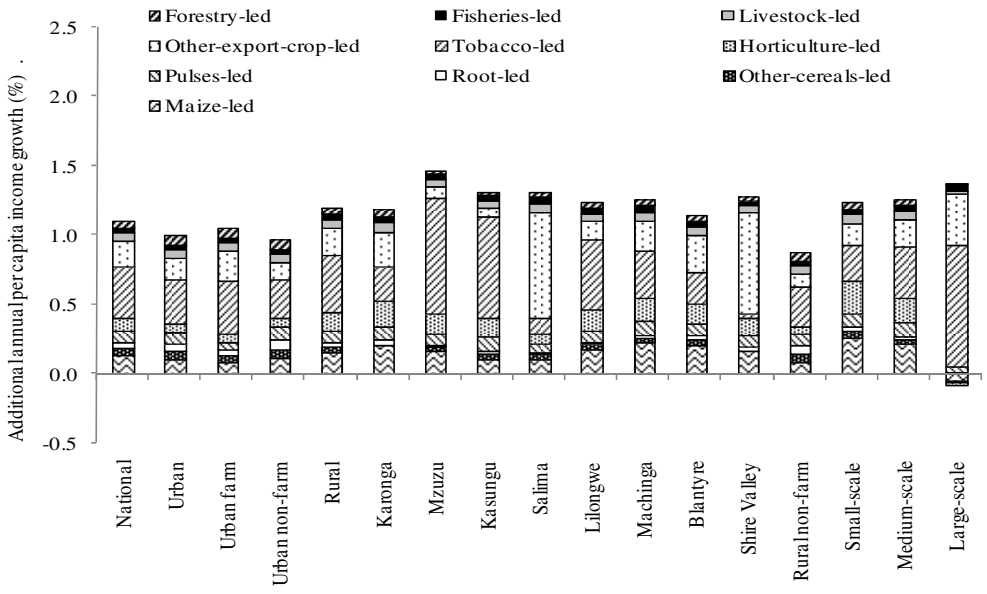
Malawi



Source: Benin et al. (2007)

The results of the CGE model also reveal that incomes will be driven mainly by growth in tobacco, cotton and maize. This, however, depends on the agro-ecological zone in the country (Figure 10). For instance, tobacco will significantly contribute to incomes in Mzuzu, Kasungu and Lilongwe ADDs while other export crops (such as cotton) are important in Salima and Shire Valley ADDs.

Figure 10: Sources of Additional Per Capita Income by Household Groups In Malawi



Source: Benin et al. (2007).

However what is clear is that, in order to achieve the targeted 6 per cent agricultural growth rate, there is need to increase investments in the agricultural sector. Benin et al. (2007) noted that increasing agricultural growth to meet the 6 per cent target requires that government spending on agriculture would have to grow by 23 per cent per annum, resulting in 33 per cent of the total budget allocated to the agricultural sector by 2015. Although, no specific investment priorities were identified, Benin et al. (2007) suggest, consistent with the analysis presented in this document, that such spending should focus on key activities such as promotion of increased use of inputs (fertilizer, improved seed, pesticides, herbicides); development, dissemination and utilization of economically viable technologies and options; irrigation development; and infrastructure development.

Value addition through agro-processing is also a good option and the potential commodities for processing include tobacco, cotton, sugarcane, cassava, vegetables, fruits, chillies, paprika, coffee, tea, milk and fish.

3.4 JUSTIFICATION FOR ASWAP FOCUS AREAS

Box 5: The price/productivity tightrope

Dorward, Chirwa, and Poulton, 2008, describe the challenge of the "price/productivity tightrope" which creates an important policy dilemma in encouraging staple food intensification. The elements of the tightrope are:

- **producers** need high returns from investment in new technologies in order to provide them with incentives to invest in productivity increasing technologies,
- **poor consumers** need low prices for food security, for welfare, and to raise real incomes to drive and support growth

Policy needs to tread a fine line between providing attractive incentives to producers to adopt new technologies and keeping cereals prices low enough to be readily accessible to poor consumers.

3.4.1 Improved Food Security and Nutrition

The MGDS sees food security as a prerequisite for sustainable economic growth and states that food should be available in sufficient quantities, either through domestic production or through imports, so that Malawians have access to sufficient nutritious food to lead a healthy and productive life. It is, therefore, the intention of the government to move away from the experience of severe food shortages that characterised the final decade of the last millennium and the first five years of the current one to a situation of sustainable food and nutrition security.

a*) Food Security*

The central requirement for reliable food security has been analysed in detail previously – and the link between widespread access to inputs for food production and the needed food security has been demonstrated. Government has been promoting maize production for food self sufficiency at household and national levels through production by both smallholder and large scale farmers. However commercial production of maize by large scale farmers declined due to poor prices of maize that led to low profitability thereby leaving maize production in the hands of smallholder farmers only. Unfortunately most of them do not have the required improved inputs. Consequently not enough maize has been produced to feed the nation annually.

Due to the maize shortages experienced, the Government's central policy during recent years has been to promote maize production at household and national levels primarily by a targeted input subsidy programme, mainly for fertilizers, improved maize seed varieties, and pesticides. More than 50 per cent of the current budget of the MoAFS is allocated to the input subsidy. Targeted at small-scale farmers, it has resulted in major maize production increases

from 1.2 million metric tonnes in 2004/05 up to 3.8 million metric tonnes in 2008/09. This production recorded in 2008/09 resulted into a record surplus of 1.3 million metric tonnes.

The targeted input subsidy programme needs to be continued and improved in order to achieve sustainable food security. In order to maximize the payoffs to such investments there is need to increase complementary research and extension efforts towards achieving greater efficiency in resource use. This can be accomplished by better targeting of nutrients and water availability to plants, adoption of good agricultural practices (use of improved seed, early planting, use of seed dressing technologies, weed management including the use of herbicides, treating the harvested maize grain with pesticides to control the larger grain borer, and storing the maize in proper silos) and responding adequately to weather variability.

The ASWAp input subsidy programme is, therefore, based around the highly efficient use of the right inputs used in the right way. This creates broad based opportunities for the poor to benefit directly from effective access to the improved seed, fertilizers and other critical inputs that are the foundation of the essential growth in agriculture. Efficiency and consistency are the guiding principles to developing a productive, commercialized and profitable agricultural sector, with broad based participation, and specifically involving the poor and vulnerable households. Such a strategy, with a foundation of good science, directed by farmers' needs and informed by the commercial, social, and ecological environments can provide gains, not only for the better off producers, but also for the poor and excluded.

In addition to maize self-sufficiency, diversification of smallholder farming systems can increase food availability, through creating economically attractive production options for drought-resistant crops such as cassava, sorghum and millet. As importantly, the evidence is clear that, once farmers reliably achieve food security, they rapidly explore other, potentially more profitable, livelihood options (both on- and off-farm). This further diversification helps reduce the vulnerability of households to unexpected shocks. It can also be expected to increase the nutritional value of available food at household level particularly pulses, horticultural crops and livestock when included into their farming systems. The Malawi government is introducing legume seed to the portfolio of subsidized inputs as a step towards sustainability.

There are, however, challenges to this strategy as shown by published Malawi experimentation. Conventional rotation and intercrop systems often produced moderately reduced quantities of grain compared to monoculture maize, which could be unacceptable to risk-adverse farmers on small land holdings (even though legume grain has enriched value compared to maize grain). The notable exceptions are the long-lived legumes for which reliable on farm Malawi data show can produce the same quantity of grain as monoculture maize, and which increase the fertiliser use efficiency from 17kgs of grain from 1 kg of nitrogen to 30 kgs of grain. This indicates that shrubby legumes could transform the economic viability of fertilizer subsidy policies. Livestock, besides being a potential cash commodity play a valuable role and are also traditionally used as assets for coping with food crisis.

Over the past years, other strategies have been tested for coping with the risks of drought, food supply shortfalls and price variability. These pilot interventions involved weather insurance, price hedging, warehouse receipts, increasing storage capacity and agricultural credit. The application of these risk management approaches has the potential to reduce the variability of Malawi's maize supply and prices. These approaches would also strengthen Malawi's ability to participate in regional grain trade.

The ASWAp will therefore contribute to achieving sustainable staple food self-sufficiency and increase food stability mainly by:

- Implementing the targeted input subsidy programme for vulnerable smallholder farmers
- Promoting the efficiency of the input subsidy programme for increased maize productivity (through improved seeds; adapted fertilizer formulation, time of application; and cropping practices), but also through reduced on-farm storage losses.
- Stimulating the diversification of food production for improved nutrition at household level by increasing the productivity of other nutritious crops especially pulses (beans, soybeans, pigeon peas and groundnuts) drought resistant crops (cassava and millet) and horticultural crops (Fruits and vegetables), promoting smallholder livestock (Goats and chicken) and fish farming assets and appropriate food use.
- Supporting market-based mechanisms for risk management for increased stability of maize availability and prices at national level, especially when weather shocks arise.

b) Nutrition Security

The long term goal of government is to significantly reduce the degree and severity of malnutrition in all its forms in the country i.e. chronic and acute malnutrition and micro-nutrient deficiency disorders among the men, women, boys, girls, under-five children, expectant and breast feeding mothers, and people living with HIV and affected by AIDS. The ASWAp programmes will therefore ensure that Malawians have both physical and economic access to adequate nutritious food for an active healthy life.

The ASWAp will therefore address most of the critical factors which create a food and nutrition insecure situation in Malawi mainly:

a) chronic poverty
b) low agricultural productivity
c) low food intake due to lack of economic opportunities either to produce adequate nutritious food or to exchange labour for income to purchase nutritious food
d) Poor food utilization due to inadequate knowledge and skills about food values, food choices, dietary diversification, combination of the Malawi six food groups and child feeding practices.
e) Poor nutrition education which is currently targeting women and not reaching men as decision makers at household level,
f) Inadequate knowledge, skills and technologies for food preparation, processing and preservation.
g) Inadequate capacity of institutions to implement nutrition programs at national, district and community levels

The ASWAp will therefore contribute to achieving sustainable nutrition security by stimulating the production of diversified foods with high nutritive value, promoting their consumption and proper utilization and emphasizing on nutrition education among the population as a whole. The following strategies will be employed:

a) Stimulating the diversification of food production based on suitability of locations by increasing productivity of high nutritive value foods such as

    - legumes (beans, soy beans, pigeon peas, cow peas and groundnuts)
    - vegetables (tomato, green beans, sweet peas, carrot, and cabbage)
    - fruits (mango, citrus, banana, plantain, pawpaw, pineapple, avocado pear,)

- Indigenous vegetables and fruits (Kamganje, Amaranthus, Masau and Masuku)
- poultry (chickens and guinea fowl for meat and eggs)
- small stock (goat for meat and milk, pigs and rabbits for meat)
- fish (Tilapia species, cut fish, through aquaculture)
- root and tuber crops (cassava, sweet potato, Irish potato)

b) Dietary Diversification

- Encourage dietary diversification of the staple foods and other food groups
- Facilitate processing and utilization of high nutritive value foods
- Intensifying nutrition education and consumer education
- Enhancing capacity building and institutional strengthening for effective implementation of nutrition programs

3.4.2 Commercial Agriculture, Agro-processing and Market Development

A second major thrust of the MGDS is agricultural commercialization, with the medium term goal of increasing value addition to agriculture and productivity of farmers, and reorientation of smallholder sub-sector towards greater commercialization and international competitiveness. The government seeks to broaden participation of smallholders, including farmers whose households are headed by women, in commercial crops, livestock and fish production. This will be achieved by promoting contract farming (principally of tobacco, cotton and horticultural crops), out-grower schemes (e.g. sugar, tea, horticultural crops) and farmer cooperatives (such as in smallholder coffee). Most of the export crops are grown on commercial estates and expansion of smallholder participation will ensure that the benefits to agricultural growth trickle down to the poor.

However, most of Malawi's agricultural exports are relatively low grade, undifferentiated primary commodities (although some important crops such as coffee and tea are gaining their own brand recognition at the international market). In order to offset the high transport costs associated with Malawi's position as a landlocked country, efforts are needed to produce higher quality products targeting higher value export markets. This requires the adoption of better technologies such as quality seeds and planting materials, access to appropriate inputs, and the pursuit of higher quality standards in production and grading systems including packaging and presentation. Ensuring that the right inputs are available in a timely fashion will require imaginative improved alliances and partnerships with the private sector (importers, local and multinational input suppliers, and agro dealers), and better planning in terms of the budget cycle.

To compete on international markets, Malawi needs to upgrade the quality of export commodities for higher unit value on international markets and to pursue niche markets (e.g. vegetables, paprika, chillies, fruits) of commodities for which it has a comparative advantage. This will require a significantly enhanced research and development programme, closely linked to emerging and changing market needs. There are also opportunities for import substitution by promoting local agro-processing industries oriented towards food and feed production such as cassava starch, poultry feed, canned fruits and vegetables, fruit juices, dried fish, milk and milk products, meat and meat products, and potato crisps.

In order to increase commercial farming revenues at national and household levels and to contribute further to the targeted sectoral growth, the ASWAp will focus its priorities on the following:

- Promoting higher productivity leading to increased production volumes of key export commodities such as scented rice, chillies, paprika, macadamia, coffee, tea, sugar, tobacco, cassava, soybeans, groundnuts, seed maize, vegetables (tomato, onion, garlic, shallots, green beans) and fruits (mango, banana, citrus, pineapple),
- Enhancing contract farming and out-grower schemes, and improved cooperation between value-chain stakeholders.
- Promoting higher unit values of export crops by improved product quality, processing, and compliance with market demand and standards.
- Promoting high value crops, livestock and fish production, leveraging agro-processing investments, (mainly addressed at the best opportunities for import substitution), and improved access to input markets.
- Providing financial and non-financial services to increase the unit value of commodities through vertical (agro-processing) and horizontal (market information, infrastructure) market integration, and facilitating access to credit for small and medium agro-processors through assistance with credit/grant application, business plan preparation and matching grant schemes.
- Promoting producer organizations such as cooperatives, associations, and clubs
- Building partnerships and alliances with local and regional markets for inputs and outputs.

3.4.3 Sustainable Agricultural Land and Water Management

The critical natural resource inputs into the production of food and commercial crops are land and water. However, these resources are not sustainably managed resulting in land degradation, soil erosion, deforestation, diminishing water resources and declining biodiversity. Sustainable land and water management is key to sustained agricultural production for ensuring food security and agricultural incomes for the present and future generations.

(a) Land resources

This sub-programme mainly targets higher efficiency of soil nutrients (mainly nitrogen) and available rain water use efficiency, to maintain and increase crops and fodder productivity. This in turn would allow for sustainable cash cropping and food diversification. Actions under sustainable land management (SLM) will therefore emphasize better land husbandry (see Box 6) at farm level, including integrated soil nutrient management relying on both organic and inorganic technologies. Adapted conservation agriculture practices will increase the soil water and nutrient buffer capacity to ensure higher productivity of rain-fed crops and mitigate the effects of weather variability and climate change. This approach will also reduce loss of agricultural land, especially in more fragile areas, and protect vulnerable areas.

The ASWAp recognises that much investment in conservation agriculture has already been made in Malawi and uptake has been modest. However, the overall thrust of the ASWAp is the widespread introduction of profitable farming options to the poor. The evidence is clear that, as farmers rise out of poverty, so they diversify and are able to take the longer term decisions to protect their environment. Thus as the ASWAp starts to create a profitable basis

for agriculture in Malawi, so efforts will be increased to promote sustainable farming approaches. The involvement of faith groups, schools, and other community-based organisations will be encouraged to provide additional capacity to drive this change.

Box 6: Basic Elements for Better Land Husbandry Components

- ***Promotion of an integrated and synergistic resource management approach*** embracing locally appropriate combinations of the following technical options:
  - build-up of soil organic matter and related biological activity to optimum sustainable levels (for improved moisture and nutrient supply and soil structure) through the use of compost, farmyard manure, green manures, surface mulch, enriched fallows, agro-forestry, cover crops and better crop residue management;
  - integrated plant nutrition management with locally appropriate, and cost effective, combinations of organic/inorganic and on/off-farm sources of plant nutrients;
  - better crop management with improved seeds of appropriate varieties, improved crop establishment at the beginning of the rains, weed management and integrated pest management;
  - better rainwater management to increase infiltration and reduce runoff (erosion) so as to improve soil moisture conditions within the rooting zone, thereby lessening the risk of moisture stress during dry spells, e.g. box ridges)
  - improvement of soil rooting depth and permeability through breaking of a cultivation, induced compacted soil layer (hoe/plough pan) through conservation tillage practices (sub-soiling, chisel ploughing)
  - reclamation, where appropriate (i.e. if technically feasible and cost effective), of arable land that has been severely degraded by such processes as gullying.
  - for irrigated crop production systems, also improving water use efficiency: improved water distribution to minimise channel seepage losses, and mulching to reduce evaporation losses, and minimising the risk of salinisation by following good irrigation and drainage practices; and
  - for livestock production systems, better integration of crop and livestock production in both the cereal based farming and agro-pastoral systems.
- ***Adoption of people-centred self-learning and investigating approaches***
- ***Community-based participatory approaches*** to planning and technology development
- ***Better land husbandry that offers farmers tangible economic, social and environmental benefits.***

Source: Strategic Investment Programme for Sustainable Land Management in Sub-Saharan Africa (FAO, 2007)

(b) Water resources

Malawi agriculture is dependent on rain which is currently not reliable because of the climate change. In the context of increased weather variability and climatic change, increasing water use efficiency and strengthening irrigation potentials through the Greenbelt Initiative will contribute to increased revenues to farmers. However these investments are only justified for high-value crops for local and export markets. The ASWAp will therefore focus on the following areas:

- Promoting increased use of irrigation
- Promoting simple rainwater harvesting and storage systems including construction of dams to reduce the vulnerability of smallholders who depend on rain-fed production.
- Rehabilitating old and developing new small to medium-scale irrigation schemes for high-value commodities
- Involving water users in sustainable water management, use efficiency and irrigation technologies;

(*c) Climate Change Issues*

Malawi relies on rain-fed agriculture and the current droughts have resulted in poor crop yields or total crop failure, leading to serious food shortages, hunger and malnutrition. Flooding has also severely disrupted food production in several districts of the country. The most vulnerable groups are rural communities, especially women, children, female-headed households and the elderly. Furthermore, droughts and floods are the major climatic hazards affecting the fisheries sector and have been responsible for the declining or even drying of water bodies resulting in low fish production due to loss of fish stocks and biodiversity.

The possible interventions to mitigate the effects of climate change are many and have been included in the focus areas of the ASWAp as follows:

- Improvement of early warning systems and weather insurance
- Developing community storage systems for seed and food crops
- Increased use of irrigation
- Protection of catchment areas and other fragile areas such as dambos and river banks
- Developing and implementing strategies for drought preparedness
- Developing small dams to harvest water
- Use of recommended improved crop varieties that are resistant to drought
- Use of recommended improved livestock breeds
- Improved crop and livestock management practices
- Improved knowledge and understanding on how temperature profiles in the lake disrupt fish breeding and survival

- Ensuring sustainable management of agricultural land including reducing land degradation through a range of better land husbandry practices, offering farmers tangible economic and environmental returns and using community-based participatory approaches;
- Protecting vulnerable areas such as dambos and river banks;
- Ensuring watershed protection mainly by community-based afforestation including fruit tree planting

Additional mitigation measures include: a) development of early warning systems, b) development of drought resistant crop varieties and promoting hardy animal species and breeds c) improved crop management practices (timing of planting, plant spacing, varieties) d) improvement in land and water management practices (irrigation systems, water harvesting systems) efficient fertilizer use, soil and water drainage and conservation farm structures, e) control of soil erosion, f) dam construction g) rehabilitation of degraded lands g) protection of fragile lands (hills, wetlands, water catchment areas) h) management and control of disease and pest outbreaks particularly army worm and red locust and i) development of community based storage systems for both food and seed.

3.4.4 Agricultural Research and Extension Services

Public expenditure on agricultural research and extension is currently low and major investments are needed to revitalize the research and extension services if their support for increased agricultural production is to be successful. Furthermore, international and regional as well as private technology flows need to be further integrated and used for farmers to benefit from the most appropriate technology options.

The success of these programs will depend to a large extent on appropriate technologies being developed and used by farmers of all gender categories. The ASWAp will therefore strengthen technology generation (research) and technology dissemination (extension) services and hence focuses on the following:

- Supporting applied research and extension programmes focused on priority ASWAp targets.
- Increasing the capacities of the research and extension systems to respond to farmers' technology needs of all gender categories, by generating and disseminating appropriate technologies for sustainable agricultural productivity increases.
- Strengthening result-oriented gender sensitive research and extension activities and improving the relevance and responsiveness of services that farmers need.
- Provision of technical services such as AI service for dairy cattle, dip tanks, vaccines and vaccination services for livestock, seed certification services, sanitary and phytosanitary services, production and certification of foundation and basic seed and vegetative planting materials, development and monitoring of quality standards, soil analysis for site specific fertilizer recommendations, pesticide residue analysis for food safety and analysis of Aflatoxins in groundnuts and other food grains.
- Dissemination of technical messages using modern mass media approaches and communication strategies

3.4.5 Institutional Development and Capacity Building

The successful pursuit of an agricultural PBA/SWAp requires strengthening of the capacities of the Ministry of Agriculture and Food Security to design and implement a coordinated investment programme. It also involves strengthening the capacities of other stakeholders in the sector such as farmer organizations, civil society, communities.

Box 7: Brazil's agricultural miracle: How to feed the world

Extracted from The Economist, Aug 26th 2010

THE world is planting a vigorous new crop: "agro-pessimism", or fear that mankind will not be able to feed itself except by wrecking the environment. Natural disasters—fire in Russia and flood in Pakistan, which are the world's fifth- and eighth-largest wheat producers respectively—have added a Biblical colouring to an unfolding fear of famine. By 2050 world grain output will have to rise by half and meat production must double to meet demand.

In 1967 Paul Ehrlich, a Malthusian, wrote that "the battle to feed all of humanity is over… In the 1970s and 1980s hundreds of millions of people will starve to death." Five years later, in "The Limits to Growth", the Club of Rome (a group of business people and academics) argued that the world was running out of raw materials and that societies would probably collapse in the 21st century.

A year after "The Limits to Growth" appeared, however, and at a time when soaring oil prices seemed to confirm the Club of Rome's worst fears, a country which was then a large net food importer decided to change the way it farmed. It decided to expand domestic production through scientific research, not subsidies. This was all the more remarkable because most of the country was then regarded as unfit for agricultural production.

The country was Brazil. In the four decades since, it has become the first tropical agricultural giant and the first to challenge the dominance of the "big five" food exporters (America, Canada, Australia, Argentina and the European Union). Farmers depend critically on new technology. Norman Borlaug, who is often called the father of the Green Revolution, said the best way to save the world's imperilled ecosystems would be to grow so much food elsewhere that nobody would need to touch the natural wonders. Brazil shows that can be done.

It also shows that change will not come about by itself. Four decades ago, the country faced a farm crisis and responded with decisive boldness. The world is facing a slow-motion food crisis now. It should learn from Brazil.

Improvement in systems and processes in programme planning, budgeting, procurement, financial management, monitoring and evaluation, and administration will encourage donors to contribute directly to a national investment plan. Furthermore training programmes targeting the resolution of critical gaps in technical skills will enhance the capacity of the ministry to implement the agreed agenda. Institutional development and capacity building are cross cutting in nature and are a pre-requisite to the success of the ASWAp. But, an important innovation under ASWAp is that capacity will be built not just in the public sector, but in partnership with community organisations, faith communities, and the private sector. This will add a degree of sustainability, depth and diversity to the capacity building effort that has been absent from previous, institutionally based programmes.

Institutional Development and Capacity Building activities under the ASWAp will take into account the core function analysis (CFA) process underway in the MoAFS. A completed CFA process will determine the specific functions and activities that different players in the sector need to undertake based on their identified competences and capacities. The following strategies will be pursued for all departments and sections to achieve the objectives:

a. Improving knowledge and skills of existing frontline staff through long term and short term training programs at Certificate, Diploma, BSc, MSc, and PhD levels.
b. Improving staffing levels through filling of existing vacancies and recruiting new staff in critical specialised areas.
c. Improving resource allocation to institutions to ensure that programs have adequate human, physical and financial resources.

d. Strengthening capacity by improving leadership and management capacity systems and procedures.

The ASWAp will also finance capacity and institutional strengthening of farmers unions, commodity bodies, water users associations, and other relevant stakeholders. The ASWAp will be implemented by all partners of the sector, and for some activities, MoAFS will sub-contract private sector, farmer unions and civil society organizations.

The effectiveness with which agricultural information is shared in most African countries (including Malawi) is poor. Formal and informal links between research leaders and extension programmes are poorly developed, so scientists receive little feedback on farmer response to technology choices being developed. Practical extension has been typically carried out by diploma holders, while graduates held the more senior and policy posts, serving to marginalise the farmer voice, with graduates ill equipped to communicate effectively with farmers. And an education system where too many young people fail to progress due to poor teaching, illness in the family, or the inability to pay school fees, serves to lose many talented individuals. This last is particularly the case for women, where women are inadequately represented at all levels of the development community (except as working farmers). Insensitivity to gender issues and gender constraints closes agriculture as a career to many women. Women play an important role in agriculture—in many parts of Africa, they are the main producers, and migration and the effects of HIV/AIDS have increased the share of women who are in charge of managing the family farms. Better extension to women is essential if agriculture is to become a driver for development, and is a precondition to meeting the first Millennium Development Goal of halving hunger and poverty.

The cost to Africa of these losses is considerable. Pardey et al. (2004) estimate that publicly funded research into new rice, bean and soya varieties yielded Brazil $16 of benefit for every $1 invested. In particular, a focus on local innovation and development of crops and techniques suited to local conditions, in partnership with farmers and the private sector is found to be crucial. This has, according to Pardey et al .(2004) and Gasques (2006) been the key factor in allowing Brazil to develop new varieties and to expand into previously non-cultivatable areas.

Through focused training programmes at the universities and colleges of agriculture, skilled professionals will be rapidly provided with the skills necessary to work with farmers, agricultural educators, researchers and extension staff to harness knowledge and information from various sources to create improved livelihoods for the poor. The aim is to facilitate and strengthen the rapid evolution of agricultural innovation systems through the active participation of broad range of actors and disciplines/sectors involved in innovation – in particular the private sector. Major emphases include:

- the creation of an enabling environment that encourages interaction amongst all actors in the system so as to put knowledge into socially and economically productive use,
- making that knowledge available through dissemination practices that promote interaction and learning by all, and,
- ensuring new knowledge contributes to the development, adaptation, and future profitability of the value chain.

Investment in human capital development overall has been constrained by public sector hiring freezes, eliminating an important avenue through which young graduates gain experience in the sector. The private sector has largely focused on attracting the more

experienced and competent public employees that meet its mandate. Civil society has also poached heavily from the best of public sector agriculturalists, albeit often at a more junior and less experienced level. Many graduates of agriculture join other industries, seeing better opportunities there. The outcome is a large (and expanding) deficit of young people gaining experience in the sector – a recruitment 'black hole' for the not very distant future when the current generation of experienced African agriculturalists reach retirement (Cabral and Scoones, 2006). The ASWAp aims, through skilful coordination with relevant other players in the agricultural education sector, to ensure that Malawi does not suffer from this problem.

CHAPTER FOUR

ASWAp PRIORITY INVESTMENTS

4.1 FOCUS AREAS AND KEY SUPPORT SERVICES

The ASWAp will implement prioritized sub-programs based on key strategic objectives while recognizing the negative impact of the HIV/AIDS pandemic, gender disparities, climate change and environmental degradation on agricultural productivity. ASWAp has three Focus Areas namely: (i) Food Security and Risk Management; (ii) Commercial Agriculture, Agro-processing and Market Development; and (iii) Sustainable Agricultural Land and Water Management as shown in figure 11. The three Focus Areas will be strengthened by two Key Support Service areas which are cross-cutting actions namely: (i) Technology Generation and Dissemination; and (ii) Institutional Strengthening and Capacity Building. The success of the ASWAp program will depend on services provided by the research and extension systems and on the capacity of the implementing institutions. Furthermore, considering the negative impacts of the HIV/AIDS pandemic and of gender disparity on agricultural productivity, these aspects will be mainstreamed as cross-cutting issues during ASWAp implementation.

An essential component of any development planning is statistics. Reliable agricultural statistics help government and donors by informing budget and aid allocation decisions and by monitoring the effectiveness in use of finances and aid. MoAFS has a National Early Warning Unit for Food Security (NEWU) which is linked to the SADC umbrella body the Regional Early Warning Unit for food Security (REWU). In line with the CAADP plan, NEWU provides early warning information for disaster preparedness and mitigation. Through crop production estimates projections and weekly agricultural commodity price data, it is possible to furnish planners, policy and decision makers with information on expected food shortages to enable advanced planning. The food balance sheet which provides useful information on food availability, food requirements and the resultant food surplus or deficit is an important tool for guiding decision making process in terms of need for distribution of food aid. Related to the domestic food gap analysis is vulnerability assessments conducted by the Malawi Vulnerability Assessment Committee (MVAC) with support from the SADC Regional Vulnerability Assessment Committee (RVAC). The Malawi Country STAT, linked to the international FAO data base, is a rich web based data bank for food, agricultural and natural resources statistics.

The ASWAp will use agricultural statistics for planning, monitoring and evaluation, policy formulation and early warning for food security. Agricultural statistics will be an essential feature of the ASWAp implementation arrangements. The agricultural statistics which will form the basis for M & E will be linked directly to the output targets of the ASWAp. The ASWAp framework has highlighted the inadequacy of regular surveys that provide essential information regarding changes that are occurring in the agricultural sector and at household level. ASWAp proposes that surveys should be funded regularly including the Annual Production Estimates (APES) sample survey which as will be seen later in the document is a key priority area in strengthening agricultural statistics.
Priority elements in the ASWAp programme are:

- **Strengthening Collaboration between NSO (National Statistics Office) and MoAFS.** A strategic plan has been developed by NSO and six institutions (including MoAFS) involved in the collection, analysis and reporting of official statistics. Strengthened collaboration between MoAFS and NSO in the production of agricultural statistics will improve accuracy and timeliness of agricultural statistics, standardise and harmonise concepts and methodologies for collecting data, reconcile discrepancies observed in MoAFS and NSO agricultural statistics, and improve stakeholder and user confidence in agricultural statistics.
- **Capacity building.** The ASWAp framework requires training programmes to be targeted at critical gaps in technical skills, one of which is agricultural statisticsc will enhance the capacity of the ministry to implement the agreed agenda. Institutional development and capacity building are cross cutting in nature and are a pre-requisite to the success of the ASWAp. The ASWAp framework capacity building arrangement has been categorised into short, medium and long term. In line with the foregoing, investing in training in agricultural statistics will directly assist in addressing the capacity gap identified in the ASWAp.
- **Enhanced survey capacity.** Surveys will be mounted or further improved in the following areas - Agricultural Production Estimates; Post harvest losses; Agriculture Market Information Systems (AMIS); cost of production and farm management surveys; Fish Catch Assessment Survey
- **Agriculture Management Information System.** In line with ASWAp concept to improve management information systems, the ministry will develop an AGMIS. This will be linked to, and enhance the value of, the Annual Agricultural Statistical Bulletin. The bulletin is a collection of various forms of agricultural statistics into one booklet for easy reference by users.
- **Area Sampling Frame.** To improve the validity and reliability of crop estimates, the Area Sampling Frame (ASF) methodology will be tested for estimating crop area and production.

The interrelationship between ASWAp Focus Areas, Key Support Services and Cross-cutting Issues is illustrated in Figure 11 while the actual focus areas and their components are summarized in Table 10.

Figure 11: ASWAp Focus Areas, Support Services and Cross-cutting Issues

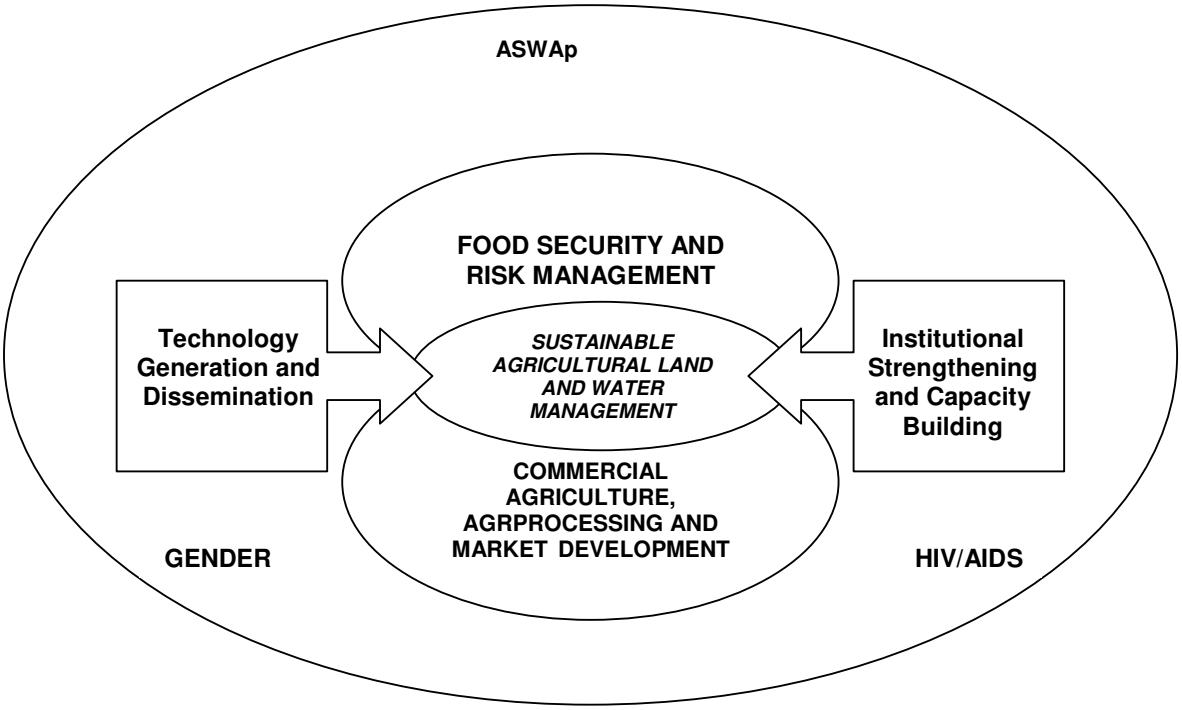


Table 10: ASWAp Focus Areas and Components

FOCUS AREA	COMPONENTS
1. Food Security and Risk Management	*1. Maize self-sufficiency through increased maize productivity and reduced post harvest losses* *2. Diversification of food production and dietary diversification for improved nutrition at household level with focus on Crops, Livestock, and Fisheries* *3. Risk management for food stability at national level*
2. Commercial Agriculture, Agro-processing and Market Development	*1. Agricultural exports of different high value commodities for increased revenue and income* *2. Agro-processing mainly for value addition and import substitution* *3. Market development for inputs and outputs through Public/private sector partnerships*
3. Sustainable Agricultural Land and Water Management	*1. Sustainable agricultural land management* *2. Sustainable agricultural water management and irrigation development through the GreenBelt Initiative*
KEY SUPPORT SERVICES • Technology Generation and Dissemination	*1. Results and market oriented research on priority technology needs and provision of technical and regulatory services* *2. Efficient farmer-led extension and training services*
• Institutional Strengthening and Capacity Building	*1. Strengthening public management systems* *2.Capacity building of the public and private sectors*
CROSS-CUTTING ISSUES • HIV prevention and AIDS impact mitigation • Gender equality and empowerment	*1. Mainstream gender and HIV AIDS*

A summary of strategic objectives, outcomes and main actions by focus area is shown in Appendix 1, while the detailed results framework including outcomes and outputs indicators and targets are shown in Appendices 3 and 4.

4.1.1 Focus Area 1: Food Security and Risk Management

Under this focus area, the ASWAp will pursue three components: (i) increasing maize productivity and reducing post-harvest losses; (ii) promoting diversification of food production for improved nutrition at household and national levels; and (iii) promoting sustainable food availability at national level by risk management.

Component 1. Increase Maize Self-sufficiency

The country will attain maize self sufficiency by increasing maize productivity and assisting targeted vulnerable smallholder farmers with agricultural inputs through the targeted Input Subsidy Programme while improving its technical efficiency. This will be implemented with further investments in technology development and dissemination while focusing on appropriate fertilizer use, the production and distribution of improved seed, the use of good agricultural practices and on-farm storage technologies for both food and seed.

Actions:

- Implement the maize input (seed and fertilizer) subsidy programme in an equitable and gender sensitive way with integrated exit strategies such as:
    - Contract farming arrangements;
    - Seasonal credits for emerging farmers;
    - Minimum commodity producer prices;
    - Organic farming and use of legumes;
    - Inputs for assets programmes; and
    - Improved farmer organisation for effective bulk buying of inputs and bulk selling of outputs
- Increase attention to efficient fertilizer use under the subsidy programme through differentiation in the fertilizer formula and extension advice to farmers on how best to use the fertilizer.
- Promote good maize agricultural practices with emphasis on the following:
    - Strengthening the existing tractor hire programmes through increased availability and accessibility;
    - Strengthening the existing oxen hire programmes through increased availability and accessibility; and
    - Time of planting, seed dressing, spacing, and weeding including use of herbicides.
    - Promotion of conservation agriculture
- Develop and register new improved varieties of maize, produce and multiply breeder and basic seed, certify commercial seed and multiply improved seed through smallholder farmers as well as through established seed firms.
- Promote improved on-farm storage technologies (food and seed).
- Promote improved on-farm storage facilities through construction of cement and metallic silos for seed and grain, training of local artisans to manufacture the silos and use of improved granaries at household level.
- Strengthen migratory pests monitoring and control

Component 2. Diversification of Food Production for Improved Nutrition with focus on Crops, Livestock, and Fisheries.

The ASWAp will promote agricultural diversification by increasing productivity of high nutritive value crops, livestock and fish based on the comparative advantage of each agro-ecological zone. The specific actions are outlined below.

ACTIONS

a) Production diversification

Crops (legumes, tubers, horticulture)

- Promote the production of quality legumes, Irish potatoes and vegetable seed for market distribution
- Promote development of fruit nurseries for production of high quality disease free planting materials
- Promote planting of fruit trees during Tree Planting season (Each household to plant at least 20 fruit trees comprising of at least mango, citrus, pawpaw and banana)
- Promote the multiplication and distribution of cassava cuttings and sweet potato vines of improved varieties.
- Include legume seed under the input subsidy programme
- Provide advisory services on good agricultural practices (GAP) and these ought to be linked to reliable gross margin analyses, regulatory activities and monitoring visits to maintain standards and quality.
- Develop and register new varieties
- Produce and multiply breeder seed.
- Promote integrated production and protection technologies (IPPT) for the horticultural crops through extension services to groups of farmers and traders.
- Conduct staff and farmer training on food budgeting (300 kg maize /person/yr; 50kg g/nuts + 50kgs Soya beans + 50kgs beans/person/year)
- Develop mother nurseries
- Facilitate the multiplication of foundation, breeders and basic seed, and promote multiplication and distribution of improved certified legume seed varieties for inclusion in the Input subsidy programme
- Facilitate preparation of policies, legislation and regulations governing the horticultural industry to ensure adherence to the required market standards and food safety (nurseries, field production and marketing standards).

Livestock (poultry, small stock, pig)

- Introduce improved, approved and registered breeds with superior characteristics
- Promote production of improved chicken feed based on locally available materials.
- Introduce productive dairy goat breeds that give at least two liters of milk per day as compared to the local goat which gives 0.25 to 0.5 liters of milk per day.

- Improve and increase capacity of existing regional hatcheries (Mikolongwe, Bwemba and Choma) for rapid multiplication of chickens and guinea fowls.
- Introduce productive breeds in the smallholder communities to improve the size and quality of goats and pigs.
- Improve the management system for pigs and rabbits under smallholder farmers
- Improve poultry vaccination services including the production and importation of sufficient vaccine doses.
- Increase the number of chickens and guinea fowls vaccinated against Newcastle disease at smallholder level
- Manufacture and distribute mini-hatcheries to groups of smallholder farmers or individuals at village level for chicken and guinea fowl multiplication.
- Promote goat re-stocking and transfer systems (farmer to farmer pass-on programmes) for meat and milk production.
- Improve vaccination services against Swine fever to stimulate production of pigs for meat.
- Disseminate skills and knowledge in the preparation, processing and utilization of rabbit meat.
- Intensify livestock frontline staff training
- Intensify farmer and staff training programs
- Intensify livestock group formation and support
- Monitor and certify quality of poultry feeds

Fish (aquaculture)

- Promote village level fish farming schemes comprising of four hectares of water surface area benefiting about thirty smallholders per location through construction of fish ponds
- Facilitate provision of fish fingerlings, fish feed and training of fingering producers as well as fish feed producers

b) Dietary Diversification

Dietary Adequacy

- Promote consumption of high nutritive value foods on a regular basis with emphasis on alternative staple foods and variety of foods from all food groups
- Promote the Malawi six food groups approach to food consumption
- Develop and disseminate local recipes with emphasis on the multi-mix approach.
- Conduct demonstrations on processing and utilization of foods in a diversified diet

Dietary Quality for Vulnerable Groups

- Promote consumption of enriched foods in complementary feeding programmes and maternal nutrition and among people living with HIV and affected by AIDS (PLHA) through the use of soy beans, pigeon peas, and groundnut as key ingredients.
- Conduct demonstrations on preparation of enriched porridge (phala) to communities, Nutrition Rehabilitation Units (NRU) and Community Therapeutic Centers (CTC)

Nutrition education

- Develop and distribute Information Education and Communication (IEC) materials on consumption, processing, preparation and utilization of enriched foods including local foods
- Train extension workers on prevention of micronutrient deficiencies
- Conduct multi-media campaigns on dietary diversification, consumption of Vitamin A and Iron rich foods
- Conduct consumer education on fortified foods
- Train Extension staff (TOT – training of trainers) and Households in processing, preservation, storage and utilization of food.
- Conduct joint staff and farmer training with the Ministry of Women and Child Development and Local Government and promote coordinated approaches

Capacity building for nutritional programmes

- Fill vacant positions related to nutrition programmes in the agricultural sector.
- Train nutrition officers to higher academic and professional levels (Diploma, BSc, MSc, and PhD levels)
- Conduct short courses on nutrition for extension staff
- Conduct training for farming families on nutrition.
- Conduct orientation courses for newly recruited staff on nutrition policies and programmes
- Procure the equipment and facilities necessary for frontline staff (motor vehicles, motor bikes, bicycles, computers and food preparation equipment.)
- Establish and strengthen Public Private Partnerships (PPP) on nutrition programmes.
- Develop effective lobbying and advocacy strategies in nutrition at all levels.
- Strengthen nutrition surveillance systems in the agricultural sector
- Promote fruit tree planting on the annual tree planting season (Each household to plant at least 20 fruit trees i.e. mango, citrus, avocado pear, banana, apple for nutrition purposes).
- Facilitate local production of local and indigenous vegetables seed of high nutritive value vegetables.
- Facilitate importation of high quality seed of the recommended varieties of exotic vegetables.

Component 3. Risk Management for Food Stability at national level

The ASWAp will introduce a food stabilization mechanism at national level by improving the management of markets and climatic risks that create national food gaps, mainly for maize. The ASWAp will therefore invest in programmes that will improve the management of the national and regional silos and the Strategic Grain Reserve to reduce grain storage losses and increase storage capacity at national level.

Actions:

- Promote innovative market-based risk management schemes, such as the crop weather related insurance products, a warehouse receipt system operated by the private sector, and commodity market insurance system.
- Develop capacity for wider use of the maize call option import contracts.
- Improve the weather forecast systems for rainfall and the early warning systems for floods and droughts.
- Develop community based storage systems and facilities for food and seed (village grain banks and improved granaries).
- Improve management of the SGR to ensure adequate stocks at national level
- Increase storage capacity at national level by building more regional silos and improving the capacity of the existing silos

- Promote planting of drought tolerant crops (cassava, millet and sorghum)
- Strengthen weather forecasting capability for agriculture
- Develop a weather related insurance product for maize ie. Rainfall index based early warning system; Macro and Micro-weather insurance systems
- Employ maize supply/price hedging strategy

4.1.2 Focus Area 2: Commercial Agriculture, Agro-processing & Market Development

The ASWAp will promote high value chains for which Malawi has a comparative advantage for export, import substitution and agro-processing development. The ASWAp has three sub programmes in this area: (i) promoting agricultural exports for improved balance of trade and income, (ii) Commercial agriculture and agro-processing for import substitution and domestic market development, and (iii) development of a public/private partnership to facilitate a nationwide system of profitable markets for agricultural inputs and outputs.

Component 1. Agricultural Exports for Improved Balance of Trade and Income

The ASWAp will increase the total value of agricultural exports through the exports of tobacco, sugar, tea, cotton, coffee, macadamia, chillies, paprika, soybeans, groundnuts, vegetables and fruits by increasing volumes and unit values of these agricultural export commodities.

Outcome 1: **Increased volumes of exported commodities**.

Actions:

- Promote contract farming, out-grower schemes and farmers' organizations (cooperatives) including women and youth agricultural clubs for specific commodities or value chains for e.g. tobacco, cotton, sugar, tea, chillies, paprika, fruit nurseries, fruit orchards, vegetables etc.
- Distribute seed, fertiliser, and chemicals vouchers through the Farm Input Subsidy Programme.
- Strengthen farmers' organizations in agri-business management skills, planning, cost-benefit analysis, accounting, input and output handling, grading and packaging and price negotiations.
- For each commodity, promote dialogue and cooperation between value chain stakeholders including farmers' organizations, traders, processors, exporters, buyers and policy makers.

- Strengthen capacity of value chain players by sub-contracting private service providers to conduct this capacity-building.
- Promote agricultural exports through market research studies, export trade fairs and buyer and seller meetings.
- Promote producers organizations for specific commodity value chain
- Promote production, distribution and utilization of improved seed, chemicals and fertilizers.

Outcome 2: **Increased unit value of agricultural exports by commodity**.

Actions:

- Provide improved technologies to enhance output quality and cost-effectiveness in particular quality seed for tobacco and cotton, clonal tea bushes for smallholders, improved macadamia planting material and quality fruit tree seedlings.
- Improve compliance with market standards (grading, packaging, labelling) by providing training to value-chain stakeholders.
- Promote quality through compliance with sanitary and phytosanitary standards and improving the capacity of national laboratories to conduct tests on export samples.
- Increase provision of quality certification and regulatory services to enhance output quality.
- Procure laboratory equipment for analysis of soil, pesticides efficacy, cotton fiber, lint quality, and pesticide residues in food crops

Component 2. Commercial Agriculture and Agro-processing for value addition and Import Substitution

The ASWAp will promote increased commercial production of rice, fruits and vegetables, cassava, potatoes, paprika and chillies primarily for agro-processing. This sub-programme will also promote increased commercial dairy and beef production, as well as sustainable lake fishing for import substitution.

Outcome 1: **Increased volumes of high value commodities for import substitution**.

Actions:

- Provide research, extension and marketing support services for irrigated and rain fed commercial crop production (choice of marketable crop, adapted varieties, crop husbandry, irrigation technique, integrated production and protection practices)
- Strengthen technical, operational and management capacities for irrigation management including establishment of water user associations (WUA)
- For dairy production, import improved heifers, promote Artificial Insemination (AI) services or live bull services and improve fodder and pasture production from local materials
- Conduct preventive vaccination against animal diseases (foot and mouth, anthrax, black leg, lumpy skin disease) for beef production
- Rehabilitate dip tank infrastructure including provision of acaricides and strengthen technical and O&M capacities of users' groups for their management;
- Promote stall feeding and local production of livestock feed based on local formulations and materials for dairy and beef production
- Encourage adoption of appropriate on/off shore fishing practices, including developing area-specific fishery management plans for Lake Malawi.
- Facilitate production of improved fingerlings, fish feed and poultry feed .

- Promote formation of milk bulking groups and cooperatives for livestock.
- Provide the essential technical services required by beef and milk producers (AI service, live bull service, feed production, veterinary services)
- Increase production of animal feed and fodder
- Promote mini dairy processing and cooling facilities

Outcome 2: **Increased unit value of commodities (crops, fish and livestock).**

Actions:

- Promote group and individual small-scale agro-processing particularly for cassava (starch) horticultural products (fruit juices and jam, tomato paste etc) and oilseed crops for cooking oil (e.g. groundnuts)
- Set-up and expand market information systems in key markets and for key commodities;
- Build or rehabilitate market infrastructure and collection points in strategic locations for specific commodities;
- Provide support to small and medium scale agro-processors in preparing business plans and loan applications to the commercial banking sector, market information, linkages between buyers and suppliers;
- Develop financial leverage systems for private agri-business enterprises through the provision of matching grants system;
- Provide non-financial business services and capacity strengthening to small and medium scale agro-processors and traders (e.g. business plan, market informat6ion, linkages between suppliers and buyers)
- Promote utilization of agro-processing technologies
- Establish organized meat and egg markets

Component 3: Development of public/private partnerships to facilitate a nationwide system of profitable markets for agricultural inputs and outputs

The objective is to create accelerated and broad-based growth in the agricultural sector by combining traditional farmer knowledge, private sector expertise, and government investments and programmes into a coherent and productive programme.

ASWAp will facilitate, through dialogue with the relevant private sector associations, support to partnerships to facilitate the development of a nationwide system of outlets for agricultural inputs and purchasing arrangements for outputs. This will build on existing efforts to improve market access but, in particular, go beyond the basic agro-dealer concept to one in which agro-dealers form a component part of the technology dissemination and promotion chain. Through carefully focused farmer-led field investigations, farmers will be encouraged to test for themselves (with support from development agencies – both government and private) new livelihood options and to explore the markets for these options. Thus the poor will become empowered to demand the inputs that they need and become linked effectively to a domestic or export market in which they play a full role.

The Partners will jointly:

- design, coordinate and implement on-the-ground activities that improve efficiencies in the inputs and output markets and lead to broader growth and development of the agricultural sector, and,

- offer solutions to the Government on subsidy improvements to relieve financially burdensome problems in delivery/distribution

- provide an explicit statement of impacts being targeted, to achieve the strategy

The model is based on the successful delivery of humanitarian aid during the 2002 food crisis to three million Malawians (throughout the entire country) where Government, donors and other stakeholders collectively implemented an impressive and successful relief operation.

Actions:

- Develop commodity based partnerships in the value chain involving all key players i.e. producers (farmers and processors), agro-input dealers, buyers, service providers (research, extension, training, information systems, financiers, marketing infrastructure) and policy makers (for legislation, regulations and standards)
- Ensure sustainable partnerships through strong linkages and effective dialogue backed by signed Memoranda of Understanding and Codes of Conduct
- Improve transaction efficiency along the value chain for both inputs and outputs, and reduce risk so as to encourage further private sector involvement (increasing agro-dealer cover, widening the base of input suppliers, banks etc.),
- Improve the efficiency of public investment, and the collateral investments being made by the private sector, NGOs and farmers.
- Empower farmers by mobilizing them into organized units such as cooperatives, farmers clubs or associations and through contract farming or out-grower schemes and training to impart skills.
- Ensure the poor get the most profitable inputs at the right time, and in quantities that they can afford,
- Improve farmer knowledge and choice regarding new technologies (enhance agro-dealer skills, implement farmer-based trials etc) as well as being informed on output market potentials and options.
- Establish and improve on effective communication and coordination mechanisms amongst government, donors, civil society organisations, and the private sector
- Enhance public sector investments to better leverage collateral for private sector investments to achieve longer term gains
- Develop a strategy for a partnership with key private sector actors that defines the objectives that must be shared by all partners, outline the structure of the Partnership, and indicate membership characteristics
- Determine roles and responsibilities and establish the approach and operational principles

The strategy will be implemented as a series of coordinated "stepping stones" through which confidence between the partners is built, strengthened, and enhanced; and through which skills, knowledge, and information is shared between partners to facilitate the development of an innovation chain to which all partners contribute. This initiative will add value to the ASWAp.

4.1.3 Focus Area 3: Sustainable Agricultural Land and Water Management

Sustainable management of natural resources will enhance the productivity of both food and cash commodities and increase sustainability of output per unit of resource, mainly land and water, while protecting the environment. This focus area has two sub-programmes that will

contribute towards sustainable land and water management, weather variability and climatic change.

Component 1. Sustainable Land Management

The land management programme will promote the dissemination and adoption of sustainable land management practices on agricultural land. The ASWAp recognises that considerable efforts have already been made to promote such practices, with apparently modest impact. However, the fundamental basis of the ASWAp is the development and widespread adoption of profitable and reliable new technologies, with an initial focus on creating improved food security. Once this food security is achieved, the evidence strongly suggests that farmers will quickly investigate new options, including those which generate longer term benefits and ensure the sustainability of the farming enterprises. The promotion of these practices is, therefore, unlike in the past, conducted as 'stand-alone' operations but in the context of whole farm profitability and needs.

Actions

- Promote the use of conservation farming technologies that build soil fertility, prevent soil erosion and conserve rain water (contour ridging, application of manure, preparation of compost, minimum tillage, agro-forestry, box ridges, tractor ploughing to break the hard hoe pan, and use of herbicides as a labour saving technology.
- Increase area under sustainable land management.
- Finance planting material (mainly seeds) and other inputs mainly related to community nurseries for agro-forestry seedlings production including fruit tree seedlings.
- Promote community based dambo and water catchment area management and the prevention of river banks degradation.
- Subsidize inputs to raise forestry and fruit tree seedlings or buying of plants from commercial nurseries for farmers and village communities for planting on fragile or degraded land areas
- Promote labour saving technologies (land ploughing using hired tractor or own tractor, herbicides for weed management and crop protection agents)
- Promote management systems and technologies that protect fragile land (river banks, dambo areas, steep slopes or hilly areas, and water catchment areas)

Component 2 Sustainable Water Management and irrigation development

The ASWAp will promote the expansion of sustainable water management by improving utilization efficiency and increasing the area under irrigation for increased high value commodity production. The high value crops considered a priority include rice, paprika, chillies, green maize, vegetables (cabbage, onion, tomato, garlic, shallot, green beans, carrots, peas), and fruits (banana, pineapple, citrus, mango, strawberry, pawpaw).

The Greenbelt initiative

Irrigation intensification will be carried out under the broad umbrella of the Greenbelt Initiative (GBI). The overall goal for GBI is to contribute towards the attainment of sustainable economic growth and development in line with the MGDS. The Initiative aims at reducing poverty, improving livelihood and sustainable food security at both household and national level through increased production and productivity of agricultural crops, livestock and fisheries.

Malawi is endowed with abundant fresh water resources. The water systems cover over 21% of the country's territorial area from Lakes (Malawi, Chirwa, Chiuta, and Malombe), perennial rivers (Shire, Songwe, North and South Rukulu, Bua, Dwangwa, Lingadzi, Lilongwe, and Ruo) and Lagoons (Chia and Bana). These water bodies offer potential to improve food and agricultural productivity.

The specific objectives of the GBI are to: Increase production and productivity of crops, livestock and fisheries; increase agricultural exports and foreign exchange earnings; Promote diversification of crop and livestock enterprises; Increase household incomes; Improve value chain linkages and operations; Increase private sector participation in agricultural production; Add value through processing of raw materials; Reduce rural-urban migration; and Improve availability of quality water for both domestic and industrial use.

The GBI will have seven major components: Infrastructure Development and Rehabilitation; Environmental Management; Technology Development and Dissemination; Institutional Development and Capacity Building; Agro-Processing and Marketing Development, Gender and HIV/AIDS Mainstreaming and Monitoring and Evaluation. To ensure sustainable water management and irrigation development, the following actions will be employed.

Actions:

- Rehabilitate existing irrigation schemes and construct new ones to expand area under irrigation from 20,000 ha to 40,000 ha at national level.
- Provide research and extension services to farmers on appropriate irrigation and crop production techniques and systems.
- Establish gender sensitive Water User Associations (WUA) and strengthen their technical and operations and management capacities for sustainable irrigation (including farmers' participation in a revolving fund) and high value commodity production and marketing.
- Establish rainwater harvesting systems in the field and off-field. These systems include the construction of new dams constructed and the rehabilitation of existing dams, as well as small scale water harvesting systems for gardening.
- Promote catchment area management and protection by WUA and community afforestation - including establishment of fruit orchards.

- Improve the technical and management capacities of WUA
- Rehabilitate existing irrigation infrastructure in research stations
- Strengthen technical capacity for irrigation management

4.1.4 Key Support Services 1: Institutional Development and Capacity Building

Institutional development and capacity building of extension services and other agricultural institutions are critical factors in creating and fostering an enabling environment for sustainable development and growth of the agricultural sector. The existence of institutional structures with clear roles, responsibilities, linkages, capacities, and skills is a very essential pre-requisite in achieving the overall goals and objectives of the ASWAp. This component is cross-cutting in nature and will implement programs to address institutional and capacity constraints in the ASWAp.

The overall objective of the institutional development and capacity building (ID&CB) program will be to create an enabling institutional capacity of key state and non-state stakeholders for the implementation and achievement of the ASWAp objectives. A particular feature of the capacity building, as noted previously, is an emphasis on capacity building across institutional boundaries and to involve faith communities, schools, and the private sector as full partners in this endeavour.

Actions:

- Strengthen and improve institutional capacity (leadership and management) of key stakeholders (across institutions) to plan, implement and monitor the programme at Central and District level.
- Improve coordination and partnership mechanisms.
- Improve capacity to manage government and donor investments in agriculture.
- Develop and strengthen policies, systems, guidelines and procedures .
- Develop and improve resource capacities of key institutions (adequate funding, motor vehicles, motor cycles, bicycles, computers, and other equipment and facilities).
- Facilitate the acquisition of additional transport means (motorbikes and bicycles and limited motor cars) to ensure that all frontline staff have transport to carry out their duties.
- Recruit additional extension workers to progressively fill the existing vacancies based on the establishment as reported by the human resources office (currently at 31 per cent vacancies).
- Construct and rehabilitate offices, institutional buildings, and institutional houses of extension workers and other offices.
- Develop Gender, HIV and AIDS analysis and mainstreaming skills at all levels beginning with focal points.
- Provide short-term and long term training to members of staff according to the training succession plan to build capacity for sustainable implementation of the ASWAp.
- Provide sufficient financing for the regular maintenance of transport means for front line extension and research staff.
- Provide training including Gender, HIV/AIDS training to frontline staff for orientation, upgrading and skills development.
- Improve agriculture sector planning, implementation, M&E, investment management, governance, and nutritional surveillance

- Establish an ASWAp secretariat to coordinate the activities of the ASWAp and provide linkage within the MoAFS and amongst key stakeholders in the agricultural sector
- Develop and strengthen public management systems such as planning, budgeting, monitoring, evaluation, financial management, human resources management, procurement
- Conduct a Core Function Analysis of the MoAFS to determine how the Ministry will manage its activities under the ASWAp
- Provide training needed to improve technical and administrative systems, skills development, strengthening partnership
- Establish and strengthen public/private partnerships for specific priority commodities
- Conduct orientation courses for newly recruited staff on policies and programmes
- Provision of training to frontline staff for orientation, upgrading and skills development
- Provision of training to frontline staff for orientation, upgrading and skills development
- Fill all critical vacant posts in the MOAFS and the agricultural sector as a whole
- Recruit the appropriate human resources needed to implement programmes effectively, and set in place the need capacity development programmes to ensure that there are properly trained people for future needs.

4.1.5 Key Support Services 2: Technology Generation & Dissemination

The most plausible way for increasing agricultural production in Malawi is by increasing crop and livestock productivity. The process[11] of technology generation, adaptation, dissemination and adoption will be enhanced towards the achievement of results identified under the key focus areas.

The ASWAp will promote demand-driven as well as market- and industry-oriented research and extension systems, while targeting the comparative advantages of each commodity and agro-ecological zone. There is a need to strengthen the efficiency and effectiveness of the public research and extension systems in order to successfully respond to farmers needs and to generate and transfer technologies required to achieve food security and sustainable agricultural growth and these will include:

- Supporting and intensifying applied research and extension programmes focused on priority ASWAp targets such as interventions in the pesticide research to contain and eliminate the Large Grain Borer (LGB) and intensification of research on Genetically Modified Foods.
- Increasing the capacities of the research and extension systems to respond to farmers' technology needs of all gender categories, by generating and disseminating appropriate technologies for sustainable agricultural productivity increases.
- Strengthening result-oriented gender sensitive research and extension activities and improving the relevance and responsiveness of services that farmers need.
- Provision of technical services such as AI service for dairy cattle, dip tanks, vaccines and vaccination services for livestock, seed certification services, sanitary and phytosanitary services, production and certification of foundation and basic seed and

[11] A 'system' and capacity assessment of agricultural support services (mainly research and extension) at national and local levels is being proposed prior to the ASWAp start. This assessment would also propose strategies for system and capacity strengthening (see also roadmap in table 14).

vegetative planting materials, development and monitoring of quality standards, soil analysis for site specific fertilizer recommendations, pesticide residue analysis for food safety and analysis of Aflatoxins in groundnuts and other food grains.

- Develop crop varieties that are high yielding, good quality, resistant to diseases and drought tolerant
- Develop Good Agricultural Practices (GAP) i.e. Soil fertility, fertilizer and plant population management systems and integrated pest management
- Develop labour saving technologies
- Develop harvest and post harvest management systems including crop storage systems
- Improve efficiency of the use of inputs (Seed , fertilizer and chemicals) by farmers
- Breed or introduce livestock that are highly productive in meat, milk and egg production
- Monitor production of livestock feeds and certify their quality
- Develop value addition technologies to promote agro-processing initiatives
- Provide technical services required by farmers i.e.dip tank fluids, vaccines for livestock; seed certification services; sanitary and phytosanitary services; production and certification of foundation and basic seed and vegetative planting materials; development and monitoring of quality standards; soil analysis for site specific fertilizer recommendations; pesticide residue analysis for food safety and analysis of Aflatoxins in groundnuts and other food grains.
- Disseminate technologies on Good Agricultural Practices (GAP) to increase agricultural productivity i.e. choice of varieties and seed; management of soil fertility, fertilizers and plant population, time of planting and integrated pest management
- Provide policy and regulatory support services
- Promote the use of model villages, green belts, clusters and farmers cooperatives in the transfer of technologies
- Train farmers on all aspects of GAP
- Provide technical services required by farmers i.e. AI service for dairy cattle; dip tank management, vaccination services for livestock; distribution of vegetative planting materials; and monitoring of quality standards.

4.1.6 Cross – cutting issues

The ASWAp is aimed at increasing agricultural productivity, improving food and nutrition security and increasing incomes of rural people. As a means for enabling economic growth and thereby reducing poverty, most ASWAp interventions will be geared towards resource-poor smallholder farmers and their transition.

In order to ensure that the ASWAp responds to the needs of women farmers, youth and people living with and affected by HIV, there is a need to adopt a gender and HIV-responsive targeting strategy. Gender and HIV and AIDS issues will be mainstreamed in the ASWAp focus areas and key support services in order to reduce the gender disparities, prevent further spread of HIV and mitigate the negative impacts of AIDS on agricultural productivity and food and nutrition security.

It is against this background that the ASWAp will initiate Gender, HIV and AIDS mainstreaming at both the work place and in the rural development programmes and projects in farming communities. In order to ensure gender equity, ASWAp interventions should target at least 50% women farmers considering the prevailing gender disparities and roles. The ASWAp also needs to address gender inequalities in the work place. Given the limited

numbers of female staff in technical and decision making positions in the sector, at least 30% of staff to be trained should be females at headquarters, district and frontline levels.

The ASWAp will also respond to the needs of the youth, who will increasingly take on leadership roles in the community. ASWAp will endeavor to ensure that the voices of the youth are properly articulated into the development process. The ASWAp will also target support groups of PLHIV and households keeping the chronically ill.

The following actions will be implemented to facilitate mainstreaming of gender, HIV and AIDS

Focus area 1: Food Security Nutrition and Risk Management

1. Develop mechanism for increasing the percentage of vulnerable women, OVCs, PLHIVs, FHHs and CHHs accessing production resources ie through FISP and user friendly technologies that reduces drudgery and increase agricultural production
2. Provide food supplements and agricultural inputs to staff living with HIV at the workplace.
3. Promote small stock animal production and fish farming for women, youth and PLHIV through pass-on schemes.

Focus Area 2: Commercial Agriculture, Agro-Processing and Market Development

1. Support women, youth and PLHIV on agricultural and non-agricultural income generating projects including business organization and management
2. Promote greater involvement of women in commercial farming.
3. Scale-up services on gender, HIV and AIDS to migrant workers and traders in rural farms, estates and rural market centers
4. Advocate for gender, HIV and AIDS mainstreaming in ASWAp planning, implementation, monitoring and budgeting processes
5. Design and implement affirmative action to increase the number of women in policy and decision making positions.
6. Promote self help projects for vulnerable women, youth and PLHIV

Focus Area 3: Sustainable Agricultural Land and Water Management

Promote adoption and scale-up appropriate agro-forestry, soil and land conservation practices amongst women, youth, and PLHIV

Support Area 1: Technology generation and dissemination

1. Institutionalize gender, HIV and AIDS responsive research in agriculture and fisheries
2. Design and disseminate gender, HIV and AIDS responsive agriculture and fisheries information, education and communication materials
3. Develop and strengthen existing training curricula and courses on gender, HIV and AIDS
4. Institutionalize gender, HIV and AIDS in ASWAp and ensure M & E systems are gender, HIV and AIDS sensitive

Process action that requires a budget

1. Document, disseminate and share best practices on gender, HIV, AIDS food and nutrition security and natural resource management.
2. In collaboration with other stakeholders, develop and implement capacity building programmes for staff at all levels and farmers of all gender Conduct gender, HIV and AIDS audit for key institutions and programmes and recommend mainstreaming strategies.
3. Strengthen and establish where there is need gender, HIV and AIDS focal points and workplace committees with clear terms of reference in all subsectors, departments and institutions
4. Develop and implement awareness and advocacy programmes against agricultural property grabbing including land.
5. Institute workplace interventions to reduce stigma and discrimination and mitigate the impacts of gender disparities HIV and AIDS
6. Review agricultural related policies, programmes and projects to mainstream gender, HIV and AIDS.
7. Formulate a resource mobilization strategy for the Agriculture sector gender, HIV and AIDS strategy
8. Market gender, HIV and AIDS strategy to donors and stakeholders and monitor its implementation.
9. Establish networks and partnerships with all stakeholders and partners dealing with gender, HIV and AIDS in agriculture fisheries and natural resources sector
10. Establish and operationalise Technical Working group committees on gender, HIV and AIDS, food and nutrition security at all levels.
11. Institute and update database on gender, HIV and AIDS in Agriculture, food security and natural resources
12. Review and develop the agriculture sector Gender, HIV and AIDS strategy.

4.2 BUDGET FOR THE ASWAP

4.2.1 Estimated Budget

The budget has been derived from strategies and prioritised actions of the ASWAp. The first priority is the food security component of the programme, followed by commercial agriculture, agri-business and market development and lastly sustainable land and water management. In coming up with the budget, the unit costs were derived from the current levels of the cost of the activities. It is assumed that the cost of the activities will remain the same for the duration of the current ASWAp implementation period. In other ways the current cost of activities will purchase the same amount of goods and services in the delivery of future targets of the ASWAp. However, if the cost of purchase of goods and services increases then reduced targets will be achieved with the same amount of money provided in The budget in Tables 11 below presents the financial and budget requirements for the priority inputs to be delivered under ASWAp including the recurrent costs of delivering the services. The table presents the cost breakdown by focus area and components. The total ASWAp first phase budget is at US$ 1,752,003,800 for the implementation of prioritised sector investments from July 2010 to June 2014. It has to be highlighted however that the Greenbelt initiative demands huge investments in the first phase of ASWAp implementation due to irrigation infrastructure designs and development.

Table 11a: Summary budget ASWAp, by Focus Area and Component (2010-2014)

ASWAp BUDGET SUMMARY						
Focus Area	**Component**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**TOTAL**
Food security and risk management		**198,980,980**	**209,030,310**	**205,239,320**	**208,302,840**	**821,553,450**
1.1	Maize self-sufficiency	162,457,200	162,791,500	163,127,750	163,464,000	651,840,450
1.2	Diversification and nutrition	34,961,280	38,188,810	39,561,570	41,801,340	154,513,000
1.3	Sustainable food availability	1,562,500	8,050,000	2,550,000	3,037,500	15,200,000
Commercial agriculture and market development		**17,179,000**	**21,122,000**	**22,149,500**	**25,355,500**	**85,806,000**
2.1	Agricultural export for improved balance of trade and income	8,632,000	10,082,500	11,170,000	11,957,500	41,842,000
2.2	Commercial production for import substitution and domestic market development	8,137,000	9,064,500	10,404,500	12,648,000	40,254,000
2.3	Input and output market development through Private public partnership	410,000	1,975,000	575,000	750,000	3,710,000
Sustainable land and water management		**152,563,800**	**156,503,600**	**160,495,400**	**171,127,200**	**640,690,000**
3.1	Sustainable agricultural land management	6,853,800	10,629,600	14,545,400	24,991,200	57,020,000
3.2	Sustainable agricultural water management	145,710,000	145,874,000	145,950,000	146,136,000	583,670,000
Key support service: technology generation and dissemination		**24,093,825**	**27,352,850**	**27,973,075**	**28,878,600**	**108,298,350**
4.1	Results and market oriented research and provision of technical and regulatory services	1,675,625	1,626,350	2,089,075	1,128,800	6,519,850
4.2	Efficient farmer-led extension and training services	22,418,200	25,726,500	25,884,000	27,749,800	101,778,500
Key support service: Institutional strenghtening and capacity building		**17,014,000**	**16,879,000**	**16,729,000**	**16,534,000**	**67,156,000**
5.1	Strenghtening public management systems	7,935,000	8,100,000	7,450,000	7,750,000	31,235,000
5.2	Capacity building of the public and private sector	9,079,000	8,779,000	9,279,000	8,784,000	35,921,000
Cross cutting issue:		**5,335,903**	**6,528,634**	**7,658,590**	**8,976,872**	**28,500,000**
6.1	Mainstreaming of gender and HIV AIDS	5,335,903	6,528,634	7,658,590	8,976,872	28,500,000
TOTAL		**415,167,508**	**437,416,394**	**440,244,885**	**459,175,012**	**1,752,003,800**
	MK		**USD**			
Total available resources	**170,648,429,050**		**1,137,656,194**			
Of which local resources are	**114,464,429,050**		**763,096,194**			
Total required resources	**262,800,570,000**		**1,752,003,800**			
GAP	**92,152,140,950**		**614,347,606**			
Assumes Exchange Rate is 1US$ = MK150						

Table 11b: ASWAp Budget and Financial Gap Analysis in Malawi Kwacha (MK)

ASWAP Focus Area	ASWAp Component	2010/ 2011 FY				2011/ 2012 FY			
		Required Resources	Available Local Resources	Available Donor Resources	Gap	Required Resources	Available Local Resources	Available Donor Resources	Gap
1. Food Security and Risk Management	1. Maize self-sufficiency through increased maize productivity and reduced post harvest losses	24,368,580,000	23,978,486,504	3,514,800,000	(3,124,706,504)	24,418,725,000	24,937,625,964	2,704,800,000	(3,223,700,964)
	2. Diversification of food production and dietary diversification for improved nutrition at household level with focus on Crops, Livestock, and Fisheries	5,244,192,000	429,653,855	3,165,900,000	1,648,638,145	5,728,321,500	446,840,009	2,628,900,000	2,652,581,491
	3. Risk management for food stability at national level	234,375,000	43,631,124	456,000,000	(265,256,124)	1,207,500,000	45,376,369	295,500,000	866,623,631
2. Commercial Agriculture, Agroprocessing and Market Development	1. Agricultural exports of different high value commodities	1,294,800,000	630,011	1,282,500,000	11,669,989	1,512,375,000	655,212	2,065,500,000	(553,780,212)
	2. Agro-processing mainly for value addition and import substitution	1,220,550,000	45,736,292	333,450,000	841,363,708	1,359,675,000	47,565,744	216,450,000	1,095,659,256
	3. Market development for inputs and outputs through Public/private sector partnerships	61,500,000	62,520,281	408,000,000	(409,020,281)	296,250,000	65,021,092	431,250,000	(200,021,092)
3. Sustainable Agricultural Land and Water Management	1. Sustainable agricultural land management	1,028,070,000	128,431,940	5,394,900,000	(4,495,261,940)	1,594,440,000	133,569,218	2,321,400,000	(860,529,218)
	2. Sustainable agricultural water management and irrigation development through the GreenBelt Initiative	21,856,500,000	907,643,580	1,598,700,000	19,350,156,420	21,881,100,000	943,949,323	2,426,100,000	18,511,050,677
Institutional Strengthening and Capacity Building	1. Strengthening public management systems	1,190,250,000	704,710,798	1,026,750,000	(541,210,798)	1,215,000,000	732,899,229	567,300,000	(85,199,229)
	2.Capacity building of the public and private sectors	1,361,850,000	142,003,481	1,310,850,000	(91,003,481)	1,316,850,000	147,683,620	1,052,550,000	116,616,380
Technology Generation and Dissemination	1. Results and market oriented research on priority technology needs and provision of technical and regulatory services	251,343,750	322,251,898	258,000,000	(328,908,148)	243,952,500	335,141,974	150,000,000	(241,189,474)
0	2. Efficient farmer-led extension and training services	3,362,730,000	96,237,570	496,500,000	2,769,992,430	3,858,975,000	100,087,072	226,500,000	3,532,387,928
Cross-Cutting Issues	Gender, HIV and AIDS Mainstreaming	800,385,463	93,296,257	699,000,000	8,089,205	979,295,154	97,028,108	348,000,000	534,267,046
Grand Total		**62,275,126,213**	**26,955,233,590**	**19,945,350,000**	**15,374,542,623**	**65,612,459,154**	**28,033,442,933**	**15,434,250,000**	**22,144,766,221**

ASWAP Focus Area	ASWAp Component	2012/ 2013 FY				2013/ 2014 FY			
		Required Resources	Available Local Resources	Available Donor Resources	Gap	Required Resources	Available Local Resources	Available Donor Resources	Gap
1. Food Security and Risk Management	1. Maize self-sufficiency through increased maize productivity and reduced post harvest losses	24,469,162,500	25,935,131,002	2,566,800,000	(4,032,768,502)	24,519,600,000	26,972,536,243	1,762,800,000	(4,215,736,243)
	2. Diversification of food production and dietary diversification for improved nutrition at household level with focus on Crops, Livestock, and Fisheries	5,934,235,500	464,713,609	2,278,500,000	3,191,021,891	6,270,201,000	483,302,153	2,056,500,000	3,730,398,847
	3. Risk management for food stability at national level	382,500,000	47,191,423	288,000,000	47,308,577	455,625,000	49,079,080	292,500,000	114,045,920
2. Commercial Agriculture, Agroprocessing and Market Development	1. Agricultural exports of different high value commodities	1,675,500,000	681,420	1,753,500,000	(78,681,420)	1,793,625,000	708,677	19,500,000	1,773,416,323
	2. Agro-processing mainly for value addition and import substitution	1,560,675,000	49,468,374	177,450,000	1,333,756,626	1,897,200,000	51,447,108	157,950,000	1,687,802,892
	3. Market development for inputs and outputs through Public/private sector partnerships	86,250,000	67,621,936	171,000,000	(152,371,936)	112,500,000	70,326,813	183,000,000	(140,826,813)
3. Sustainable Agricultural Land and Water Management	1. Sustainable agricultural land management	2,181,810,000	138,911,987	2,036,400,000	6,498,013	3,748,680,000	144,468,466	1,745,400,000	1,858,811,534
	2. Sustainable agricultural water management and irrigation development through the GreenBelt Initiative	21,892,500,000	981,707,296	1,500,900,000	19,409,892,704	21,920,400,000	1,020,975,587	879,750,000	20,019,674,413
Institutional Strengthening and Capacity Building	1. Strengthening public management systems	1,117,500,000	762,215,199	568,800,000	(213,515,199)	1,162,500,000	792,703,807	549,300,000	(179,503,807)
	2.Capacity building of the public and private sectors	1,391,850,000	153,590,965	322,050,000	916,209,035	1,317,600,000	159,734,603	277,800,000	880,065,397
Technology Generation and Dissemination	1. Results and market oriented research on priority technology needs and provision of technical and regulatory services	313,361,250	348,547,653	150,000,000	(185,186,403)	169,320,000	362,489,559	150,000,000	(343,169,559)
	2. Efficient farmer-led extension and training services	3,882,600,000	104,090,555	121,500,000	3,657,009,445	4,162,470,000	108,254,177	121,500,000	3,932,715,823
Cross-Cutting Issues	Gender, HIV and AIDS Mainstreaming	1,148,788,546	100,909,232	346,500,000	701,379,314	1,346,530,837	104,945,601	327,000,000	914,585,236
Grand Total		**66,036,732,796**	**29,154,780,650**	**12,281,400,000**	**24,600,552,146**	**68,876,251,837**	**30,320,971,876**	**8,523,000,000**	**30,032,279,961**
Total available resources	170,648,429,050		1,137,656,194						
Of which local resources are	114,464,429,050		763,096,194						
Total required resources	262,800,570,000		1,752,003,800						
GAP	92,152,140,950		614,347,606						
Assumes Exchange Rate is 1US$ = MK150									

CHAPTER FIVE

ASWAp IMPLEMENTATION ARRANGEMENTS

5.1 PROGRAMME COORDINATION AND MANAGEMENT

The agricultural sector performance and effectiveness have in the past been weakened by multiple, uncoordinated donor and government financial support that has resulted in lack of coherence in priorities, inconsistencies in implementation, low government ownership, low critical mass of investments in key areas and therefore low impact of agricultural investments. It has also resulted in high transaction costs on behalf of the Government and generally has contributed to weaker government institutions.

The Government of Malawi has recognized these challenges and has recently embarked on defining a Development Assistance Strategy. This strategy seeks to "domesticate" commitments taken as part of the Paris Declaration on AID effectiveness in 2005 and confirms the government's preference for budget support or pool funding arrangements for financial support to a government programme.

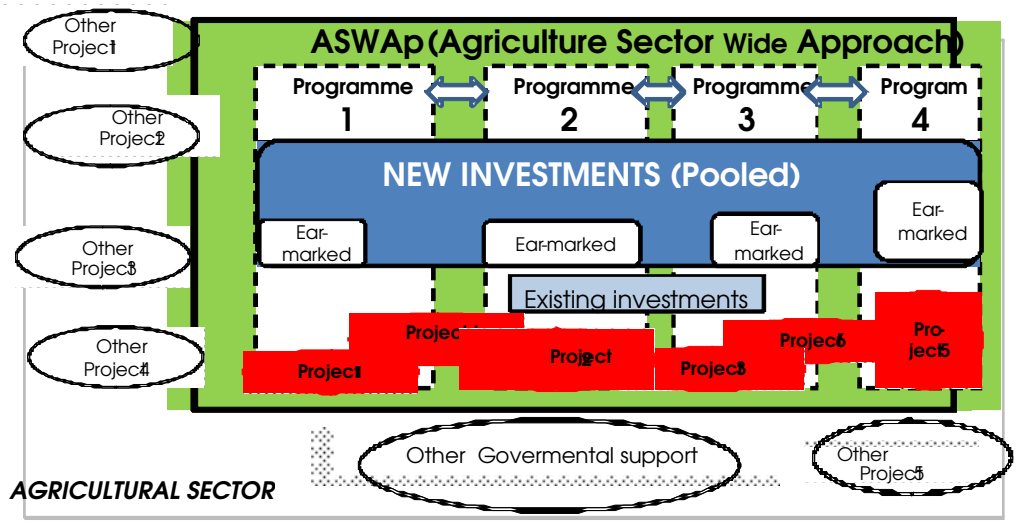
The ASWAp's medium term goals include donor harmonization and alignment of assistance to agriculture. Harmonization is defined as better coordination between donor and government policies, strategies, implementation modalities and procedures. Alignment is defined as donors aligning on Government policies, strategies, priorities and procedures. In view of the institutional complexity of the sector and the size of the challenge, a gradual approach will be adopted by initially covering a set of priority actions, aimed at achieving MGDS priority targets, within which coordination among funding partners and public and private implementers will be enhanced. This will lead to a completely harmonized approach to investment in agriculture in the form of a sector wide programme.

5.1.1 Harmonization and Alignment Process

The process of harmonization and alignment of assistance to the agricultural sector is represented in figures 12 and 13. The large box represents the whole of the agricultural sector, while the thick line represents the ASWAp, a priority programme within the agricultural sector. Some on-going discrete projects fall within the scope of the ASWAp, as defined in the results framework and related priority areas, others fall outside. In an initial phase government and donors will be able to pool their additional funding to support the whole of the ASWAp and its priority programmes, or they can choose to earmark their additional funding to support a specific programme or even sub-programme of the ASWAp.

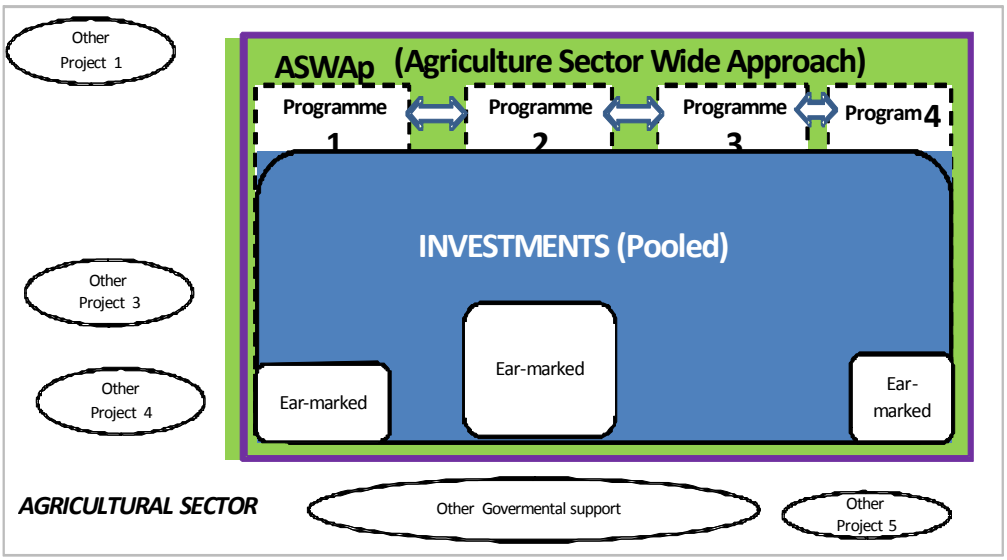
With on-going discrete projects/programmes being terminated or extended and new funding going to the pool, or at least being earmarked within the ASWAp framework, it is expected that the ASWAp will gradually grow to a fully harmonized and aligned programme (see Figure 13). The focus areas/programmes could also gradually evolve towards a SWAp, covering a larger scope of investments within the agricultural sector.

Figure 12: ASWAp (at start); Agricultural sector,ASWAp, Focus Areas and Investments



There will be need for a gradual transition from the current fragmented array of interventions towards: (i) enhanced coordination of major on-going investments and their link to future ones; (ii) a base pool funding for the programme which would allow some earmarking of funds, initially complemented by discrete funding of certain sub-programmes or specific actions outside the pool; (iii) agreement on a transition strategy for gradual harmonization between donors and government and alignment to government priorities, policies and procedures. Various government policies will also have to be harmonized so that there is policy coherence, consistency and stability. NGO discrete projects will continue to operate. Under the ASWAP, the objective will be to better coordinate and align them to ASWAp priorities.

Figure 13: ASWAp (medium term); Agricultural Sector,ASWAp, Focus Areas and Investments



The various steps for achieving this gradual approach to improved harmonization and alignment in the agricultural sector include:

1. Agreement on government priorities for the agricultural sector.
2. Enhancing coordination between on-going 'projects' and 'new' harmonized investments within the ASWAp framework.
3. Using government structures and planning and monitoring systems as a first choice to implement projects as compared to Project Implementation Units (PIUs).
4. Aligning with government systems and procedures regarding financial management, procurement and auditing which have to be assessed and strengthened.

Funding modalities: There are three financing modalities for the ASWAp namely: pooled funding, earmarked funding and discrete funding. Earmarked funds are provided by government (and sometimes managed by government), while discrete funds can be provided by other stakeholders and are not managed directly by government. Both operate with separate accounts outside the flow of funds mechanism for the pooled funding. Most on-going projects use discrete funding and in the short-term these on-going discrete projects will continue (Figure 12).

5.1.2 Malawi CAADP Compact

The Malawi CAADP Compact outlines the institutional, planning, budgeting, procurement, financial management, M&E and reporting arrangements related to a fully

harmonized and aligned ASWAp framework. The Compact sets principles and ways of working amongst the public institutions, Development Partners, the Civil Society, Private Sector, and other actors, engaged in the agricultural and food security sectors. Furthermore, it is expected to guide the alignment of existing projects and programmes to the ASWAp framework and demands enhanced coordination in implementing prioritised sector investments. This Compact was signed by the Government of Malawi, representatives of the Development Partners, the Civil Society, Private Sector, representatives of the farmer organisations and farmers union on April 19, 2010.

It is planned that the ASWAp officially starts in the 2010/2011 financial year with some pooled funding, while allowing for earmarked and discrete funding within the ASWAp priority framework. However, all investments supporting the ASWAp priority framework will seek to coordinate programme planning, budgeting and M&E in relation to the ASWAp targets. In the meantime, government systems of procurement, financial management and accountability can be strengthened. As the Ministry of Agriculture and Food Security is implementing a fully-fledged Sector Wide Approach, it will simultaneously strengthen capacities to build trust in the system and ensure that donors join the pooled funding system.

5.1.3 Link between ASWAp and on-going programmes

The Farm Inputs Subsidy Programme (FISP) vs ASWAp - The Farm Inputs Subsidy Programme (FISP) implements Focus Area 1(Food Security and risk management) of the ASWAp .The programme aims at increasing food security at household and national levels. Specifically, the programme aims at increasing the smallholder farmer access to improved farm inputs and adoption of improved technologies in maize production systems. Natural disasters, high input prices due to high transport costs, high levels of poverty and low output prices among other factors often times limit the smallholder farmer's capacity to access inputs for increasing production. Before the introduction of FISP in 2005/06, this situation led to persistent severe food insecurity in the country. The country depended on food imports to sustain its food requirements. Due to this, food importation used to have negative impacts on the availability of foreign currency among others. Therefore, the FISP Coordination team will periodically report progress to the ASWAp secretariat. The ASWAp secretariat will report to the Principal Secretary and the Executive Management Committee for final decisions.

The Greenbelt Initiative (GBI) - The Greenbelt Initiative (GBI) implements Focus Area 3 (Sustainable Agricultural Land and Water management) of the ASWAp. The overall objective for Greenbelt Initiative is to contribute towards the attainment of sustainable economic growth and development in line with the Malawi Growth and Development Strategy (MGDS). The Initiative aims at reducing poverty, improving livelihood and sustainable food security at both household and national level through increased production and productivity of agricultural crops, livestock and fisheries.

Specifically the Initiative aims at increasing production and productivity of crops, livestock and fisheries; increasing household incomes; agricultural exports and foreign

exchange earnings; promoting diversification of crop and livestock enterprises; reducing rural-urban migration; and improving availability of quality water for both domestic and industrial use.

The GBI Secretariat will periodically report progress to the ASWAp secretariat. The ASWAp secretariat will report to the Principal Secretary and the Executive Management Committee for final decisions. In addition, a multi-sectoral GBI Management Body chaired by the Office of the President and Cabinet will give oversight to the implementation process and manage inter-sectoral and inter-institutional issues.

5.1.4 ASWAp Organizational arrangements

The ASWAp will be delivered principally through the existing organisational structures of the public administration. This will help ensure sustainability and contribute to building capacity. In contrast, where possible, and in line with recent international commitments on development assistance, creating new and parallel implementation structures will be avoided. It is nonetheless recognized that there are new management and coordination demands to be accommodated in a programme-based approach and hence some temporary structures in the organisational arrangements are proposed. An organisation and management chart is shown in Figure 14 while the ASWAp secretariat organisation chart is shown in figure 15.

a) ASWAp Management Structure

The Ministry of Agriculture and Food Security (MoAFS) is the lead ministry for the ASWAp while other implementing and interested ministries will participate in making key decisions on the programme. At the central level, the line departments of the MoAFS and the Ministry of Irrigation and Water Development (MoWID) will have the principal responsibility for delivery of the programme. All programs/projects in the agriculture sector are under the umbrella of ASWAp framework, implement ASWAp priorities, and are required to regularly report progress to the ASWAp Secretariat. The ASWAp joint planning, monitoring and evaluation will holistically examine all sector investments. Figure 14 illustrates the management structure for implementation of the programme.

As a sector investment plan, ASWAp implementation will take on board all key stakeholders. The roles and responsibilities of key stakeholders are outlined below:

Ministry Of Irrigation and Water Development
The Ministry will principally be responsible for irrigation infrastructure development and rehabilitation.

Ministry of Local Government and Rural Development
The Ministry will principally be responsible for ensuring high quality, efficient, and effective implementation of ASWAp through their existing Governance Structures at all levels. The Ministry will work closely with other key stakeholders to ensure successful implementation of prioritized ASWAp interventions.

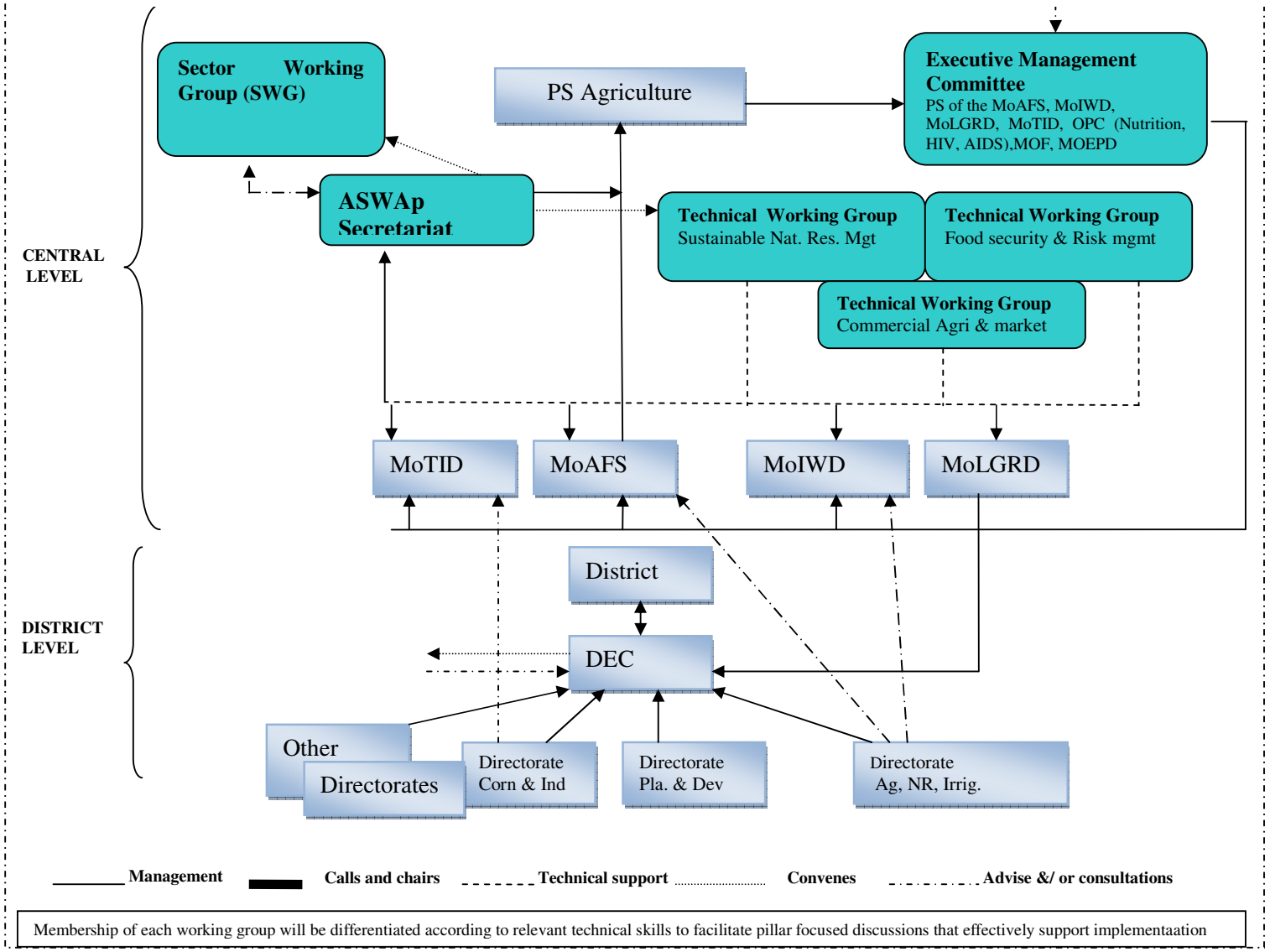
Ministry of Lands and Physical Planning
The Ministry will principally be responsible for ensuring that land issues are properly managed as the MoAFS intensifies agricultural activities.

Ministry of Natural Resources, Energy, and Environment
The Ministry will principally be responsible for ensuring that resources are used in a sustainable manner.

Ministry of Industry and Trade
The Ministry of Industry and Trade will principally be responsible for ensuring that there is a market available for the increased production.

Figure 14 shows the various bodies involved in the implementation of the ASWAp - these are further explained in Appendix 2 of this document.

Figure 14: ASWAP Management Structure



At district level, formal responsibility for delivery rests with the District Commissioner (DC). However, in practice, this will be delegated to the Directorate for Agriculture, Natural Resources and Irrigation, and within this directorate to the District Agricultural Development Officers (DADO) and District Irrigation Officers (DIO).

The functions of the public sector structures and consultative bodies proposed for effective delivery of the ASWAp services are as follows:

Decision making will be the responsibility of an Executive Management Committee, chaired by the Principal Secretary (MoAFS), with membership from participating ministries (Water & Irrigation Development; Trade & Industry Development; and Local Government & Rural Development) and supporting ministries such as Economic Planning & Development; Finance, Gender; HIV/AIDS and Nutrition Department under the OPC.

Planning, monitoring and evaluation will be done by the District Councils, working in conjunction with the MoAFS (through the Agricultural Development Divisions) and the participating ministries;

Implementation will be principally by the District Councils with support from the Agricultural Development Divisions; and

Consultation with stakeholders (including farmers, the private sector, the development partners, civil society, non-governmental organisations and other non-state actors) will be organised by the MoAFS and the District Councils. Roles of the various structures are summarised below:

- Executive Management Committee: provides strategic direction and inter-ministerial coordination, oversees implementation of policy decisions, endorses annual workplans, and monitors progress.

- ASWAp Secretariat: consolidates work plans, liaises with development partners; convenes meetings of the Management Working Group, the Technical Working Group, Sector Working Groups, and the Executive Management Committee; ensures timely reporting; monitors adherence to the Malawi CAADP Compact; coordinates the annual progress review; and prepares proposals for the Executive Management Committee's endorsement.

- Sector Working Group: provides for dialogue between government, civil society, private sector, and development partners on financial management, planning, and monitoring & evaluation; and supports line departments in these areas.

- Technical Working Group: supports line departments on technical issues and methodologies for implementation of activities; advise the Principal Secretary, MoAFS on broad policy issues; and reflect informal feedback from stakeholders.

- District Executive Committee: reviews progress in implementation and represents stakeholders' views at district level.

- Task forces will be established to handle specific technical and management issues. Very likely the following task forces will be needed: Food security; Sustainable Agricultural water management and irrigation development; Sustainable Agricultural

land use management; Commercial Agriculture and market development; Agroprocessing; Institutional strengthening and capacity building; Research and Extension services; Gender and HIV/AIDS mainstreaming.

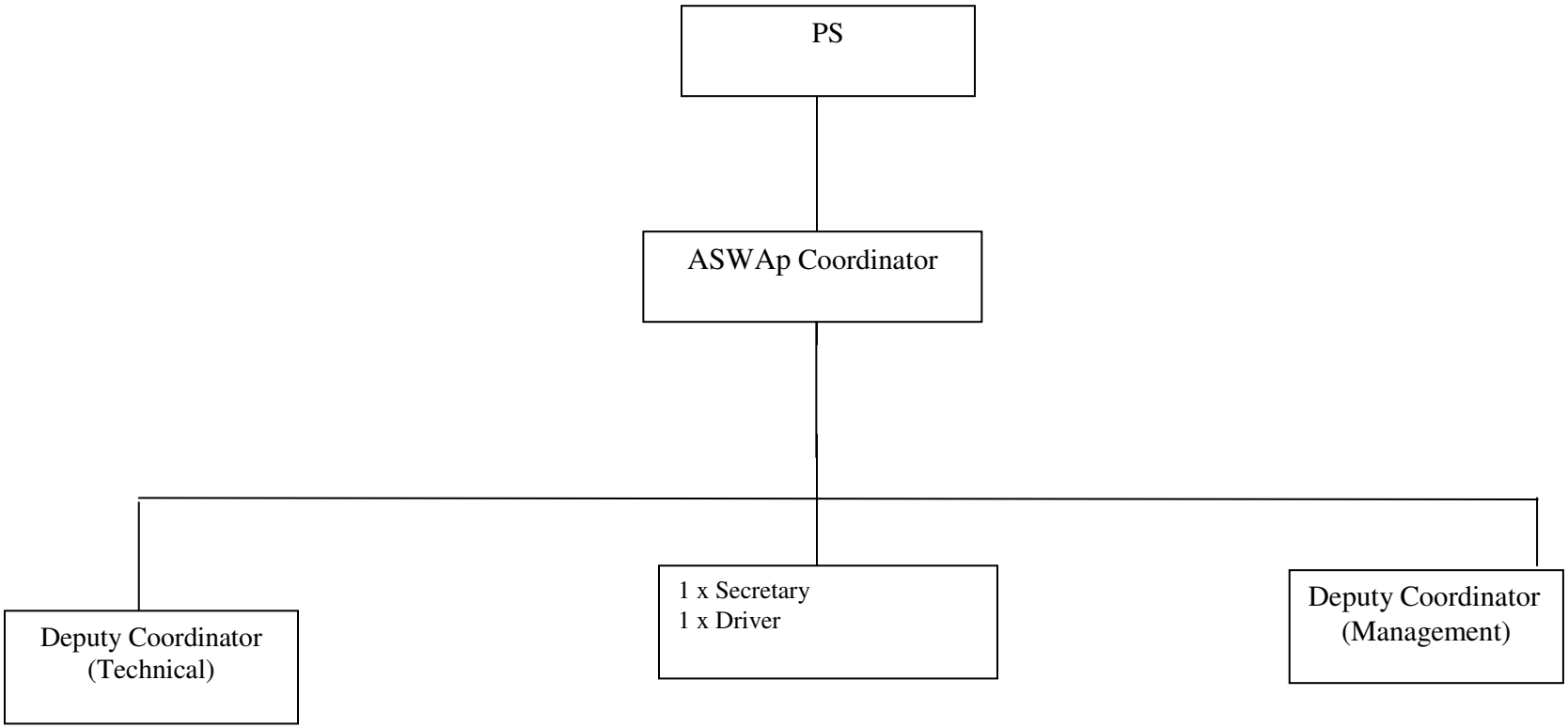
b) ASWAp Secretariat

The ASWAp Secretariat is intended to facilitate the strategic and operational processes of implementing the ASWAp. The Secretariat will be located in the Ministry of Agriculture and Food Security and the Coordinator will report directly to the Principal Secretary (PS). Terms of Reference for this secretariat are provided in Appendix 2.

The Secretariat is a lean structure comprising of three key positions (Figure 15), namely: ASWAp Coordinator supported by two deputies (one responsible for technical issues and the other management issues). The ASWAp Coordinator is responsible for ensuring that the Secretariat coordinates the work of various mechanisms and advises the PS directly. The Coordinator will also interact with development partners. The Deputy Coordinator (Technical) will be responsible for all technical operations, especially working with the three Technical Working Groups and backstopping line officers in the various departments and other implementing actors. The Deputy Coordinator (Management) will be responsible for operations and supporting initiatives for strengthening capacities for effective delivery of the ASWAp results. In addition to these three positions, there will be need to engage TAs in areas of M&E, Finance Management, Human Resources Management and Procurement which are critical in ensuring effective implementation of ASWAp activities. These will not be considered as part of the Secretariat personnel but instead work directly with respective departments and divisions as part of capacity building process. Initial support services positions may essentially include: Secretary (1) and Driver (1).

The ASWAp Secretariat is deliberately intended to be relatively small, comprising critical skills only. The skills required relate to leadership and operational responsibilities that ensure that the Secretariat plays its facilitation and backup role effectively and efficiently. The Secretariat will engage outside expertise with respect to the implementation of specific priority areas of intervention. This will be done through short term technical assistance arrangements based on demand and expressed gaps to support implementation of activities of ASWAp within the MoAFS and other participating Ministries.

Figure 15: ASWAp SECRETARIAT ORGANISATION STRUCTURE



5.1.5 Annual Preparation and Implementation Cycle

The ASWAp will align its planning, budgeting and monitoring cycle to the Government of Malawi's main cycle. The fiscal year goes from July to June while budget preparation extends from January to May. Budget ceilings are issued anytime between February and May before the budget goes to Parliament for approval in late June. The budget implementation report is sent at the same time as the next budget. The time line for planning, budgeting and commitments is outlined in figure 16

The planning preparation will start at district level in January of the year preceding implementation (N-1). Districts will have until March to finalize their activities and budget based on disaggregated annual targets of selected output indicators from the results framework. The ADD will provide backstopping support to districts at least in the initial stages.

The districts will receive individual budget ceilings previously agreed by the Executive Management Committee (EMC), on proposals from the MoF. The Annual Work plan and Budget (AWPB) will be revised and sent to the District Commissioner (DC) and Agricultural Development Division (ADD) by early April. The ADD will consolidate the AWPBs from the various districts under its area and send the consolidated version to the Planning Department of the MoAFS between March April.

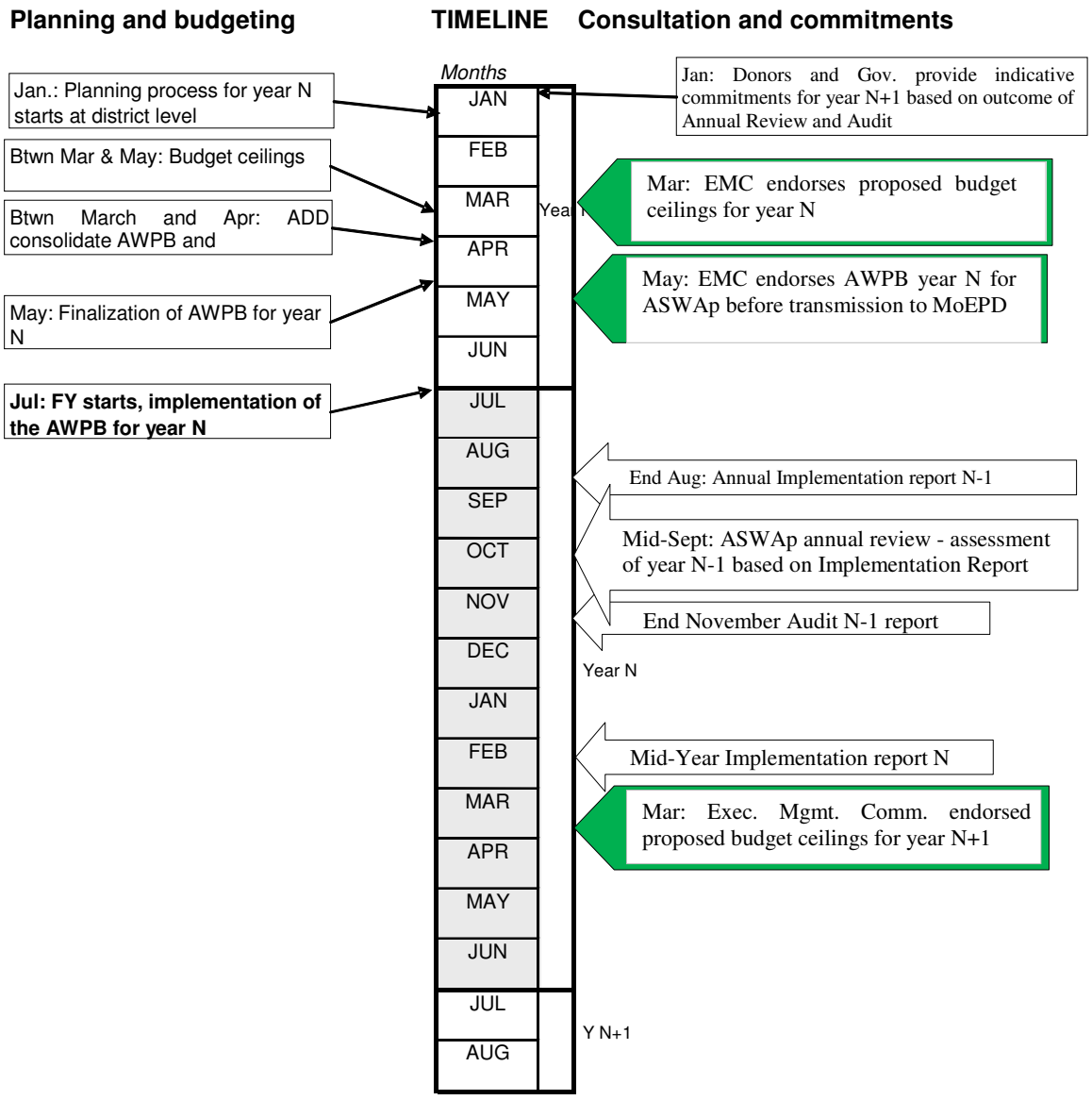
By Mid-May, the Planning Department will consolidate the AWPB for the Ministry of Agriculture and Food Security. The ASWAp secretariat will insert the budget elements from the other implementing ministries (MoIT, MoLGRD, MoIWD, Department of Climate Change and Meteorological Services and other key implementers) and finalize the overall AWPB for the ASWAp. This will be endorsed by the EMC before being sent to the MoF for inclusion in the budget in June.

All cost centres will receive funds according to the treasury plan and start implementing activities and spending their budget. All districts will report at least on a quarterly basis both on the use of funds and implementation of activities to the DC and the ADD. These will compile a report and submit it to Planning and the Finance departments at the Ministry Headquarters.

An annual implementation report will be prepared within 60 days of the end of the fiscal year. This report will be based on the planning for the previous year (N-1) and will explain which targets have been met, which ones have not and why. This report will form the basis for an Annual ASWAp Review (coinciding with the Partnership Forum) to be held in September that will make a performance assessment of the Ministries and the ASWAp during the previous year. The report will also contain financial and budget execution information. The Agriculture sector review should then feed into the MGDS review mechanism.

An external audit will be launched shortly after accounts are closed in July. It is expected that this external audit will be ready by November. Based on the outcome of the Annual review and on the Audit report, donors will make their commitments for the following year (N+1). This, along with GoM commitments and the amounts foreseen in the Mid-Term Expenditure Framework, will form the basis for calculating budget ceilings for the following fiscal year. These should be confirmed by March.

Figure 16 : ASWAp timeline for Planning, Budgeting and Commitments



5.2 ASWAP FUNDING, FINANCIAL AND PROCUREMENT ARRANGEMENTS

Development partners have agreed to provide harmonized support for that country's sectoral investment programme. The main objective of this harmonization effort is to shift from short term lending for many discrete development projects toward more coordinated financing of agreed investment programmes. A collateral commitment is to make greater use of government systems for project or programme management and administration.

The adoption of a sector wide approach (or SWAp) does not imply the adoption of any particular funding arrangements or financial management system. ASWAp is not a lending instrument. The government has expressed a preference for the receipt of basket or pooled funding. However, in practice it is anticipated there will be an evolutionary transition from project to programme funding. The speed of this transition will depend on the rules of different donors and evidence of the growing strength of government systems.

The pursuit of greater harmonization of funding and programming can be measured in terms of three objectives. First, as discussed above, a growing share of funding will be explicitly aligned with the Results Framework of the ASWAp investment programme. Second, a declining proportion of development partner funding is expected to be allocated to discrete projects, and a growing proportion will be allocated to ASWAp programmes in the form of pooled funding. Finally, a growing share of donor resources are expected to be declared on budget, be managed by government staff and be administered using the government's own financial management, procurement and human resource management systems. These principles are broadly outlined in the CAADP Compact and may be more specifically delineated in a Code of Conduct.

5.2.1 *Transition from Projects to ASWAp Programme Support*

Currently, the MoAFS directly or indirectly supervises more than 35 distinct donor projects. Only 14 of these projects were considered on budget in 2010/11. In the immediate future, the projects which are on-budgetwill be identified and thus within the investment portfolio of the ASWAp. Related efforts are needed for projects linked with the ASWAp but administered under the auspices of other Ministries in government.

There will remain a limited number of agricultural projects funded by development partners which are not considered on-budget because these are implemented by public or private non-governmental entities (civil society organizations, CGIAR centres, farmer unions and agri-business). While these may be considered as part of the ASWAp, insofar they contribute to the Results Framework, they will not be included in the ASWAp budget plan.

As experience is gained, efforts will be made to clarify the contributions of civil society organizations, non-governmental agencies and the private sector to the ASWAp. NGOs will be asked to submit work plans to the ASWAp Secretariat which highlight the contributions of their programming to specific components of the ASWAp. The methods for improving coordination of these investments with government programmes will be explored. Similarly, efforts will be made to categorize the contributions of the private sector to specific components of the ASWAp Results Framework.

5.2.2. Funding Modalities

The ASWAp will be implemented using various funding modalities that will be mutually agreed upon between the Government of Malawi and Collaborating Development Partners. Again, the major objective is to improve the harmonization of investment efforts in support of the agreed development programme. In principle, the objective is to shift from discrete project funding toward pooled sectoral funding in the pursuit of an agreed set of performance indicators representing major outcomes or sectoral results. In practice, funding modalities chosen will depend on the rules guiding commitments of individual development partners, the experience gained in moving from project to programme funding, and the proven strength of government systems.

In this context, it is possible to approximately characterize five types of funding modality (Table 12) though the distinctions between these classes may be subject to negotiation on a case by case basis. In any case funding modalities will be further detailed in the Memorandum of Understanding

Table 12: Summary of Main ASWAp Funding Modalities

Type	In ASWAp (on plan)	On Budget	Use of government admin systems	Government leads implementation	Use of ASWAp performance indicators
Discrete projects	Y/N	Y/N	Y/N	Y/N	Y/N
Parallel funding (multiple donors for coordinated projects)	Y	Y/N	Y/N	Y/N	Y/N
Co-funding (multiple donors for single project)	Y	Y	Y	Y	Y
Pooled programmatic funding	Y	Y	Y	Y	Y
Pooled sectoral funding	Y	Y	Y	Y	Y

Discrete Projects

Most funding for agricultural sector activities currently takes the form of discrete funding for specific agreed workplans with associated budgets. Often, the implementation of such projects is led by a Project Implementation Unit (PIU) specifically hired for the purposes of project management and administration. This PIU may or may not be under government supervision. By the end of 2011, all parties are agreed that there will be no more PIUs for projects based on contracts signed with government. With more immediate effect, it is anticipated that all new agricultural projects will highlight what components, and component activities in the ASWAp investment plan are being supported. In effect, all ASWAp related project commitments must be 'on plan'. If a discrete project

is not identifiable with a component part of the national ASWAp workplan, this will not be considered a contribution to the ASWAp.

Most discretely funded projects are expected to start to use government systems for project management and implementation. They are expected to adopt ASWAp performance indicators in their logframes or results frameworks. They are expected to be identified as on-budget, with a schedule of disbursement which can be tracked in relation to national budgets.

A small number of discretely funded projects may be considered part of the ASWAp workplan, but implemented by non-governmental agencies. These would be considered 'off-budget' for the purposes of national planning. However, the adoption of ASWAp linked performance indicators would still be encouraged.

Parallel Funding

An major step toward harmonization can be made by shifting from entirely distinct project funding to the funding of closely linked workplans operating in parallel to one another. For example, there may be multiple discrete project investments in support of the expansion of small-scale irrigation in the country. In this case, the project workplans would be identified with component activities within the ASWAp investment plan, and efforts would be made to coordinate these investments through sharing of workplans, sharing of implementation support missions and the pursuit of common performance indicators. If the project is on-budget, this will be implemented by government agencies using the government's own financial management and procurement systems. However, it is again possible that a component project running in parallel with related commitments may be run by a non-government agency outside of government systems.

Co-Funding

Co-funding of project commitments represents a third step toward harmonization of commitment. This involves the commitment of multiple donors to a single, common workplan and budget. One example of this is the Agricultural Development Programme Support Project (ADP-SP) which has a single workplan and budget with complementary contributions from the World Bank, the Global Environment Facility and the Kingdom of Norway. Again, the expectation is that this project workplan would be identifiable within the overall ASWAp investment plan. In addition, these commitments are expected to be on-budget, and to make full use of government administrative and management systems. The workplan should target the pursuit of identified ASWAp performance indicators.

Pooled Programme Funding

Development partners may also agree to allocate pooled funding to programmes of the ASWAp. In this case, funding is committed to a more generic set of activities defined by government teams leading the implementation of larger components of the ASWAp. For example, several donors may jointly commit funding toward the implementation of the Farm Input Subsidy Programme. This commitment would be on-budget and would make full use of government systems. It would be implemented by the budget, and to the limits acceptable to donors it would be implemented using government financial management and procurement rules. The pooled funding commitment would be governed by a Joint Financing Agreement signed by multiple donors.

Pooled Sectoral Funding

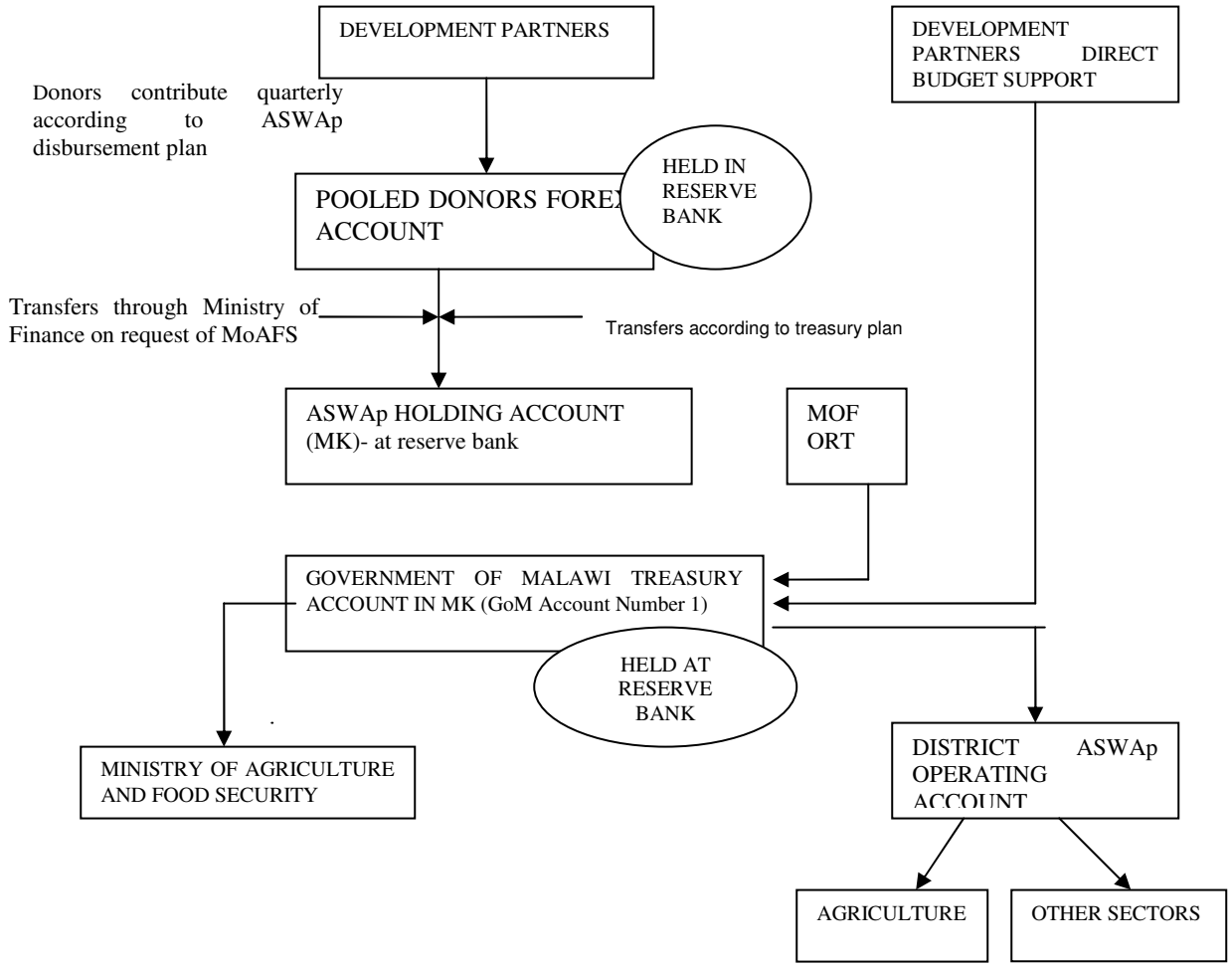
Ultimately, some donors may agree to provide pooled funding for the overall ASWAp investment plan in a similar manner to their current programme of national budget support. In effect, this would be an earmark of a component of national budget support to the agricultural sector. This would obviously be on-budget, make full use of government systems and be subject to review using agreed ASWAp performance indicators.

Financial Arrangements for Pooled Funding

Donors will disburse their funds into the Forex account which are then transferred into the withholding account and converted into local currency. The funds thereafter will go through Treasury to the implementing agency which is the Ministry of Agriculture and Food Security(MoAFS) (Figure 17). Upon the authorisation of the MoAFS, Treasury will disburse funds directly to the district. The implementing sectors at Central level shall access their funds through the Ministry of Agriculture and Food Security. Their budgets shall be included in the MoAFS vote and will access their funds through the same Ministry on monthly/quarterly basis in accordance with their work-plans and budgets. The following steps outline the pooled funding modality Table 13):

- Collaborating partners will deposit funds in a Forex account (in USD) based at the Central Bank of Malawi (the Ministry of Finance is the signatory) on a quarterly basis and based upon an agreed disbursement plan linked to the ASWAp treasury plan;
- The funds shall be converted into Malawi Kwacha and transferred into the withholding account. The balance of the Forex account shall transit from one fiscal year to the next one.
- The implementing sectors at Central level shall access their funds through the Ministry of Agriculture and Food Security. Their budgets shall be included in the MoAFS vote.
- Districts are expected to open ASWAp operating accounts for themselves (one per district) to avoid fungibility of ASWAp resources with resources for other normal district programmes. This will ensure that there is proper use and accountability of the ASWAp resources.

Figure 17 : ASWAp Flow of Funds Mechanism



5.2.3 Annual Work-plans and Budgets (AWPB) for both Recurrent and Development Funds

The pursuit of harmonization begins with the contributions of development partners to the funding and implementation of the national investment plan. In the initial stages, these contributions may only be defined in generic terms as commitments to Focal Areas and Components of the overall ASWAp. However, for harmonization to work in practice, more detailed discussions will be needed to clarify how project and programme workplans are linked into the overall ASWAp workplan and budget.

- The ASWAp Secretariat will prepare/consolidate the AWPB that will be discussed and agreed upon with ASWAp collaborating partners, and included in the main budget document of the GoM.
- The main basis for the AWPB will be the result framework that will lay out the main actions and their corresponding targets for the year in question.

- The ASWAp Secretariat will prepare/consolidate an associated annual procurement plan which details the contributions of government and development partners to the ASWAp investment programme.
- The ASWAp Secretariat will prepare/consolidate an associated annual staff development plan which details the contributions of government and development partners to the ASWAp investment programme.
- The ASWAp Secretariat will prepare/consolidate an associated technical assistance plan which details the contributions of government and development partners to the ASWAp investment programme.
- The ASWAp Secretariat will prepare/consolidate an associated annual technical progress and performance report on the ASWAp summarizing major accomplishments and the status of achievement of key performance indicators.

5.2.4 ASWAp Financial Management

The ASWAp Financial Management will be characterized by the principles of accountability and transparency at each level of the implementation process. Achieving these objectives will require an efficient accounting system that is capable of providing management with accurate and timely expenditure reports and other financial information. In this regard, Government of Malawi and Collaborating Partners will be committed to ensure that:

- The Government Public Financial Management Act (2003) Public Audit Act (2003), Public Procurement Act (2003), the Treasury Instructions and Desk instructions guide all financial matters for the implementation of the ASWAp;

- The MoAFS and other participating partners maintain adequate financial management systems to reflect expenditure transactions and assets financed from the Programme of work. This system will ensure that the MoAFS and participating institutions produce timely, relevant and reliable financial information for planning, budgeting and implementation of the Programme of work.

- The MoAFS maintains implementation of a computerized accounting system which can produce accurate and timely financial management information using the Accounting General System called IFMIS (Integrated Financial Management Information System).

- Technical Assistants are recruited to assist the MoAFS headquarters, departments, districts, and other implementing partners to enhance the implementation of the Integrated Financial Management Information System (IFMIS) and improve management, accounting, cash management, financial accounting, audit, procurement and asset management.

- Any participating entity in the implementation of the ASWAp provides monthly financial statements. These statements will classify, analyze and report data covering income and expenditures from all sources of funding in accordance with Ministry of Finance requirements and the needs of the AWPB of the ASWAp. The ASWAp annual consolidated financial statements based on the ASWAp work programme will be submitted to the MoF.

- The ASWAp secretariat submits a mid-year Programme review Report to the Executive Management Committee which includes financial accounts of the implementation of the Programme of work by 28th February. An annual programme implementation report will be prepared by 31st August, covering the previous fiscal year. The format of this report will be agreed upon between the Government and ASWAp donors.

- The Auditor-General- carries out a mid-year Financial Audit for pooled funding programmes. For earmarked and discrete funding programmes, a private audit firm under the auspices of Auditor-General will carry out the audits. This audit will cover the first six months of each fiscal year of the government of Malawi (July-December), and an Annual Consolidated Financial Audit at the end of each fiscal year (July-June).

- The Government of Malawi ensures that its systems within the Agricultural and Food Security sector have robust levels of internal controls. This will require the establishment of internal audit function, independence of accounting functions, separation of initiation and authorization of transactions, and recording and custody of assets.

In this context it is expected that the Ministry of Finance will release the funds to all the cost centres (Ministry central level, ADD and District) upon request of the MoAFS linked to a disbursement plan, in a timely manner in accordance with the agreed disbursement plan and IFMIS procedures. Performance and expenditure reporting will be done by each cost centre in the agreed reporting formats. Accounting and financial management reports will be prepared in line with existing government procedures to be discussed and agreed with ASWAp donors.

In line with previous recommendations (2000 Public Expenditure Review report), the ASWAp shall increase funding to districts and other lower level establishments to a ratio between headquarters and districts of at least 40 percent and 60 percent respectively. However, this shall exclude funds for implementing complex programmes which are better managed centrally such as the subsidy programme and the Human Resource Development Plans.

5.2.5 District Level

At district level, ASWAp funds will be disbursed directly from Treasury to the districts. These shall be required to open an ASWAp operating account at a Commercial Bank in their respective districts. The funds shall be disbursed on monthly/quarterly basis in line with the proposed AWPB.

The District Agricultural Development Officer (DADO) will be the custodian of this account who ensures that implementation takes on board all other key stakeholders such as other public and civil society organisations. Each ASWAp implementing sub-sector shall be required to submit their plans of action for the month and payment requests to the Director of Finance (DoF) at the District level through the DADOs office.

The DoF will be responsible for compiling monthly expenditure returns for the ASWAp. The office of the DADO will therefore submit the agriculture district reports to the Ministry of Agriculture and Food Security headquarters who in turn will submit the consolidated report to the Accountant General. Copies of the national report shall also be circulated to other ASWAp implementing Ministries, donors and relevant stakeholders. In the spirit of decentralization, the ADDs shall be

responsible for providing backstopping services and policy direction in the management of ASWAp funds. In order for this role to be effectively implemented there is need to build capacity at both ADD and district levels with the provision of adequate staffing in the accounts sections at all levels..

5.2.6 Procurement

The Government of Malawi and collaborating partners will agree that the principles underpinning public procurement within the ASWAp will be: transparency, efficiency, accountability, fair opportunity to all bidders, prevention of fraud and other malpractices, and promotion of local capacity.

Government and collaborating partners recognize that current Government procurement systems, practices, procedures and staff capacity will require further development and strengthening in order to ensure proper management of procurement function in accordance with the above principles.

Prior to ASWAp initial draft, a Country Procurement Assessment Report by the World Bank concluded that:

- The Office of the Director of Public Procurement (ODPP) - a new national procurement regulatory body, established by the 2003 Public Procurement Act - is not yet fully staffed and made operational as planned.
- Standard Tender and Procurement Documents are in the process of being drafted.
- Specific documents for the Agricultural Sector will also have to be developed.
- There is a severe national shortage of trained procurement staff to which the MoAFS is no exception.
- Specialized Procurement Units (SPUs), as stipulated in the Public Procurement Act 2003, are not operational.

However, since the publication of the World Bank report, Malawi has made progress in a number of areas identified by that report. For example, the office of the ODPP has been established, staffed with qualified procurement specialists and fully operational. Furthermore, there are established procurement units in different ministries supported by procurement specialists as exemplified by the MoAFS. The Country has also intensified training of officers in procurement.

In this context, the World Bank procedures for International Competitive Bidding will only apply for the first phase of ASWAp implementation to allow Government of Malawi and MoAFS procurement systems to become fully and effectively operational. Each cost centre at national or district level will establish an internal procurement committee. Each cost centre should have at least one procurement specialist, or at least an accountant trained in procurement matters.

5.3 PLANNING, MONITORING AND EVALUATION

5.3.1 Introduction

The ASWAp will be implemented mainly by the Ministry of Agriculture and Food Security (MoAFS) headquarters and by districts. Using and strengthening Government planning, monitoring and evaluation systems will be an essential feature of the ASWAp implementation arrangements.

This implies major changes from the present situation characterized by a fragmentation of donor and non-government support to the sector, mainly in the form of multiple independent projects. Most of the larger projects funded by donors are implemented by the MoAFS usually through Project Implementation Units (PIUs), while some are implemented by the Ministry of Irrigation and Water Development (funded by ADB) and others by the Ministry of Local Government and Rural Development (funded by IFAD).

In moving towards a prioritized annual work plan and budget which details activities to be implemented by the districts, ADDs, and departments of the MoAFS, MoIWD and MoTPSD, NGOs, and Civil Society Organisations, there will be a need to harmonise planning, monitoring, evaluation and reporting systems and procedures. Both planning and M&E will be linked directly to the output targets of the ASWAp.

5.3.2 Assessment

An assessment of the technical and support systems and procedures will be intensified to identify extra gaps and propose strategies for strengthening. The assessment will be conducted at central, ADD, and district levels.

5.3.3 Results Framework

The ASWAp results framework will provide a clear picture of national priorities to be the basis for planning at all levels. It will also be the basis for monitoring and evaluating the ASWAp. The Annual Work Plan and Budget (AWPB) will be established on the basis of the results framework and be referred to the various outputs and their targets. The structure of the AWPB will follow the programmatic approach as articulated in the various focal areas and sub-programmes.

Output indicator targets will need to be disaggregated at district and ADD levels to allow activity planning and budgeting within the ASWAp framework. For the on-going projects, there is need to realign to the ASWAp framework and utilise the ASWAp M&E framework. The district AWPB will be prepared in line with the identified priorities in the ASWAp framework. The eventual ASWAp priorities shall be identified in a participatory manner during the review process.

The results of the ASWAp reviews will support existing initiatives in planning and monitoring such as the Annual Review of the MGDS implementation, the Integrated Financial Management System (IFMIS) and the OPC-led capacity assessment to be done at all levels and sectors for the common services systems and staff. The districts will prepare and submit progress reports to the ADDs based on their AWPB for onward submission to the ASWAp secretariat. Annual implementation reports will be compiled by the ASWAp secretariat based on submissions from the various ADDs. The format for these reports will be based on outputs and targets as provided for in the AWPB and the results framework. This will ensure that there is a link between the planning document (AWPB) and the monitoring reports.

5.3.4 Responsibilities

The responsibility of the Planning Department will be to propose budget ceilings for the various departments, ADDs and districts based on the budget ceiling provided by the MoF and confirmed by the Executive Management Committee. The distribution of the ceilings across cost-centres will be based on the outputs of the ASWAp programme (results framework), articulated by cost-centre wherever possible

Each Department, ADD, and district will prepare its own annual work plan (activities) and budget using a weighted criterion to identify the planned share of resources by programme. These will then be compiled by the Planning Department which will make the final adjustments to the AWPB of the Ministry of Agriculture and Food Security.

The ASWAp secretariat will then compile the proposed AWPB from the various implementing ministries and present them to the Executive Management Committee for final approval before submission to the Ministry of Finance.

5.3.5 Evaluation

The agricultural sector is characterized by inadequate regular surveys that provide essential information regarding changes that are occurring in the sector and at household level. However, efforts are being made to fill the data gap. For example, the Beneficiary Impact Assessment Baseline Survey that has been implemented by MoAFS under the ADP-SP will act as the reference point. In addition, the MoAFS is implementing regular monitoring surveys. Under the ASWAp more regular agricultural surveys, including the annual Agricultural Production Estimates Sample Survey, will be funded to increase the availability of statistical data necessary for planning, policy formulation and early warning. These will be implemented in close collaboration with NSO. Most of the indicators to be tracked are provided in the Targets and Results Framework (Appendix 3).

5.4 INSTITUTIONAL STRENGTHENING AND CAPACITY BUILDING

5.4.1 Proposed Approach to Capacity Building

The ASWAp is a prioritised results-oriented framework under the Ministry of Agriculture and Food Security's leadership that calls for a gradual harmonization and alignment of Government and donor financial support. It has strong linkages to national, regional and international policy frameworks particularly the MGDS, CAADP and MDGs. The programme builds on successes of the past and supports capacity building initiatives and strengthening of institutions for effective delivery of services. It therefore represents a significant change in conducting business in the agriculture sector as implementation and management of resources including donor support will utilise the existing government structures. This demands that staff will need immediate orientation and regular subsequent training on their responsibilities and tasks. This will be based on two main principles namely support oriented to meeting skill needs for effective delivery of the ASWAp and utilizing as much as possible credible local education and training providers for both short and long term courses. This is in part to ensure capability as staff retires, but also because vacancy rates in the civil service are high (estimated at 40 per cent across government). These needs will be addressed through postgraduate training at Masters and Doctorate levels and through training and education leading to undergraduate degrees, diplomas and certificates. However, in the case of skill needs for which

training is not available in Malawi, the services of regional as well as international institutions will be used.

5.4.2 Professional[12] and Administrative Skills

The capacity assessment of the needs of the common services and of the agriculture, health, education and irrigation sectors have been done to promote systematisation and ensure that support to capacity strengthening can be directed to agreed priority areas.

It is recognised, however, that there will be immediate skill needs for delivery of the ASWAp. Thus, once systems have been redesigned, all professional and administrative staff involved in delivery of the ASWAp will be offered short orientation programmes. The content of these programmes will vary and be specific to the skill area concerned. There will thus be separate programmes on each professional skill (planning, monitoring & evaluation, and management) and on each administrative skill (financial management, procurement, and human resources management).

The capacity building programmes will be short, medium, and long term duration dependent of the nature of capacity gap identified.

5.4.3 Technical Skills

A similar approach will be adopted in building capacity in technical skills with training offered for orientation and subsequent retraining. It will also be offered for short, medium, and longer term capacity building through examined courses at diploma, certificate, undergraduate, masters and exceptionally, doctorate levels. The identification of training needs will be through training and capacity needs analysis to be conducted at the onset and during the implementation of the ASWAp.

5.4.4 Selection of Trainees and Allocation of Funding for Training

Channelling funding for training to priority needs is essential. In particular, there is strong competition to obtain scholarships for postgraduate degrees, particularly for courses offered outside Malawi within the public sector. This is mainly due to insufficient resources hence need for an objective criterion for selection of trainees.

ASWAp orientation training and retraining: It is envisaged that all professional, administrative and technical staff at central level in the MoAFS, participating ministries and at the district level will be eligible for orientation training and subsequent yearly retraining in Malawi. As a result, no selection criteria are required.

Other types of training (i.e. postgraduate, undergraduate, certificate and diploma): It is proposed that criteria be established to allocate funding between the various ministries at central district levels. In order to link training funds to size of institutions, it is recommended that funds be allocated separately to postgraduate training at masters and doctorate levels internationally and nationally. Furthermore, an additional allocation for diplomas and certificates will be made on the basis of priority programme areas while the allocation of funding between ministries and districts would be made on the basis of approved programmes. It would in practice create a pool of funding for each

[12] 'Professional skills' include planning, monitoring & evaluation, and management.

ministry and district to be allocated between competing users. In order to best direct use of the funds and avoid unduly subjective judgement, it is recommended that preference for Doctorate and Masters degrees (both local and foreign) and diplomas should be given to departments with: (i) the highest average age of graduate level staff, (ii) the lowest ratio of staff with higher degrees (Masters and Doctorate) to total graduate establishment; and (iii) those which have the highest multi-annual budget allocations under the ASWAp.

5.4.5 Systems Design

The shift to a programme approach will require major changes to ways of working. This will be reflected in work planning, monitoring & evaluation, public financial management, procurement and human resources management. Major changes are expected in the first two areas with some adjustments to system design in the others.

Systems will need to be designed and installed before ASWAp implementation can progress and in addition, support to system operation will be needed for a period thereafter. Provision for technical assistance to systems design and operation has therefore been made in the budget.

System redesign will prospectively be based on the systems review recommendations as part of the support by the Office of the President and Cabinet in capacity assessment. If the recommendations are not in line with the priorities of MoAFS to govern ASWAp implementation, then a new systems assessment will be instituted.

5.5 ROLL-OVER OF THE ASWAP

The ASWAp implementation is scheduled to commence in the 2010/11 financial year which is the first year of the 4 year implementation period (2010/11- 2014/15). A small proportion of activities (less than 20%) outlined in the ASWAp are non-traditional to the Ministry and partners. For example, risk management component which encompasses weather insurance, village banks, market friendly buffer system management, and warehouse receipt systems among others. The larger proportion constitutes on-going activities being implemented by various departments and institutions and have been wholesomely taken on board for continuity purposes. However, targets for such activities are up-scaled in line with the aspirations of the ASWAp.

The on-going activities that have been fully integrated into the ASWAp (like the fertilizer subsidy program, seed multiplications, community seed-banks, model villages, livestock multiplication and vaccinations, soil fertility conservation and small-scale irrigation systems) may, where necessary, be modified in terms of the implementation procedures as per the ASWAp requirements. In this respect it is recommended that work-plans and expenditure plans should clearly highlight activities and the resource requirement during the entire four year period until the agricultural/sector is completely ASWAp focused (after first phase in 2014/15).

For activities, programs and projects that presently address issues outside the ASWAp, the implementing departments and institutions are strongly encouraged to start discussions with financiers towards aligning those to the vision and aspirations of the ASWAp. Where realignment may not be possible, the implementers should move towards winding up implementation of those programs/projects/activities as soon as possible. The aspiration of the Ministry is to ensure that all activities in the agricultural sector are fully aligned to the ASWAp and that the amount of resources

spent outside the framework is considerably minimized or wiped out all together by the end of the ASWAp first phase in 2014/15. For non-traditional priorities, like the risk management (weather insurance, village banks, and call option contracts) there is need for the ASWAp Secretariat to facilitate preparation of implementation proposals and action plans with the key sub-sectors/departments for submission to relevant donors.

The ASWAp Secretariat shall also be required to work closely with the Finance Department of the Ministry in monitoring the flow of resources to ASWAp targeted activities. It is strongly advisable that the Ministry should liaise with Treasury to clearly indicate ASWAp resources in any funding disbursements to the Ministry just like was the case during implementation of the Pro-Poor Expenditures (PPEs). It should be noted that the same case is being done with funds for the Health Sector SWAp. Implementing departments shall be encouraged to keep separate track of implementation of ASWAp areas within their mandates as well as the management of funds. For discretely funded priority areas (mainly being implemented through NGOs, Civil Society, Private Sector) the Secretariat shall be required to take note of those and monitor progress with the relevant implementers. The monitoring should include: the ASWAp focused implementation work plans, resources flow/disbursement reports, and implementation progress reports highlighting the level of linkages/participation of target beneficiaries and impact assessment reports on areas being implemented under ASWAp. Likewise, the DADO will be required to take note of discretely funded priority areas, coordinate and monitor progress with the relevant implementers.

CHAPTER SIX

ISSUES AND RISKS

6.1 BACKGROUND

There are several issues and risks that may adversely affect the implementation of the ASWAp. Among others, these might include inadequate commitment to the macro-economic reform programme, political instability, climatic risks including severe drought or floods, policy inconsistency, inadequate harmonization, weak financing mechanisms and capacity, and inadequate commitment to institutional reforms and speedy recruitment of staff to fill vacant positions in the Ministries.

6.2 INADEQUATE COMMITMENT TO THE MACRO-ECONOMIC REFORM PROGRAMME

The present Government has demonstrated commitment to macro-economic reforms. When it was elected in 2004, it inherited a serious macro-economic situation with a major increase in domestic debt from MK9.1 billion in June 2001 (8 per cent of GDP) to MK47.1 billion in 2004 (25 per cent of GDP). The new Government committed itself to strict fiscal discipline and adhered to all agreements made with the International Monetary Fund. It also implemented a policy of zero tolerance on corruption.

Interest rates fell, inflation fell, growth picked up, net credit to the private sector increased, and macro-economic stability was restored. The additional resources available to government were invested in the fertilizer subsidy (8.3 per cent of domestic expenditure and 2.8 per cent of GDP) and an increase in public sector wages and pensions.

There is now broad consensus about the need to maintain macro-economic stability among all political parties and strengthened capacity within the institutions that demand accountability for public funds. The risk due to lack of commitment to macro-economic reform is therefore relatively low.

6.3 POLITICAL INSTABILITY

The risk of serious political instability is relatively low given that the present Government is a majority government and presents significant opportunities for advancing priority Government developmental agenda. It is therefore anticipated that the period for passing the budget and other important pieces of legislation will be shortened.

6.4 WEATHER VARIABILITY AND CLIMATIC CHANGE

There is a significant risk of both drought and flooding. These have serious impacts both at the household and national economy level. At the household level, farmers experience dry spells at critical periods thereby depressing yields while environmental degradation imply that floods occur more frequently devastating homes and assets.

At national level, a major drought can undermine economic growth and food security. Food crises undermine macro-economic stability, divert scarce government capacity to deal with the crisis and also undermine investments in education and health. It will thus be important to ensure that farmers are given drought resistant and early maturing varieties and inputs in time to minimize the risk of an early end to the rainy season. Issues of minimising the risk of climate change and strengthening environmental protection to reduce the risk of erosion and flooding must be given priority and the required cross-sectoral collaboration throughout the implementation of the ASWAp. At market level, implementation of market-based risk management strategies will mitigate the risks associated with drought. Such strategies include macro-weather insurance, micro-weather insurance, warehouse receipt system and other market friendly buffer stock system management.

6.5 POLICY INCONSISTENCY

Inconsistency surrounding the key elements of agricultural policy has been a major deterrent to private sector investment in the past. Other areas of damaging policy inconsistency have included the grain and other commodity market liberalization, the maize export or import ban and privatization of parastatals. Past policy has often been significantly influenced by both internal and external pressure groups. The ASWAp should provide a common and transparent framework for developing policy in the future, and be a medium for evidence-led discussion rather than relative bargaining strength, advocacy skills, or sanctions. The risk for disagreement remains. During implementation, there is need for research to enhance harmonized formulation and implementation of policies.

6.6 INADEQUATE HARMONIZATION

This is potentially a major source of risk. In order for the donor community to align support to the policies and programme of work outlined in the Agricultural Sector Wide Approach, there needs to be broad consensus that these are the most critical priorities, that procurement and financial systems are robust and that sufficient capacity exists to implement the programme of work effectively. Agreeing on priorities, developing mutual trust and building capacity all take time and sustained effort and goodwill by all partners.

There is danger that in the interim, until a “perfect programme” emerges that some donors and other key stakeholders will simply continue with past practices. The experience of sector wide programmes in the agriculture sector throughout the region suggests that progress will take some time and there is need for Government, donor community, civil society, private sector, and farmer union to invest significantly in dialogue and developing trust.

6.7 TERMS AND CONDITIONS OF CIVIL SERVANTS EMPLOYMENT

The high levels of vacancies in the civil service are, in part, a symptom of unattractive terms and conditions of service. Clearly, the inability to recruit and/or retain qualified staff is a major risk to the programme. For instance, the extension system in the MoAFS is operating at 70 per cent of the establishment, and the inability to fill the vacancies will adversely affect the implementation of the ASWAp. It may also mean that the impacts of capacity building are dissipated, if there is major leakage of trained staff from the public sector. The continuation of current terms and conditions of service therefore represents a major risk to the successful execution ASWAp. Furthermore, these appalling conditions of service might lead to increased corrupt practices. There is therefore critical

need to make deliberate efforts to improve the terms and conditions of service by developing an emergency human resource development and retention plan targeting hard to reach areas of work. The plan should encompass among others construction and rehabilitation of dilapidated extension delivery infrastructure because agricultural staff in rural areas need decent housing and offices, provision of mobility facilities, hardship allowance and protective clothing.

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APPENDICES

Appendix 1: Strategic Objectives, Outcomes and Actions

STRATEGIC OBJECTIVE	FIELD OUTCOME INDICATOR	ACTION
Focus Area 1. FOOD SECURITY AND RISK MANAGEMENT		
1.1 Maize self sufficiency		
a. Increase maize productivity	Average maize yield increased from 1.2 to 3.0MT/ha	• Implement the input subsidy program (seed and fertilizer)
		• Increase attention to efficient fertilizer and seed use in subsidy program
		• Promote good agricultural practices including establishment of model villages, Clusters and Green belts
		• Develop and register new improved varieties and multiply breeders seed and basic seed
		• Increase distribution of improved maize seed
		• Strengthen migratory pests monitoring and control
b. Decrease on-farm post harvest losses	Post harvest losses reduced from 30% to 15%	• Promote improved on-farm storage technologies and facilities (granaries/silos, Larger grain borer control) for both food and seed maize •
1.2 Promote diversification of food production and dietary diversification for improved nutrition at household level		
1.2.1 Increase food productivity		
a. Increase productivity of pulses (beans, soy bean, pigeon peas, cow peas) and ground nuts	Average productivity increased from 0.5 to 1.0MT/ha	• Facilitate multiplication (breeders & basic seed) and distribution of improved legume seed varieties and be included in the Input subsidy programme • Conduct staff and farmer training • Promote GAP (Develop new varieties, conduct seed quality control, promote community seed banks, popularize improved technologies)
b. Increase productivity of horticultural crops namely Fruits	Average productivity for horticultural crops increased	• Improve existing systems for distribution of high quality vegetable seeds and fruit tree seedlings

(mango, citrus, banana, plantain, pineapple, pawpaw, avocado pear) and vegetables (tomato, carrot, pumpkin, Amaranthus, kangange, moringa)		• Facilitate development of fruit nurseries through the establishment of mother fruit orchards for supply of quality scion of recommended varieties. • Conduct staff and farmer training • Facilitate preparation of policies, legislation and regulations governing the horticultural industry to ensure adherence to the required market standards and food safety (nurseries, field production and marketing standards).
		• Promote adoption of Integrated Production and protection (IPP) technologies for horticultural crops
c. Increase productivity of cassava, sweet and yellow potato and Irish potato in relevant areas	Average yield increased for cassava from 20 to 25MT/ha, sweet potato from 13 to 20MT/ha	• Facilitate multiplication and distribution of disease free improved planting material of cassava and sweet potato • Conduct staff and farmer training • Develop mother nurseries
d. Increase household (HH) poultry meat and egg productivity	>Egg production increased from 2,291 to 4,685MT per year >Poultry mortality reduced from 60 to 20%	• Improve provision of vaccines/vaccination services for poultry diseases • Promote increased production of high quality feed including development of local feed formulations • Monitor and certify quality of poultry feeds
	>Poultry meat production increased. >Chicken population increased from 44 million to 120 million at national level >Guinea fowl population increased from 900,000 birds to 2,000,000 at national level	• Increase capacity of regional hatcheries and number of mini-hatcheries for chickens including Black Australop • Intensify livestock group formation and support • Intensify livestock frontline staff training
e. Increase small stock productivity (goat)	>Goat herd size increased from 3 million to 5.4million >Goat milk productivity increased from 0.5liters/goat to 1.5liters /goat/lactation >Pig herd size increased from 1million to 2milion pigs pa. >Rabbit herd size increased from	• Promote goat re-stocking and farmer-to-farmer transfer (pass-on) systems for meat and milk production • Intensify farmer and staff training programs • Intensify vaccination campaigns

	600,000 to 1.2milion rabbits per year	
Livestock Production		• Introduce improved, approved and registered exotic breeds with superior characteristics • Promote production of improved chicken feed based on locally available materials. • Introduce productive dairy goat breeds that give at least two liters of milk per day as compared to the local goat which gives 0.25 to 0.5 liters of milk per day. • Improve and increase capacity of existing regional hatcheries (Mikolongwe, Bwemba and Choma) for rapid multiplication of chickens and guinea fowls. • Introduce productive breeds in the smallholder communities to improve the size and quality of goats and pigs. • Improve the management system for pigs and rabbits under smallholder farmers • Improve poultry vaccination services including the production and importation of sufficient vaccine doses. • Increase the number of chickens and guinea fowls vaccinated against New Castle disease at smallholder level • Manufacture and distribute mini-hatcheries to groups of smallholder farmers or individuals at village level for chicken and guinea fowl multiplication. • Promote goat re-stocking and transfer systems (farmer to farmer pass-on programmes) for meat and milk production. • Improve vaccination services against Swine fever to stimulate production of pigs for meat. • Disseminate skills and knowledge in the preparation, processing and utilization of rabbit meat.

Fish Production		• Promote village level fish farming schemes comprising of four hectares of water surface area benefiting about thirty smallholders per location through construction of fish ponds • Facilitate provision of fish fingerlings, fish feed and training of fingering producers as well as fish feed producers
1.2.2 Promote consumption and utilization of diversified high nutritive value foods at HH level		
a) Promote dietary adequacy	Proportion of h/h consuming diversified diet and micronutrient rich foods (with Vit A and Iron) increased and measured by HDDS (H/h Dietary Diversity Score)	• Develop standardized messages covering production to utilization • Conduct demonstrations on processing and utilization of a diversified diet. • Develop local recipes with emphasis on the multi-mix approach • Conduct regular dietary monitoring and assessments • Promote the six food groups approach and generate baseline data for post-promotion evaluation (in year 3) •
b) Improve quality of diets for the most vulnerable groups	Number of vulnerable people accessing quality diets increased	• Promote consumption of enriched foods with soy beans, g/nuts, beans, p/peas, c/peas) in complementary feeding programmes, maternal nutrition and PLHIV • Conduct demonstrations on preparation of enriched phala in both communities and at NRU and CTC sites
c) Intensify nutrition education	Number of households accessing nutrition education increased	• Develop and promote IEC materials on consumption, processing, preparation and utilization of enriched foods • Train extension workers on prevention of micronutrient deficiencies

		• Conduct multi-media campaigns on dietary diversification, consumption of Vit A and Iron rich foods • Conduct consumer education on fortified foods • Conduct staff and farmer training in food budgeting (300 kg maize /person/yr; 50kg g/nuts + 50kgs Soyabeans + 50kgs beans/person/year) • Train Extension staff (TOT) and Hh in processing, preservation, storage and utilization. • Conduct joint staff and farmer training with the Ministry of Women and Child Development and Local Government and promote coordinated approaches
1.3 Risk management for sustainable food availability at national level		
a. Improve risk management systems and mechanisms for food stability at national level	National food gap avoided (MT)	• Improve management of the Strategic Grain Reserve (SGR)
		• Increase storage capacity at national level
		• Promote village grain bank schemes including improved granaries and mini silos
	Increased number of functioning market- based risk management mechanisms employed	• Establish a warehouse receipt system • Employ maize supply/price hedging strategy
		• Strengthen the framework and capacity for maize call options import contracts
		• Establish a commodity market insurance system
	Number of weather related risk management mechanisms employed	• Develop a weather related insurance product for maize ie. Rainfall index based early warning system; Macro and Micro-weather insurance systems
		• Strengthen weather forecasting capability for agriculture
	Technology adoption	• Encourage planting of drought resistant crops

• **Focus Area II. COMMERCIAL AGRICULTURE, AGRO-PROCESSING and MARKET DEVELOPMENT**		
• **II.I Agricultural exports for improved balance of trade and income**		
Increase total value of agricultural exports by commodity	Increased exports of tobacco (125,000 to 185,000MT), tea (44,000 to 60,000MT), cotton (20,000 to 50,000MT), sugar (110,000 to 150,000MT), coffee, macadamia, Birds eye chillies, paprika, groundnuts, soybeans,	• Promote contract farming, out-grower schemes, farmer associations and cooperatives by commodity
		• Promote producers organizations for specific commodity value chain
		• Strengthen managerial and technical capacity of producer organizations
		• Promote partnerships, dialogue and cooperation between chain stakeholders • Strengthen capacity of value chain players
		• Promote production, distribution and utilization of improved seed, chemicals and fertilizers.
		• Promote agricultural exports (through market research studies, export trade fairs, buyer/trader meetings etc.)
	Increased unit value of agricultural exports (MK/MT) by commodity based on constant prices	• Improve compliance to market standards (grading, packaging, labeling, volumes demanded, timing of exports, delivery requirements etc.)
		• Promote quality through compliance to sanitary and phytosanitary standards, varieties, and grading
		• Provide technical services support to enhance output quality including quality certification and regulatory services and border post produce inspections
		• Procure laboratory equipment for analysis of soil, pesticides efficacy, cotton fiber, lint quality, and pesticide residues in food crops
		• Consider input subsidy for tobacco seed & fertilizer, cotton seed & chemicals and legume

		seed
• **11.2 Commercial production and agro-processing for import substitution and domestic market development**		
a. Increase volume of high-value commodities for agro-processing and import substitution	Increased volume of high value crops under irrigation and rain-fed conditions i.e. rice, fruits (pineapple, mango, oranges, banana,), vegetables (tomato, green beans, onion), potato, cassava,).	• Rehabilitate existing irrigation schemes and systems and develop new ones
		• Strengthen technical and Operational & Management capacities for irrigation management including establishment of WUA when required
		• Provide research, extension and marketing services for irrigation systems users
	Increased milk production & processing from 30,000 to 61,000MT	• Provide research, extension and marketing services for irrigation systems users. • Import dairy cattle animals and upscale multiplication of dairy animals • Increase production of animal feed and fodder • Promote mini dairy processing and cooling facilities
	Dairy animal mortality reduced from 20% to 5%	• Provide preventive cattle vaccination services (foot and mouth, anthrax, black leg diseases) for beef and milk production (Intensify disease control programmes)
		• Provide the essential technical services required by beef and milk producers (AI service, live bull service, feed production, veterinary services)
		• Rehabilitate dip-tank infrastructure and strengthen technical and O & M capacities for their management
	Increased beef herd size from 850,000 to 1,250,000	• Promote formation of MBG/cooperatives for livestock • Develop local feed formulations and train people on production of the feeds • Promote stall feeding systems
	Increased red meat production &	• Establish rural mini abattoirs

	processing from 44,779 to 91,569MT	• Establish organized meat and egg markets
	Increased white meat production & processing from 69,097 to 141,396MT	
	Increased fish catch landing (capture fisheries) from 45,000 to 60,000MT per year	• Encourage adoption of appropriate on/off shore fishing practices
b. Increase unit value of commodities (financial and non financial services)	Increased fish productivity in fish ponds (aquaculture) from 700kg to 2,000kg/ha	• Develop area-specific fishery management plans
		• Promote improved fingerlings and fish feed production
	Increased unit value of commodities through agro-processing	• Promote group and individual small scale agro-processing (e.g. fruit, potato, cassava, dry beans green beans; tomato fish; milk & beef) • Promote utilization of agro-processing technologies • Set up and expand market information systems
	Producer/consumer price differential reduced in key markets and for key commodities	• Promote group and individual small scale agro-processing for reduced spatial and temporal variability of prices
		• Build or rehabilitate market infrastructure in relevant places for specific commodities
	Increased access to credit by small and medium scale agro processors and traders	• Provide financial leverage systems for private agro-business enterprise development (e.g. matching grants)
		• Provide non-financial business services and capacity strengthening to small and medium scale agro-processors and traders (e.g. business plan, market informat6ion, linkages between suppliers and buyers)
• **II.3 Public/private partnerships in Input and output market development**		
a) Improve the public/private partnerships for broader growth of the agriculture sector	Efficiencies in the Input and output markets improved	• Develop a strategy for partnerships between the public sector and private sector actors with well defined objectives, structures, membership characteristics, roles, responsibilities, operational principles and agreed code of conduct
	Linkages for public/private sector	• Establish and improve on effective

	investments strengthened	communication and coordination mechanisms amongst government, donors, civil society organisations, and the private sector
		• Enhance public sector investment to better leverage collateral investments by the private sector to achieve longer term gains
		• Improve efficiency of public investments and collateral investments made by the private sector, farmers and NGOs
		• Improve transaction efficiency along the value chain for inputs and outputs
		• Improve farmer knowledge and choice regarding new technologies
Focus Area III SUSTAINABLE AGRICULTURAL LAND AND WATER MANAGEMENT		
III.1 Sustainable agricultural land management	Agricultural area (ha) under sustainable management (SLM) increased from 72,000 tO 250,000ha	• Promote conservation farming (use of best technologies that build and sustain soil fertility, prevent soil erosion, conserve soil moisture, promote efficient utilization of rain or irrigation water)
		• Promote labour saving technologies (land ploughing using hired tractor or own tractor, herbicides for weed management and crop protection agents)
		• Promote management systems and technologies that protect fragile land (river banks, dambo areas, steep slopes or hilly areas, and water catchment areas) • promote community based dambo management systems
		• Subsidize inputs to raise forestry and fruit tree seedlings or buying of plants from commercial nurseries for farmers and village communities for planting on fragile or degraded land areas
III.2 Sustainable agricultural water management and irrigation development	Area under sustainable irrigation (ha) increased from 72,000 to 300,000ha	• Rehabilitate existing irrigation schemes and systems • Develop new irrigation schemes with appropriate

		systems • Strengthen technical capacity for irrigation management • Promote establishment of water users associations • Improve the technical & management capacities of WUA • Rehabilitate existing irrigation infrastructure in research stations
		• Establish rainwater harvesting systems (dams, box ridges)
		• Promote effective management of water catchment areas (afforestation, fruit orchard establishment, grass cover, etc)
		• Re-stock rural irrigation dams and rivers with fish
III.3 Sustainable management of the effects of climate change		
a) Mitigate the effects of drought and floods		• Improve early warning systems for droughts and floods as well as disease and insect pest outbreaks (Army worm, Red locusts, aphids)
		• Develop rain water harvesting and storage systems
		• Construct irrigation dams to ensure availability of water
b) Adopt appropriate technologies to combat drought		• Promote growing of drought tolerant crops and management practices
		• Encourage planting of forest trees and fruit trees in fragile land areas
		• Promote growing of Jatropha trees for production of bio-disiel to reduce air pollution
		• Develop strategies for drought preparedness and accurate crop estimates
		• Protect fish breeding locations in lakes and rivers that are being degraded by droughts and floods
		• Support soil conservation initiatives and rehabilitation of degraded agricultural land

		•
KEY SUPPORT SERVICE 1: Institutional Strengthening and Capacity Building		
a) Institutional strengthening and development	Number of institutions and systems developed and strengthened	• Strengthen and improve institutional leadership and management capacities and skills of key stakeholders to plan, coordinate, implement and monitor the ASWAp programme as well as managing government and donor investments • Improve agriculture sector planning, implementation, M&E, investment management, governance, and nutritional surveillance
		• Conduct a Core Function Analysis of the MoAFS to determine how the Ministry will manage its activities under the ASWAp
		• Establish an ASWAp secretariat to coordinate the activities of the ASWAp and provide linkage within the MoAFS and amongst key stakeholders in the agricultural sector
		• Develop and strengthen public management systems
		• Establish and strengthen public/private partnerships for specific priority commodities
	>Training for improved academic and professional knowledge and skills of existing agricultural staff in all departments achieved	• Provide training needed to improve technical and administrative systems, skills development, strengthening partnership
		• Conduct orientation courses for newly recruited staff on policies and programmes
		• Provision of training to frontline staff for orientation, upgrading and skills development •
		• Provide short and long term courses on the various priority programmes of the ASWAp at certificate, diploma, B Sc, and PhD levels
b) Capacity building	Adequate human resources in place to	• Fill all critical vacant posts (currently estimated at

	improve staffing at all levels to effectively implement the ASWAp programmes	45% in the MOAFS) in the MOAFS and the agricultural sector as a whole • Recruit the appropriate human resources needed to implement programmes effectively • Recruit additional extension workers to progressively fill the establishment based on the human resources figure (currently at 45 per cent vacancies). •
	Improved resource allocation (equipment, facilities and finances)	• Procure adequate equipment and facilities (motor cars, motor bikes, computers, bicycles, laboratory equipment, office furniture and equipment) for front line staff • Provide adequate finances to meet operational costs and maintenance of vehicles and equipment
		• Develop and improve resource capacities of key institutions for front line agricultural staff •
KEY SUPPORT SERVICE 11: Technology Development and Dissemination		
a) Conducting results and market oriented research on priority technology needs and provision of technical and regulatory services	Increased agricultural productivity as a result of technology adoption and utilization	• Develop crop varieties that are high yielding, good quality, resistant to diseases and drought tolerant
		• Develop Good Agricultural Practices (GAP) i.e. Soil fertility, fertilizer and plant population management systems and integrated pest management
		• Develop labour saving technologies
		• Develop harvest and post harvest management systems including crop storage systems
		• Improve efficiency of the use of inputs (Seed , fertilizer and chemicals) by farmers
		• Breed or introduce livestock that are highly productive in meat, milk and egg production
		• Monitor production of livestock feeds and certify their quality

		• Provide technical services required by farmers i.e.dip tank fluids, vaccines for livestock; seed certification services; sanitary and phytosanitary services; production and certification of foundation and basic seed and vegetative planting materials; development and monitoring of quality standards; soil analysis for site specific fertilizer recommendations; pesticide residue analysis for food safety and analysis of Afflatoxins in groundnuts and other food grains.
		• Develop value addition technologies to promote agro-processing initiatives
b) Provision of efficient farmer-led extension and training services	Increased agricultural productivity due to efficient delivery of extension services	• Disseminate technologies on Good Agricultural Practices (GAP) to increase agricultural productivity i.e. choice of varieties and seed; management of soil fertility, fertilizers and plant population, time of planting and integrated pest management
		• Provide policy and regulatory support services
		• Promote the use of model villages, green belts, clusters and farmers cooperatives in the transfer of technologies
		• Train farmers on all aspects of GAP
		• Provide technical services required by farmers i.e. AI service for dairy cattle; dip tank management, vaccination services for livestock; distribution of vegetative planting materials; and monitoring of quality standards;
CROSS CUTTING ISSUES: Gender Disparities, HIV and AIDS Pandemic		
Gender equity and empowerment and HIV and AIDS impact mitigation	Agricultural productivity increased by recognizing gender roles and responsibilities and mitigating the impact of HIV and AIDS	• Mainstream HIV and AIDS and Gender strategy in the ASWAp • Establish Gender, HIV and AIDS focal points to act as catalysts to coordinate and address Gender, HIV and AIDS mainstreaming activities in all

		institutions implementing the ASWAp
		• Train members of the focal points to increase their knowledge in Gender, HIV and AIDS analysis and capacity enhancement
		• Mobilize and empower community groups and train them to equip them with skills in Gender, HIV and AIDS analysis
		• Establish and build partnerships with other organizations and networks involved in Gender, HIV and AIDS issues to build coalitions that facilitate advocacy, capacity building and sharing of experiences
		• Operationalize the MoAFS policy and strategy on Gender, HIV and AIDS mainstreaming in the agricultural sector
	Increased and improved agricultural labour	• Identify roles and concerns of men, women, boys, girls, and consider division of labour.
	Improved food security and income security at household level	• Empower vulnerable groups to have access to agricultural inputs, benefits and opportunities.
	Improved HIV and AIDS impact mitigation intervention for service providers and farmers	• Scale up interventions for nutritional support, education and agro-based income generation
	Improved access to treatment , care, food and nutritional support to people living with HIV leading to improved research and extension services	• Provide access to medical treatment, care, food and nutritional support to mitigate the health and nutritional impact of HIV and AIDS
	Enhanced decision making process in the agricultural sector	• promote participation of vulnerable groups in decision making, policy formulation and implementation processes
	Prevention of HIV and AIDS and behavior change enhanced	• Scale up education on HIV and AIDS and ensure that ASWAp activities do not promote HIV infection and transmission amongst participating members
	Community empowerment	• Increase capacity of staff and farmers to mainstream HIV, AIDS and Gender issues in ASWAp interventions

Appendix 2: Composition and Functions of ASWAp Related Bodies

CENTRAL LEVEL				
Body	**Composition**	**Functions**	**Meetings**	**Reports to**
Executive Management Committee (EMC)	• Chaired by the PS of Agriculture • PS MoWID • PS Dept. of Nutrition, HIV & AIDS • PS MoTPSD • PS MoLGRD • PS MoF • PS MoDPC • MoLNRE (co-opted as needed) • OPC Public Sector Reform (co-opted as needed)	• Provides strategic direction for the ASWAp • leads inter-Ministerial coordination. • Oversees development and implementation of policy decisions under ASWAp • Endorses Annual Work Plan (AWPB) • Monitors progress.	Twice yearly	Cabinet sub-committee on agriculture
ASWAp Secretariat	• ASWAp Coordinator • Deputy Coordinator (Technical) • Deputy Coordinator (Administration)	• Consolidates AWPBs for endorsement by the EMC. • Convenes and minutes meetings of Working Groups, the Partnership Forum and the Executive Management Committee. • Ensures timely reporting by participating implementation agencies and consolidates Annual Implementation Reports (AIRs) and possibly quarterly reports. • Liaises with donors and monitors adherence to the provisions of the MoU & the CoC • Convenes and prepares for the Annual Review Process.	Works continuously	PS Agriculture
Partnership Forum	• Chaired by the PS, MoAFS • PS of participating Ministries • Reps of Development Partners • Reps. of NGOs • Reps. of the private sector • Reps. of parastatals • Reps of Farmers' organisations • Reps. of Districts (possibly one from	• Receives reports and reviews progress in the implementation of ASWAp in general and of each AWPB • Presents stakeholders' views to the EMC on ASWAp strategy and actions.	Once yearly (coinciding with the ARP)	Advisory

	the Northern Region, one from the Central Region and one from the Southern Region) • Reps. of relevant education institutions			
Working Group on Management related issues	• Chaired by the ASWAp Secretary • 4 reps of the Development Partners • 1 rep of the MoAFS • 1 rep of the MoIWD • 1 rep. of the MoTPSD • 1 rep of the MoLGRD • 1 rep of the MoF • 1 rep of the MoDPC	• Provides forum for dialogue between for government and development partners on financial management, procurement, planning, budgeting, monitoring and evaluation. • Supports line departments in financial management, procurement, planning, budgeting, monitoring and evaluation. Seeks to reflect informal feedback from donors on these areas.	Every two weeks (or more frequently on demand).	Advisory body
Technical Working Groups	**Food Security** • Chaired by a Director, MoAFS • 1 rep. of the MoIWD • 1 rep. of the MoLGRD • 2 reps. of NGOs • 1/2 reps. of Development Partners • 2 reps. of farmers' organisations • 1 rep. of the private sector • 1 rep. of the districts	• Supports line departments on technical issues and methodologies for the implementation of ASWAp activities within the relevant focus area (Food Security). • Advises the PS Agriculture on broad policy issues related to the activities within the relevant focus area. Seek to reflect informal feedback from stakeholders on the relevant focus area.	Quarterly (or more frequently on demand)	Advisory
	Sustainable Natural Resource Management and Mitigation of Climate Change Effects • Co-chaired by a Director MoAFS and the MoIWD • 1 rep. of the MoAFS • 1 rep. of the MoLGRD • 1 rep. of the MoLNRE • 2 reps. of NGOs working in SLM • 1/2 reps. of Development Partners working on SLM • 2 reps. of farmers' organisations • 1 rep. of the districts	• Supports line departments on technical issues and methodologies for the implementation of ASWAp activities within the relevant focus area (Sustainable Natural Resource Management and Mitigation of Climate Change Effects) • Advises the PS Agriculture on broad policy issues related to activities within the relevant focus area. • Seeks to reflect informal feedback from stakeholders on the relevant focus area.	Quarterly (or more frequently on demand)	Advisory

APPENDIX 3A: ASWAP RESULT INDICATORS

COMPONENT	SUB-COMPONENT	INDICATOR	UNIT OF MEASURE	BASELINE (2009-10)	2010 -11	2011-12	2012 -13	2013 -14	2014-1 5
Food security and risk management	Maize self-sufficiency through increased maize productivity and reduced post harvest losses	Average maize yield increased from 1.8 to 3.3 mt/ha by 2014	Metric / ha	1.8	2.0	2.3	2.6	3.0	3.3
		Post harvest losses reduced from 25% to 10% by 2014	Percentage	25	20	18	15	12	10
		Estimated total soil loss	Tonnes/ha/year	20	18	15	14	13.	12.5
	Diversification of food production and dietary diversification for improved nutrition at household level with focus on crops, livestock and fisheries	Proportion of farm families consuming dietary diversification	Percentage	15%	25%	35%	45%	55%	65%
		Number of food crops grown by households increased from one to at least two by 2014.	Food crops grown	1	2	3	3	3	3
	Risk Management	National food gap for energy	Percentage	0	0	0	0	0	0

COMPONENT	SUB-COMPONENT	INDICATOR	UNIT OF MEASURE	BASELINE (2009-10)	2010 -11	2011-12	2012 -13	2013 -14	2014-1 5
	for Sustainable food stability at national level	foods reduced to zero by 2014							
Commercial Agriculture, Agro-processing and Market Development	Agricultural Exports for improved balance of trade and income	Total value of agricultural exports increased from $580 million to $850 million by 2014	Million US$	580	650	700	750	800	850
	Commercial production and agro-processing for import substitution and domestic market development	As above							
		Household agricultural incomes increased from US$280 per annum to US$600 per annum by 2014.	US $	280	300	350	500	550	600
		Access to credit by small and medium scale agro processors and traders	Percentage	20	30	40	50	60	70

COMPONENT	SUB-COMPONENT	INDICATOR	UNIT OF MEASURE	BASELINE (2009-10)	2010 -11	2011-12	2012 -13	2013 -14	2014-1 5
		increased from 20% to 70% by 2014							
	Public/Private partnerships in input and output market development	As above							
	Improve the public/private partnerships for broader growth of the agriculture	As above							
Sustainable Agricultural Land and Water Management	Sustainable Agricultural Land Management /.	Agricultural area (ha) under sustainable land management (SLM) increased from 72,000 ha to 250,000 ha by 2014	Hectares	72,000	120,000	150,000	180,000	220,000	250,000
	Sustainable Agricultural Water Management and Irrigation Development through the Greenbelt Initiative	Area under sustainable irrigation increased from 72,000 to 300,000ha by 2014	Hectares	72,000	140,000	180,000	240,000	280,000	300,000

COMPONENT	SUB-COMPONENT	INDICATOR	UNIT OF MEASURE	BASELINE (2009-10)	2010 -11	2011-12	2012 -13	2013 -14	2014-1 5
	Sustainable Management of the effects of climate	As above							
Key Support Services:									
Technology Generation and Dissemination	Results and Market oriented research on priority technology needs and provision of technical and regulatory services	Rate of adoption of priority technologies increased from 40% to 70% by 2014	Percentage	40%	45%	50%	55%	60%	70%
	Efficient Farmer-Led Extension and Training Services	As above							
Institutional Strengthening and Capacity Building	Strengthening Public Management Systems	Staff Vacancy rate reduced from 31% to 10% by 2014	Percentage	31	26	22	18	12	10
	Capacity Building of the Public and Private Sectors	A comprehensive capacity building program in place by 2014		0	1	1	1	1	1
Cross-Cutting Issues:									

COMPONENT	SUB-COMPONENT	INDICATOR	UNIT OF MEASURE	BASELINE (2009-10)	2010 -11	2011-12	2012 -13	2013 -14	2014-1 5
HIV Prevention and AIDS Impact Mitigation	HIV related morbidity and mortality attrition minimized	Proportion of staff accessing supplementary feeding at workplace increased from 3.4% to 8% by 2014.	Percentage of staff	3.4%	3.5%	4.5%	6%	7%	8%
		Average farmer working hours per day to be maintained at 5 hrs per farmer per day	Working hours	5 hrs	5 hrs	5 hrs	5 hrs	5 hrs	5 hrs
	Enhanced resilience and household coping mechanisms	As above							
	HIV infected risks and vulnerabilities reduced	As above							
Gender Equality and Empowerment	Gender disparities reduced	Proportion of vulnerable groups (men, women, girls, boys, orphans, widow(er)s, etc. accessing agricultural inputs through the FISP increased from 47% to 50%	Percentage	47	50	50	50	50	50

COMPONENT	SUB-COMPONENT	INDICATOR	UNIT OF MEASURE	BASELINE (2009-10)	2010 -11	2011-12	2012 -13	2013 -14	2014-1 5
		by 2014.							
		Proportion of vulnerable people involved in decision making, policy formulation and implementation processes increased from 30% to 50% by 2014.	Percentage	30	33	35	40	45	50
	Enhanced capacity of youth, women and men	As above							

APPENDIX 3B: DETAILED ASWAP RESULTS AND TARGETS FRAMEWORK

Strategic Objective	Final outcome indicator	Current Status (2009-2010)	Target (2013/14)	Action	Resp. Inst.	Output indicator	Current status (2009/10)	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Total	Unit cost ($US)
Prog. I. FOOD SECURITY AND RISK MANAGEMENT													
I.1. Maize self-sufficiency													
a. Increase maize productivity	Average maize yield increased (MT/ha)	1.8	3.0	Implement the input (maize seed + fertilizer) subsidy programme	DAPS	Number of farmers receiving voucher for fertilizer subsidy	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	6,400,000	50
				Input subsidy for maize seeds	DAPS	Number of farmers receiving voucher for maize seed subsidy	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	8,000,000	6
				Promote good agricultural practices (GAP)	DAES	Number of farmers receiving GAP (for maize including fertilizer use)	600,000	990,000	1,177,500	1,290,000	1,440,000	4,897,500	10
				Develop improved	DARS	Number of improved	6	2	2	1	1	6	10,300

			varieties		varieties released							
			Multiply breeder seed	DARS	Quantities of breeder seed multiplied (Kg)	5000	5000	6000	7000	8000	26,000	10
			Increase distribution of improved maize seed	DARS	Quantities of maize basic seed produced (MT)	5	10	15	20	25	70	5,000
				DARS	Quantities of commercial improved seed certified (MT)	500	1,000	1,500	2,000	2,500	7,000	50
				DARS	Quantities of improved maize seed sold (MT)	15,000	20,000	24,000	29,000	34,000	107,000	179
				DCP	Number of farmer groups involved in improved seed multiplication	120	120	120	140	160	540	100
% of post-harvest losses reduced from 25% to 10%		0.1	Promote improved on-farm storage technolog	DAES	Number of farmers receiving info. on storage	600,000	990,000	1,177,500	1,290,000	1,440,000	4,897,500	10

			ies (food, seed)		technologies (physical, chemical)							
	0.25		Disseminate messages on post harvest handling		Number of messages on post harvesting	4	4	5	5	6	20	800
			Distribute metallic silos	DCP	Number of metallic silos distributed	660	792	950	1,140	1,369	4,251	300
			Train local artisans in metallic silo building		No. of local artisans trained in metallic silos	250	300	400	500	600	1,800	100
			Construct cement silos for seeds		No. of cement silos constructed	86	120	200	250	290	860	300
			Identify integrated post harvest technologies	DARS	No of new post harvest technologies identified and approved by the ATCC	3	3	4	4	5	16	20,000
			Strengthen migratory pests monitorin	DCP	No. of hectares monitored and controlled	42,500	42,500	42,500	42,500	42,500	170,000	170

				g and control									
Sub-total													
I.2. Promote diversification of food production for improved nutrition at household level													
a. Increase legumes productivity	Groundnut (MT/ha) productivity increased		1.5mt	Promote Input subsidy for legume seeds	DAPS	Number of farmers receiving voucher for legume seeds subsidy	-	600,000	600,000	700,000	700,000	2,600,000	6
		0.5mt		Promote groundnut community seed banks	DCP	No of community seed banks established	15	20	30	40	50	140	500
				Promote good agricultural practices	DARTS/ DAES	No. of farmers receiving advice on GAP (including indigenous vegetables)	600,000	700,000	800,000	1,100,000	1,150,000	3,750,000	10
	Beans productivity		1mt			No. of pulses related technical messages developed	2	2	2	2	2	8	800
	Soy beans	0.4	1mt	Multiply breeder and basic seed	DCP	No. of community seed banks	12	18	40	50	60	168	500

Pigeon peas	0.8	1mt	Develop new pulses varieties	DARS	No. of new pulses varieties released	12	0	3	5	1	9	8,000
Cow peas	0.5	1mt	Develop new pulses varieties	DARS	No of community seed banks	4	6	3	3	3	15	350
	0.5		Multiply breeder and basic pulse seed		Quantities of breeder pulses seed produced (Kg)	600	750	900	1,050	1,200	3,900	15
					Quantities of basic pulse seed produced (MT)	6	8	9	10	12	39	5,000
					Qty of certified commercial pulses seed (MT)	60	75	90	105	120	390	75
			Increase distribution of improved pulse seed	DPC	Number of farmer groups involved in pulse seed multiplication	9	10	20	30	40	100	100
			Conduct pulses seed quality control	DARS	Number of hectares inspected	1,000	1,500	2,000	2,500	3,000	9,000	35
			Promote establishment of community seed banks for legumes	DCP	No of community seed banks established	35	50	100	150	200	500	500
			Popularize new crop varieties and	DCP/DAES	No of demonstrations conducted	1,200	1,500	1,800	2,100	2,500	7,900	2,500

				improved farming technologies									
b. Increase HH horticultural crops productivity	Average productivity for horticultural crops increased			Improve existing system for distribution of high quality horticultural seeds/vegetative planting material	DPC	Number of technical messages released related to horticulture	-	2	3	4	5	14	800
	Fruit yield and quality improved		12,842,989plants	Promote fruit tree propagation	DCP	No. of fruit trees propagated	8,848,403	12,500,000	17,000,000	22,000,000	26,500,000	78,000,000	2
	Pineapples (MT/ha)	5,842,989 plants	30										
	Average plantain yield increased (MT/ha)	24	25										
		22		Promote use of improved technologies in horticulture		No. of farmers adopting technologies	-	15,000	20,000	30,000	40,000	105,000	10
	Leafy vegetables productivity increased (MT/ha)		20	Develop improved horticultural technologies	DARS	Number of farmers groups involved in horticulture seed multiplication	-	8	9	10	11	38	300
		15				Number of technologies released	10	11	13	14	15	53	8,000
	Number of backyard, communal and school gardens established		2600			No. of backyard gardens promoted	-	500	600	700	800	2,600	60

c. Increase root and tubers crops productivity in relevant areas	Average cassava yield increased (MT/ha)	?	25	Multiplication and distribution of cassava and sweet potato improved planting materials	DCP	Quantities of cassava improved planting material (bundles) distributed	314,178	324,570	334,182	344,110	354,350	1,357,212	1
	Average sweet potato yield increased (MT/ha)	20	20		DCP	Quantities of sweet potato improved planting material (bags) distributed	157,089	162,285	167,091	172,055	177,175	678,606	1
	(yellow and white varieties , MT/ha)	13											
				Develop mother nurseries (vegetative multiplication)	DARS	Area under mother nurseries (ha)	15	20	30	40	50	140	650
						Construct/rehabilitate tissue culture laboratory	2	1	0	1	0	2	100,000
d. Increase HH poultry meat and egg productivity	Number of chickens produced at national level increased		######	Provide vaccines / vaccination services against Newcastle disease	DAHLD	Number of NCD vaccine doses procured ('000)	10,000	22,000	66,000	105,000	150,000	343000	2
	National flock of guinea fowls increased	######	2,000,000	Multiplying and de-worming of guinea fowls	DAHLD	No. of poultry groups supported	-	56	56	56	56	224	300

		900,000				No. of guinea fowls de-wormed and vaccinated	-	1,100,000	1,350,000	1,650,000	2,000,000	6100000	0.015
				Increase availability of well trained livestock extension workers	DAHLD	Number of AVOs trained	300	200	250	250	500	1200	120
				Increase provision of veterinary services for poultry	DAHLD	Undertake refresher courses for Aides on poultry production and marketing	-	200	200	200	200	800	120
				Establish mini hatcheries	DAHLD	No. of mini hatcheries established	-	8	7	7	6	28	25,000
				Improve poultry feed quality	DAHLD	Number of farmers receiving information on adapted poultry feed training	4,000	400	1,320	1,616	744	4080	150
					DAH	Number of mini feed mills established	-	1	3	3	4	11	7,200
				Develop local poultry feed formulae	DARTS	Number of local feed formulae developed	2	0	1	1	0	2	10,000
e. Increase small stock productivity (goat)	Increased goat herd size & productivity		5,400,000	Promote goat re-stocking and pass-on programmes	DAHLS	Number of farmer groups assisted with breeder goats	150	200	200	200	200	800	1,450
		3,000,000				Number of goats de-wormed	3,000,000	3,500,000	4,200,000	4,200,000	5,400,000	17300000	0.3
				Training of farmers in goat management		No of farmers groups trained	-	58	116	232	464	870	100
				Introduce drug-box		No. of groups	-	58	116	232	464	870	10

				services		supported							
	Increased goat milk production (MT)		1.5 litres/goat/day	Promote keeping of improved dairy goat breeds (Torkenburg and Saanen)	DAHLD	No. of organized groups participated in pass-on-programme	5	10	18	25	35	88	10,600
	Increased rabbit herd size & productivity	0.25 litres/goat/day	1,200,000	Promote rabbit re-stocking and pass-on programmes	DAHLS	Number of groups supported with rabbit breeds	-	28	28	28	28	112	200
f. Increase hh dairy production	Increased cow milk production (MT)	600,000	80,000	Import dairy animals	DAHLD	No of dairy animals	24,760	1,000	1,200	1,440	1,700	5340	2,200
		39,000		Intensify cross breeding programmes	DAHLD	No of dairy animals	24,760	2,476	8,171	10,622	4,603	25872	2
				Increase animal feed/fodder production and conservation	DAHLD	Silage tonnage achieved	180,000	18,000	59,400	77,220	33,462	188082	3
				Intensify disease control programmes	DAHLD	No of dairy animals de-wormed	24,760	27,236	35,407	46,029	50,632	159304	2
				a. Vaccination	DAHLD	No of dairy animals vaccinated	24,760	27,236	35,407	46,029	50,632	159304	5
				b. Dipping	DAHLD	No of dairy animals dipped	24,760	27,236	35,407	46,029	50,632	159304	3
				c. TB testing	DAHLD	No of dairy animals tested	24,760	21,789	28,325	36,823	40,505	127442	2

				d. Mastitis control	DAHLD	No of dairy animals treated	24,760	8,171	10,622	13,809	15,190	47792	1
g. Increase hh pig productivity	Increased pork production (MT)		51190 (MT)	Source genetically superior breeding stock	DAHLD	No of pigs sourced	5,652	800	1,040	1,352	1,487	4679	950
		25,033		Intensity on-farm feed production	DAHLD	No of farmers trained	2,200	2,420	3,146	4,090	4,499	14155	2
	Reduced pig mortality (%)		30	a. De-worming and vaccination of pigs against swine fever	DAHLD	No of healthy pigs	928,952	1,021,847	1,328,401	1,726,922	1,899,614	5976784	2
h. Increased fish productivity	Increased fish catch landing (MT)	70	60,000 MT/ year	Encourage adoption of appropriate technologies on off-shore fishing practices	Fisheries dept	Quantity of fish captured per year from the lake	45,000	48,000	52,000	56	60,000	160056	
	Increased pond aquaculture production (MT)	45,000	2000Kg /ha	Promote improved fingerlings and fish feed production at smallholder level		No. of village fish farming schemes established	1	1	1	1	1	4	11,428
		700Kg/ha			Fisheries dept	Number of fish ponds constructed	400	250	270	300	350	1170	2,500
					Fisheries dept	Number of farmers engaging in fish farming village schemes	80	80	80	80	80	320	10
						Number of fingerlings distributed	2,400	2,400	2,400	2,400	2,400	9600	1

						Number of fingerlings producers trained	30	48	70	86	122	326	720
						Number of fish feed producers trained	30	48	70	86	122	326	720
						Number of feed formulae developed	2	2	2	2	2	8	7,500
				Restocking of dams in rural areas		Number of dams restocked	20	27	54	60	65	206	5,000
1.3. Increase consumption of diversified high nutritive value foods													
	Proportion of household consuming diversified diet increased and measured by HDDS (h/h) Dietary score			Develop guidelines and standard messages for provision of Nutrition Care support	OPC/DAES	Guidelines and standardized messages developed	-	1	1	0	0	2	20,000
				Review and consolidate nutrition guidelines	DAES	Number of review meetings	-	1	1	2	2	6	20,000
				Disseminate the guidelines through various channels.	DAES	Number of dissemination campaigns	-	1	1	2	2	6	30,000

				Develop and disseminate IEC materials on food preparation, processing and storage.	DAES	IEC materials developed and disseminated	-	1	1	2	2	6	30,000
				Train Extension staff (TOT) and households in processing, preservation, storage and utilization.	OPC/DAES	No. farmers trained	-	160,000	160,000	160,000	160,000	640000	100
					OPC/DAES	No. extension staff groups trained (AEDOs)	-	25	25	25	25	100	5,000
				Disseminate the food preparation, processing, storage and utilization guidelines.	OPC/DAES	No. of guidelines dissemination campaigns	-	1	2	1	1	5	30,000
				Conduct national and localized campaigns to promote optimal nutritional practice and healthy life styles	OPC/DAES	Number of campaigns conducted	-	1	1	2	2	6	30,000

				Conduct trainings for service providers in food processing, preparation, storage and participatory recipe development	OPC/DAES	Number of training sessions conducted	-	1	1	2	2	6	15,000
				Develop and disseminate recipes that use indigenous food to diversify diets	OPC/DAES	No. of recipes technologies developed and disseminated	-	1	1	2	2	6	15,000
				Conduct dietary monitoring and assessment	OPC/DAES	Monitoring and assessments conducted	-	4	4	4	4	16	15,000
Sub-total													
1.4. Increase consumption of micronutrient rich foods													
	Increase number of households consuming Vitamin A and iron rich foods			Train extension workers on prevention of micro-nutrient deficiencies	OPC/DAES	Number of extension worker groups trained	-	25	25	25	25	100	7,000
				Promote use of iodized salt in all family food.	OPC/DAES	Number of promotional campaigns conducted	-	1	1	2	2	6	15,000
				Conduct consumer education on fortified foods	OPC/DAES	Consumer education sessions conducted	-	20	20	20	20	80	15,000
Sub-total												0	

1.5. Improve quality of diets for the most vulnerable groups												0	
				Document and disseminate widely nutrition interventions that have shown impact	OPC/DAES	Number of documentation and dissemination rounds	-	1	2	2	1	6	15,000
				Conduct demonstrations on preparation of enriched phala	OPC/DAES	No of demonstrations conducted	-	50	50	50	50	200	15,000
Sub-total													
I.6. Sustainable food availability at national level													
a. Risk management for food stability	Avoid national food gap (MT)		Surplus	Improve management of the SGR & reduce storage losses	DAPS	Qty of grain stored in SGR (mt)	60,000	70,000	80,000	90,000	100,000	340000	13
	Increase number of functioning market based risk management mechanism	Deficit	5	Establish a warehouse receipt system	DAPS	Volume of maize stored under the warehouse receipt system (MT)	-	10,000	20,000	30,000	40,000	100000	20
		1		Promote village grain bank schemes	DAES	Number of FOs that participate in village banks	-	30	40	50	60	180	130
					DCP	Number of village bank schemes operated	24	25	30	35	40	130	2,143
				Establish a maize	PS	An insurance system operated	-	0	1	0	0	1	6,000,000

				market insurance system									
	Number of weather-related risk management mechanism			Strengthen weather forecasting capability for agriculture	CAETS/MET	Strong weather stations in all EPAs, districts and ADDs	-	50	75	100	125	350	5,000
Sub-total													
Total Food Security Programme													
Prog. II. COMMERCIAL AGRICULTURE AND MARKET DEVELOPMENT													
II.1. Agricultural export for improved balance of trade and income													
Increase total value of agricultural exports by commodity	Volume of exports (US$)		850 million	Promote commercial production	DCP/DAPS	Volume of exports (in US$ Million	580 million						0
	Increased export of Cotton Increased export of Cotton Increased export of Cotton	580 million	40,000	Input subsidy for cotton seeds and chemicals	DCP/DAPS	Number of farmers receiving voucher for cotton seeds subsidy	-	0	0	0	0	0	9
		20,000		Promote contract farming and producers' organizations	DCP/DAPS	Number of new FO engaging in contract farming for cotton supported	5	10	15	20	50	95	4,500

	Increased export of Sugar (MT)		150,000	Promote contract farming and producers' organizations		Number of FO engaging in contract farming for sugar assisted	2	0	0	1	0	1	6,000
	Increased export of Tobacco (MT)	110,000	185,000	Implement input subsidy for fertilizer	DAPS	Number of farmers receiving voucher for tobacco fertilizers	0	0	0	0	0	0	3
		125,000		Promote contract farming and producers' organizations		Number of FO engaging in contract farming for tobacco	20	5	10	15	20	50	8,500
	Increased export of Tea (MT)		60,000	Promote contract farming and producers' organizations		Number of FO engaging in contract farming for tea	-	1	2	3	4	10	5,700
	All export commodities	44,000		Train FO members in agribusiness skills		Number of FO members trained in agribusiness skills (management, accounting, quality control)	-	5,000	10,000	20,000	25,000	60,000	35
				Strengthen managerial and technical capacity (gross margin analysis, bulking) of producer Organizations.	DAPS	Number of FO members trained in quality control: post harvest grading/handling techniques	-	200,000	400,000	600,000	800,000	2,000,000	3
				Promote dialogue and cooperation between value chain stakeholders		Number of value chain specific coordination mechanisms set-up	-	2	4	6	7	19	50,000
				Strengthen capacity of value chain players	DAPS	Number of value chain stakeholders trained on value	100	150	150	150	150	600	500

						chain development, by commodity							
						Number of new agri-food export contracts facilitated by MEPC	-	2	15	25	35	77	1,000
				Promote agricultural exports through market research studies, export fair	DAPS	Number of commodity strategies developed	-	2	2	2	2	8	50,000
						Number of export trade studies/ analysis, by commodity	-	5	5	5	5	20	50,000
	Increased unit value of agricultural export ('000 MK/MT) by commodity (constant prices)			Improve compliance to market standards (grading, packaging)	DAES?	Number of value chain players trained in commodity handling, processing and storage	-	50	50	100	100	300	150
				Promote quality through compliance with Sanitary and Phytosanitary standards	DARS/ DAHLD	Number of SPS standards enforced	-	2	3	4	5	14	50,000
						Number of laboratories for SPS set up	-	1	2	3	1	7	71,429
						Quantity of product tested by national labs for agri-food exports (MT)	-	750	1,000	1,500	1,500	4,750	150

						Number of technicians/inspectors trained in SPS	-	10	20	30	40	100	3,500
				Increase quality certification and regulatory services	DARS/ DAHLD	Number of product accreditation (PA) quality assurance (QA) and certification services (CS)	5	5	5	5	5	20	10,000
						Number of quality assurance certificates issued	-	50	150	250	350	800	75
				Enhance border posts- produce inspections	DARS	Number of border posts infrastructure provided	-	2	3	3	2	10	250,000
				Provide technical support to enhance output quality (seed)		Quantity of improved tobacco certified seed distributed (Kg)	-	200	300	400	500	1,400	200
						Area replanted with clonal tea bushes (ha)	-	19	19	22	25	85	2,500
						Quantities of improved cotton seed (MT)	2,000	2,500	3,000	3,500	4,000	13,000	275
						No. of ha under tractor hire scheme	2,090	5,000	12,000	18,000	25,000	60,000	250
						No of ha under oxenisation	1,110	5,000	10,000	15,000	20,000	50,000	140
						No of ha under herbicides use	1,633	5,000	12,000	18,000	25,000	60,000	130
					DCP	No. of hand planks distributed	1,200	12,000	35,000	50,000	60,000	157,000	50
Sub-total												0	

II.2 Commercial production and agro-processing for import substitution												0	
2.a. Increase volume of high-value commodities for agro-processing	Monetary Value of horticulture crops produce (US$)		42 million			Annual value of horticulture produce	30 million						-
	Increased volume of high value horticulture crops and rice.	30 million	?	Provide research, extension and marketing services for irrigation systems users	DAES	Number of farmer groups receiving advice on irrigation production and marketing of rice/horticulture	1,000	1,200	1,400	1,600	1,800	6,000	100
		?				Quantities of improved rice seed multiplied(MT)	300	400	500	650	850	2,400	500
	Increased milk production and processing(MT)		61,443	Provide dairy related services	DAHLD	Number of dairy Heifers imported	1,000	1,200	1,400	1,600	1,800	6,000	1,786
		30,047				Number of trained AI technicians operational	102	127	152	177	202	658	1,142
						Number of diary farmers trained in fodder production	1,440	1,872	2,433	3,163	4,112	11,580	71
						Number of farmers receiving advice on dairy husbandry	3,000	3,900	5,070	6,591	8,568	24,129	71
						Quantities of raw forage seed produced and distributed (MT)	1	1	2	2	3	8	1,286

				Intensify formation of MBGs/Cooperatives		Number of MBGs	5	15	65	64	28	172	450
						Provide mini dairy processors/ cooling facilities	6	1	2	3	1	7	65,000
				Develop local dairy feed formulation	DARTS	Number of local feed formulae developed	2	0	1	0	1	2	10,000
	Increased beef herd size		1,250,000	Rehabilitate dip-tank infrastructure and strengthen technical and O&M capacities for their management	DAHLD	Number of cattle treated against ticks	400,000	450,000	500,000	550,000	600,000	2,100,000	1
		850,000		Increase % of animals dipped		Number of dip tanks rehabilitated	100	100	100	100	400	700	3,570
						Number of dip-tank users management groups established and trained	100	100	100	100	400	700	1,700
				Conduct preventive vaccination (foot and mouth, anthrax, black leg) for beef production	DAHLD	Number of animals vaccinated against FMD	185,000	190,000	200,000	210,000	215,000	815,000	2
						Number of doses of FMD vaccine imported	150,000	190,000	200,000	210,000	215,000	815,000	2
						No of animals vaccinated against Black leg	200,000	250,000	300,000	350,000	400,000	1,300,000	2

						Number of animals vaccinated against LSD	200,000	250,000	300,000	350,000	400,000	1,300,000	2
	Increased milk production and processing		61,443	Intensify MBGs/Cooperatives	DAHLD	No of MBGs	150	15	40	64	28	147	2,500
		30,047		Provide mini Dairy processing/cooling facilities	DAHLD	No of cooling facilities	6	11	5	6	3	25	65,000
	Increased red meat production and processing		91,569	Promote stall feeding	DAHLD	No of animals.	500	200	280	392	549	1,421	2,200
		44,779		Establish organized markets		No of markets	12	1	4	5	4	14	15,000
				Establish rural/mini abattoirs		No of rural abattoirs	8	6	4	6	4	20	30,000
	Increased white meat production and processing		141,296	Train local broiler and pig feed formulation	DAHLD	No of farmers	4,000	400	1,320	1,716	744	4,180	150
		69,097		Establish markets and processing system		No of markets	3	3	3	2	1	9	25,000
	Increased egg production (MT)		4,685	promote local feed production and formulation	DAHLD	No of farmers	2,500	250	825	1,073	464	2,612	150
		2,291		Establish organized egg markets		No of markets	-	5	10	7	6	28	15,000
	Increased hides collection and improved quality		446,678	Increase collection and improve quality	DAHLD	No of hides	218,435	240,279	312,362	406,071	446,678	1,405,390	9
	Increased skins collection and improved quality	218,435	3,776,955	Increase collection and improve quality		No of skins	1,847,012	2,031,713	2,641,227	3,433,595	3,776,955	11,883,490	5
		1,847,012		Enhance information	DAHLD	No of technical messages	8	2	2	2	1	7	140

				on hides and skin trade									
	Increased fish catch landing (MT)		60,000	Encourage adoption of appropriate on/off-shore fishing practices	DoF	Number of fishers receiving information about appropriate fishing practice	150	250	250	250	250	1,000	100
		45,000				Number of off-shore fishing technology	1	2	3	3	3	11	50,000
						Number of fishers receiving information and training about off-shore fishing	200	450	500	700	900	2,550	1,500
				Develop area-specific fishery management plans	DoF	Number of management plan approved	3	3	4	4	4	15	42,250
2.b. Increased unit value of commodities (financial & non-financial support services)	Increased unit value of commodities			Promote group and individual small scale agro-processing (e.g. horticultural produce, cassava, potato, pulses)	DCP	Number of cassava and sweet potato processing groups set up	60	70	80	90	100	340	500
						Number of cassava and sweet potato processing equipment distributed	15	50	95	130	150	425	2,500
						No of farmers receiving information about transformation	610,000	5,000	5,000	10,000	10,000	30,000	35

					technologies for root crops							
			Develop and adapt agro-processing technologies	DARS	Number of root crop agro-processing technologies released	2	0	1	0	1	2	15,000
Improve availability of value added products			Increase knowledge and skills in agro-processing technologies	DAES	Number of extension staff in agro-processing technologies	30	300	289	100	100	789	10,000
					Number of farmer groups trained in agro-processing	70	100	150	100	24	374	5,000
					Facilitate procurement of agro-processing machinery	70	100	150	100	24	374	7,000
Producer/consumer price differential reduced in key markets and for key commodities (reduced spatial and temporal variability of prices)			Expand market information system	DAPS	Number of MIS bulletin	45	47	49	50	52	198	750
					Number of radio programmes prepared on MIS	45	47	49	50	52	198	200
					Number of vernacular language into which the information is broadcast	1	2	3	4	5	14	100
			Build or rehabilitate market infrastructure	DAPS	Number of new wholesale markets built	-	5	5	5	5	20	20,000

						Number of new collection points built	90	25	25	25	25	100	1,000
						Number of markets rehabilitated	-	10	10	10	10	40	10,000
	Increase access to credit by small and medium scale agro-processors			Financial leverage systems for private agro-business enterprise development (matching grants, etc.)	DAPS	Number of systems developed and tested	-	0	1	0	0	1	1,500,000
				Provide non-financial business services and capacity strengthening to small and medium scale agro-processors.		Number of agro-processors trained	-	2	4	8	20	34	5,000
						Number of medium scale agric producers	-	2	10	20	40	72	5,000
Sub-total												0	
Total Agribusiness and Market Development												0	
Prog. III. SUSTAINABLE LAND AND WATER MANAGEMENT												0	
III.1. Sustainable agricultural land management												0	
Increase area (ha) under sustainable land management (SLM)	Agricultural area (ha) under sustainable land management (SLM) increased		250,000	Promote conservation farming/ agriculture (all technologies that maintain soil fertility and water managemen	DLRC	No of groups receiving CA advice and planting material	5,400	280	560	1,120	1,240	3,200	500

				t)									
		100,000			DLRC	No of hectares under conservation agriculture	47,526	10,000	17,500	25,000	77,500	130,000	150
						No of hectares under agro-forestry	49,858	10,000	15,000	20,000	25,000	70,000	500
				Develop soil fertility and water conservation technologies	DARS	Number of Soil and water conservation technologies developed	-	4	4	4	4	16	20,000
				Promote community-based dambo management	DLRC	Number of dambos (10ha) with agreement for sustainable land use	-	27	54	81	108	270	400
				Prevent river banks degradation	DLRC	Length of streams/river bank protected for sustainable land use (km)	3,264	350	350	350	350	1,400	580
Sub-total												0	
III.2. Sustainable agricultural water management												0	
Increase area (ha) under sustainable irrigation through the Greenbelt Initiative	Area under irrigation (ha) for high value crops increased		300,000	Rehabilitate existing irrigation schemes and construct new ones through the Greenbelt Initiative	DOI	Number of hectares under rehabilitated irrigation schemes	72,000	2,000	2,000	2,500	2,500	9,000	3,000

		72,000		Strengthen technical capacity for irrigation management	DOI	Number of groups of farmers receiving advice about irrigation techniques	1,000	1,000	1,000	1,000	1,000	4,000	100
	No of farmers growing irrigated crops		740,000	Develop new irrigation schemes with appropriate systems	DOI	Number of hectares under new irrigation schemes	2,000	3,500	4,000	5,000	5,000	17,500	6,000
		660,000		Establish rainwater harvesting systems (dams, box ridges)		Number of dams constructed	10	5	5	5	5	20	280,000
						Number of dams rehabilitated	15	6	6	6	6	24	150,000
				Promote water users associations	DOI	Number of Water Users Associations formed	11	60	100	100	150	410	2,200
				Improve the technical & management capacities of WUA	DOI	Number of WUA members trained in technical and managerial capacities	11	60	100	100	150	410	7,200
						Number of small-scale water harvesting/storage facilities		200	300	300	300	1,100	1,500
				Promote catchment area management (afforestation, etc)	DOI	Areas afforested(ha)		1,000	1,000	1,000	2,000	0	500
				Rehabilitate existing irrigation infrastructure in research stations	DARS	Number of infrastructure rehabilitated	-	4	2	2	2	10	100,000
Sub-total													

Total Natural Resource Management												
CAPACITY BUILDING												
1.1. Strengthen mobility of institutions in the ministry	Mobility problems reduced			Undertake Procurement services	DFA	Number of motor vehicles procured	68	100	80	50	45	275	70,000
						Number of motor cycles procured	300	85	80	70	80	315	5,000
						Number of bicycles procured	1,087	1,000	2,000	800	200	4,000	120
Sub-total													
1.2. Improve on the quantity and quality of institutional infrastructure	Increased number of good quality buildings			Rehabilitation of soil and seed laboratories at Chitedze	DFA/DARS	Number of laboratories rehabilitated	-		1	1	1	3	65,000
				Rehabilitate staff houses and offices	DFA	Number staff houses and offices rehabilitated		200	200	200	200	800	70,000
				Construct staff houses and offices	DFA	Number staff houses and offices constructed		100	100	100	100	400	200,000
				Rehabilitation of buildings for weather observation stations		Number of buildings rehabilitated	-	2	2	2	2	8	10,000
Sub-total													
1.3. Improve quantity and quality of institutional equipmen	Increase number of good quality equipment			Procure assorted office equipment	DFA	Assorted equipment procured		300	300	300	300	1,200	20,000

t												
				Procure IEC Printing material		IEC Printing material procured	-	3	4	5	6	18	50,000
				Procure IEC related small equipment		IEC related small equipment procured	-	1	1		1	3	10,000
				Procure Laboratory Research equipment		Laboratory Research equipment procured	-		1	0	1	2	300,000
				Procure Weather stations Equipment and spare parts		Weather stations Equipment and spare parts procured	-	100	100	50	50	300	7,000
				Procure Farm inputs for Land Conservation and crop Experimentation		Farm inputs procured	-	1	0	0	0	1	48,600
				Procure Crop Grading equipment		Grading equipment procured	-	1	0	0	0	1	40,380
				Procure Crop demonstration equipments		Equipments procured	-	1	0	0	0	1	18,550
				Procure LRC small field Experimentation equipment		LRC field Experimentation procured	-	1	0	0	0	1	80,000
Sub-total													
1.4. Strengthening institutional capacity				Collaborate continously with partners	DAES	Number of technical meetings conducted	-	4	4	4	4	16	500
				Conduct stakeholder meetings with government sectors, NGO, Bilateral and multilatel partners and the	DAES	Number of stakeholder meetings	-	1	1	1	1	4	21,000

				private sector									
				Produce a consolidated quarterly report of nutrition services by each sector	DAES	No of quarterly reports produced	-						
				Conduct biannual Nutrition feedback meetings for stakeholders	DAES	No. of meetings conducted	-	2	2	2	2	8	15,000
				Conduct consultative meetings for establishment of a business Coalition for nutrition	DAES	No. of meetings conducted	-	1	1	2	2	6	10,000
				Identify partners for coalition	DAES	No of partners identified	-	1		1	1	3	1000
				Coordinate creation of nutrition, HIV and AIDS officers positions in all the government ministries and departments	DAES	Departments with HIV/AIDS and nutrition offices positions	3	10	10	15	20	55	125
				Conduct annual sectoral	DAES	No. of meetings	-	1	1	1	1	4	12,000

				review meeting on nutrition mainstreaming									
Sub-total													
1.5. Improve capacity of staff in the ministry	Increased number of staff effectively performing their duties		27	Recruit technical experts	CAETS	Number of consultants hired	-	2	2	4	5	13	63,000
				Recruit nutritional staff	DAES	Number of staff recruited	-	200	200	250	250	900	50
				Conduct orientation of newly recruited staff in nutrition policies and programs	DAES	Number of orientation sessions conducted	-	200	200	250	250	900	100
				Implement long term training programme		Number of staff trained in monitoring and evaluation	-	15	15	15	15	60	40,000
						Number of staff trained in human resource management	-	17	17	17	17	68	40,000
						Number of staff trained in financial management	-	10	10	10	10	40	40,000
						Number of staff trained in procurement	-	13	13	13	13	52	40,000
						Number of staff trained in Administration	-	12	12	12	12	48	40,000
						Number of staff trained in Transport management	-	6	6	6	6	24	40,000

						Number of staff trained in vehicle repair	-	10	10	10	10	40	5,500
						Number of staff trained in LRC/Crops/Research and Extension		15	15	15	15	60	40,000
						Number of staff trained in Extension services/methods	761	565	525	525	500	2,115	200
				Develop capacity of newly recruited staff in nutrition	DAES	Number of staff trained in Nutrition	-	8	8	8	8	32	40,000
				Conduct short term training for subject matter specialists		Number of workshops conducted		14	14	14	14	56	2,865
Sub-total													
1.6. Mainstream gender, HIV and AIDS strategy in ASWAP	Reduced gender disparities and impacts of HIV and AIDS in the farming communities and working places		70 % of the farming communities	Increase capacity of staff and farmer to mainstream gender, HIV and AIDS in ASWAP interventions	DAES	Number of staff trained	963	1,200	1,600	2,000	2,880	7,680	200
		37 % of villages		Review organization structures and human resource policies	DAPS/DAES	Policies reviewed		1	2	2	2	7	5,000
				Develop and implement visibility strategy for gender, HIV and AIDS mainstreaming	DAES	Visibility strategy developed	0	0	1	0	0	1	22,500

			60	Establish focal points for gender and HIV/AIDS	DAES	Number of focal points established	0	2	0	0	0	2	5,000
	Transformed villages in uptake, adoption and utilization of technologies in all sectors of agriculture in a harmonized policy environment	40	2,136	Increase capacity of farmers to adopt, utilize and sustain Improved agricultural technologies	DAES	No of model villages established	710	84	84	84	84	336	10,000
		710				Number of farmer groups trained	963	560	600	660	560	2,380	100
Sub-total													

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APPENDIX 4: ASWAP RESULTS FRAMEWORK COSTING (US$)

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Focus Area 1: Food Security and Risk Management																	
Component 1.1: Maize self-sufficiency																	
a. Increase maize productivity	Average maize yield (MT/ha) increased	1.8	3.3	Implement the input (maize seed + fertilizer) subsidy programme	H	Number of farmers receiving vouchers for fertilizer subsidy	1,500,000	1,600,000	1,600,000	1,600,000	1,600,000	50	80,000,000	80,000,000	80,000,000	80,000,000	320,000,000
					H	Number of farmers receiving vouchers for maize seed		1,600,000	1,600,000	1,600,000	1,600,000	25	40,000,000	40,000,000	40,000,000	40,000,000	160,000,000
					H	Recurrent cost for Input subsidy programme		1	1	1	1	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000	140,000,000
				Promote good agricultural practices (GAP)	M	Number of farmer groups involved in improved seed multiplication	80	100	120	140	160	100	10,000	12,000	14,000	16,000	52,000
				Train staff in seed mutliplication	M	Number of staff trained		300	400	500	600	500	150,000	200,000	250,000	300,000	900,000
				Train farmers in seed mutliplication	M	Number of farmers trained		1,000	2,000	3,000	4,000	100	100,000	200,000	300,000	400,000	1,000,000
b. Decrease on farm pre and post harvest losses	% of post-harvest losses	25%	10%	Fabricate and distribute mettallic silos	H	Number of silos fabricated and distributed	660	680	810	975	1,175	100	68,000	81,000	97,500	117,500	364,000
				Train local artisans in metallic silos fabrication	H	Number of artisans trained		280	270	270	270	100	28,000	27,000	27,000	27,000	109,000
				Construct cement silos for seeds	H	No. of cement silos constructed	86	100	170	215	250	350	35,000	59,500	75,250	87,500	257,250
				Strengthen migratory pests monitoring and control	H	No. of hectares monitored and controlled	30,000	1,704,050	1,703,000	1,703,500	1,704,000	4	6,816,200	6,812,000	6,814,000	6,816,000	27,258,200
					H	Number of staff trained		300	400	500	600	500	150,000	200,000	250,000	300,000	900,000
					H	Number of farmers trained		1,000	2,000	3,000	4,000	100	100,000	200,000	300,000	400,000	1,000,000
Sub-total Component 1.1													**162,457,200**	**162,791,500**	**163,127,750**	**163,464,000**	**651,840,450**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Component 1.2: Diversification of food production and dietary diversification for improved nutrition at household level with focus on Crops, Livestock, and Fisheries																	
a. Increase legumes and pulses productivity	Groundnut (MT/ha) productivity increased	0.5 mt	1mt	Promote Input subsidy for legume seeds	H	Number of farmers receiving voucher for legume seeds subsidy		1,600,000	1,600,000	1,600,000	1,600,000	12	19,200,000	19,200,000	19,200,000	19,200,000	76,800,000
	Beans productivity	0.4 mt	1mt	Promote legumes community seed banks	H	No of community legumes seed banks established	35	50	100	150	200	500	25,000	50,000	75,000	100,000	250,000
	Soy beans	0.8 mt	1mt	Promote new varieties and good agricultural practices for legumes	H	No.of related technical messages developed	2	2	2	2	2	800	1,600	1,600	1,600	1,600	6,400
	Pigeon peas	0.5 mt	1mt	Increase distribution of improved pulse seed	H	Quantities of basic pulse seed produced (MT)	-	300	300	300	300	10,000	3,000,000	3,000,000	3,000,000	3,000,000	12,000,000
					H	Number of farmer groups involved in pulse seed multiplication	10	10	20	30	40	500	5,000	10,000	15,000	20,000	50,000
b. Increase hh horticultural crops productivity	Average plantain yield increased (mt/ha)	22	25	Promote dissemination of improved technologies in horticulture	H	Number of staff being trained in horticulture technologies		350	450	550	600	200	70,000	90,000	110,000	120,000	390,000
	Leafy vegetables (MT/ha)	15	20	Create enabling policy and regulatory environment for Horticulture	M	Number of policies		-	1	-	-	30,000	-	30,000	-	-	30,000
	Pineapple (mt/ha)	24	30		M	Number of fruit trees propagated through community or public nurseries	5,000,000	6,000,000	8,000,000	10,000,000	12,000,000	0.1	600,000	800,000	1,000,000	1,200,000	3,600,000
	Monetary Value of horticulture crops produce (million US$)	30	42		M	No. of backyard gardens promoted	-	500	600	700	800	60	30,000	36,000	42,000	48,000	156,000
	Prevalence Banana Bunchy Top (%)	90	10	Sensitize farmers on the presence of the disease and its control measures	H	Number of sensititazation meetings		40	240	-	-	200	8,000	48,000	-	-	56,000
				Develop and desseminate messages on the impact of banana bunchy top disease	M	Number of posters developed and dessiminated		800,000	800,000		-	1	800,000	800,000	-	-	1,600,000
				Demonstrate corrective community action	L	Number of demonstrations		80	200	-	-	300	24,000	60,000	-	-	84,000
					M	Number of mats destroyed		6,000	7,000	8,000	10,000	50	300,000	350,000	400,000	500,000	1,550,000

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
				Propagate banana suckers using split corm method and distribute to affected farmers	M	Number of suckers propagated and distributed		4,000	5,000	8,000	10,000	10	40,000	50,000	80,000	100,000	270,000
c. Increase root and tubers crops productivity in relevant areas	Average cassava yield increased (MT/ha)	8	15	Multiplication and distribution of cassava and sweet potato improved planting materials	M	Quantities of cassava improved planting material (bundles) distributed	314,178	325,000	335,000	345,000	355,000	0	97,500	100,500	103,500	106,500	408,000
	Average sweet potato yield increased (MT/ha)	3	8		M	Quantities of sweet potato improved planting material (bags) distributed	157,089	162,000	168,000	172,000	178,000	0	48,600	50,400	51,600	53,400	204,000
d. Increase HH poultry meat and egg productivity	Number of chickens produced at national level increased	44 million	120 million	Provide vaccines / vaccination services against Newcastle disease	H	Number of NCD vaccine doses procured ('000)	10,000	22,000	66,000	105,000	150,000	2	44,000	132,000	210,000	300,000	686,000
	Poultry mortality (%)	60%	20%	Multiplying and de-worming of guinea fowls	M	No. of poultry groups supported	-	56	56	56	56	300	16,800	16,800	16,800	16,800	67,200
	National flock of guinea fowls increased (million)	0.9	2		M	No. of guinea fowls de-wormed and vaccinated	-	1,100,000	1,350,000	1,650,000	2,000,000	0	16,500	20,250	24,750	30,000	91,500
	Egg production (MT/year)	2,291	4,685	Increase availability of well trained livestock extension workers	L	Number of AVOs trained	300	200	250	250	500	120	24,000	30,000	30,000	60,000	144,000
				Increase provision of veterinary services for poultry	L	Undertake refresher courses for Aides on poultry production and marketing	-	200	200	200	200	120	24,000	24,000	24,000	24,000	96,000
				Establish mini hatcheries	L	No. of mini hatcheries established	-	8	7	7	6	25,000	200,000	175,000	175,000	150,000	700,000
				Improve poultry feed quality	L	Number of farmers receiving information on adapted poultry feed training	4,000	400	1,320	1,616	744	150	60,000	198,000	242,400	111,600	612,000
					L	Number of mini feed mills established	-	1	3	3	4	7,200	7,200	21,600	21,600	28,800	79,200
e. Increase small stock productivity (goat)	Increased goat herd size (million)	3	5.4	Promote goat re-stocking and pass-on programmes	M	Number of farmer groups assisted with breeder goats	150	200	200	200	200	1,450	290,000	290,000	290,000	290,000	1,160,000

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
					M	Number of goats de-wormed	3,000,000	3,500,000	4,200,000	4,200,000	5,400,000	0	1,050,000	1,260,000	1,260,000	1,620,000	5,190,000
				Training of farmers in goat management	L	No of farmers groups trained	-	100	150	250	500	100	10,000	15,000	25,000	50,000	100,000
				Introduce drug-box services	M	No. of groups supported	-	58	116	232	464	10	580	1,160	2,320	4,640	8,700
	Increased goat milk production (L/day)	0.25	1.5	Promote keeping of improved dairy goat breeds	M	No. of organized groups participated in pass-on-programme	5	10	20	35	35	12,000	120,000	240,000	420,000	420,000	1,200,000
	Increased rabbit herd size (million)	0.6	1.2	Promote rabbit re-stocking and pass-on programmes	L	Number of groups supported with rabbit breeds	-	30	30	30	30	200	6,000	6,000	6,000	6,000	24,000
f. Increase hh dairy production	Increased cow milk prod. (MT)	30,000	60,000	Import dairy animals	H	No of dairy animals	24,760	1,000	1,200	1,400	1,700	2,200	2,200,000	2,640,000	3,080,000	3,740,000	11,660,000
				Intensify cross breeding programmes	H	No of dairy animals	24,760	2,500	8,000	11,000	4,500	5	12,500	40,000	55,000	22,500	130,000
				Increase animal feed/fodder production and conservation	M	Silage tonnage achieved	180,000	18,000	60,000	80,000	35,000	5	90,000	300,000	400,000	175,000	965,000
				Intensify disease control programmes,vaccination and dipping	H	No of dairy animals de-wormed	24,760	30,000	35,000	45,000	50,000	10	300,000	350,000	450,000	500,000	1,600,000
				TB testing	M	No of dairy animals tested	24,760	25,000	30,000	35,000	40,000	2	50,000	60,000	70,000	80,000	260,000
				Mastitis control	M	No of dairy animals treated	24,760	10,000	10,000	15,000	15,000	2	20,000	20,000	30,000	30,000	100,000
g. Increase hh pig productivity	Increased pork production (MT)	25,033	51,190	Source genetically superior breeding stock	H	No of pigs sourced	5,652	800	1,000	1,300	1,500	950	760,000	950,000	1,235,000	1,425,000	4,370,000
				Intensity on-farm feed production	L	No of farmers trained	2,200	2,500	3,000	4,000	5,000	10	25,000	30,000	40,000	50,000	145,000
	Reduced pig mortality (%)	70	30	De-worming and vaccination of pigs against swine fever	H	No of healthy pigs	928,952	1,000,000	1,400,000	1,700,000	2,000,000	2	2,000,000	2,800,000	3,400,000	4,000,000	12,200,000
h. Increased aquaculture productivity	Increased pond aquaculture production (Kg/ha)	700	2,000	Encourage adoption of appropriate technologies on off-shore fishing practices	M	No. of village fish farming schemes established,training and materials included	1	1	1	1	1	10,000	10,000	10,000	10,000	10,000	40,000
				Promote improved fingerlings and fish feed production at smallholder level	M	Number of fish ponds constructed	400	250	300	300	350	2,500	625,000	750,000	750,000	875,000	3,000,000

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
					L	Number of fingerlings and fish feed producers trained	50	100	150	180	250	750	75,000	112,500	135,000	187,500	510,000
					L	Number of feed formulae developed	2	2	2	2	2	10,000	20,000	20,000	20,000	20,000	80,000
				Restocking of dams in rural areas	M	Number of dams restocked	20	30	60	60	65	10,000	300,000	600,000	600,000	650,000	2,150,000
i. Nutrition improved	Proportion of farm families consuming dietary diversification	15%	55%	Develop and disseminate guidelines related to food processing, storage, utilization	M	Guidelines and standardized messages developed and disseminated	-	3	3	3	3	20,000	60,000	60,000	60,000	60,000	240,000
	Number of food crops grown by Hh	1	3	Develop and disseminate IEC materials on same	M	IEC materials developed and disseminated via promotion campaigns	-	3	4	5	6	30,000	90,000	120,000	150,000	180,000	540,000
				Train Extension staff (TOT) and households	M	No. farmers trained use of equipment and	-	160,000	160,000	160,000	160,000	10	1,600,000	1,600,000	1,600,000	1,600,000	6,400,000
					M	No. extension staff groups trained (AEDOs)	-	100	100	100	100	5,000	500,000	500,000	500,000	500,000	2,000,000
				Conduct trainings for service providers	M	Number of training sessions conducted	-	1	1	2	2	15,000	15,000	15,000	30,000	30,000	90,000
				Develop and disseminate recipes that use indigenous food to diversify diets	M	No. of recipes technologies developed and disseminated	-	1	1	2	2	15,000	15,000	15,000	30,000	30,000	90,000
				Conduct consumer education on fortified foods	L	Consumer education sessions conducted		1	2	2	1	15,000	15,000	30,000	30,000	15,000	90,000
				Conduct dietary monitoring and assessment	M	Monitoring and assessments conducted	-	4	4	4	4	15,000	60,000	60,000	60,000	60,000	240,000
Sub-total Component 1.2													**34,961,280**	**38,188,810**	**39,561,570**	**41,801,340**	**154,513,000**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Component 1.3. Sustainable food availability at national level																	
a. Risk management for food stability	Avoid national energy food gap	0	0	Improve management of the SGR & reduce storage losses	H	Qty of grain stored in SGR (mt) Unit cost of storage US$/MT	60,000	70,000	80,000	90,000	100,000	15	1,050,000	1,200,000	1,350,000	1,500,000	5,100,000
				Establish a warehouse receipt system	H	Volume of maize stored under the warehouse receipt system (MT)	-	10,000	20,000	30,000	40,000	20	200,000	400,000	600,000	800,000	2,000,000
				Promote village grain bank schemes	M	Number of village bank schemes operated	24	25	30	40	45	2,500	62,500	75,000	100,000	112,500	350,000
				Establish a maize market insurance system	M	Premium paid for insurance	-	-	1	-	-	6,000,000	-	6,000,000	-	-	6,000,000
				Strengthen weather forecasting capability for agriculture	M	Strong weather stations in all EPAs, districts and ADDs	-	50	75	100	125	5,000	250,000	375,000	500,000	625,000	1,750,000
Sub-total Component 1.3													**1,562,500**	**8,050,000**	**2,550,000**	**3,037,500**	**15,200,000**
Total Focus Area 1													**198,980,980**	**209,030,310**	**205,239,320**	**208,302,840**	**821,553,450**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Focus Area 2: Commercial Agriculture and market development																	
Component 2.1. Agricultural export for improved balance of trade and income																	
Increase total value of agricultural exports	Volume of exports (million US$)	580	800	Promote contract farming and producers' organizations	M	Number of FO engaging in contract farming for cash crops	27	15	30	40	75	2,000	30,000	60,000	80,000	150,000	320,000
	Increased export of Cotton	20,000	40,000	Train Prod. Org. members in agribusiness skills	M	Number of FO members trained in agribusiness skills (management, accounting, quality	-	5,000	5,000	5,000	5,000	150	750,000	750,000	750,000	750,000	3,000,000
	Increased export of Sugar (MT)	111,000	150,000	Strengthen managerial and technical capacity of producer organizations.	L	Number of FO members trained in quality control: post harvest grading/handling techniques	-	5,000	5,000	5,000	5,000	100	500,000	500,000	500,000	500,000	2,000,000
	Increased export of Tobacco (MT)	125,000	185,000	Promote dialogue between value chain stakeholders	M	Number of value chain coordination mechanisms set-up	-	2	4	6	7	50,000	100,000	200,000	300,000	350,000	950,000
	Increased export of Tea (MT)	44,000	60,000	Strengthen capacity of value chain players	M	Number of value chain stakeholders trained on value chain development, by commodity	100	150	150	150	150	500	75,000	75,000	75,000	75,000	300,000
					M	Number of new agri-food export contracts facilitated by MEPC	-	2	15	25	35	1,000	2,000	15,000	25,000	35,000	77,000
				Promote exports through market research studies export fair	M	Number of commodity strategies developed	-	2	2	2	2	50,000	100,000	100,000	100,000	100,000	400,000
					M	Number of export trade studies/ analysis, by commodity	-	5	5	5	5	50,000	250,000	250,000	250,000	250,000	1,000,000
Increased unit value of agricultural export ('000 MK/MT) by commodity	Increased unit value of tobacco	-	-	Improve compliance to market standards (grading, packaging)	M	Number of value chain players trained in commodity handling, processing storage	-	50	50	100	100	1,000	50,000	50,000	100,000	100,000	300,000

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
	Increased unit value of cotton	-	-	Increase quality certification and regulatory services	M	Number of product accreditation (PA) quality assurance (QA) and certification services (CS)	5	5	5	5	5	10,000	50,000	50,000	50,000	50,000	200,000
					M	Number of quality assurance certificates issued	-	5,000	5,000	5,000	5,000	75	375,000	375,000	375,000	375,000	1,500,000
				Provide technical support to enhance output quality (seed)	M	Quantity of improved tobacco certified seed distributed (Kg)	-	200	300	400	500	200	40,000	60,000	80,000	100,000	280,000
					M	Area replanted with clonal tea bushes (ha)	-	25	25	25	25	2,500	62,500	62,500	62,500	62,500	250,000
					H	Quantities of improved cotton seed (MT)	2,000	2,500	3,000	3,500	4,000	275	687,500	825,000	962,500	1,100,000	3,575,000
				Promote mechanisation	H	No. of ha under tractor hire scheme	2,090	10,000	10,000	10,000	10,000	250	2,500,000	2,500,000	2,500,000	2,500,000	10,000,000
					M	No of ha under oxenisation	1,110	16,615	16,615	16,615	16,615	130	2,160,000	2,160,000	2,160,000	2,160,000	8,640,000
					M	No. of hand planks distributed	1,200	12,000	35,000	50,000	60,000	50	600,000	1,750,000	2,500,000	3,000,000	7,850,000
				Promote labour saving technology	L	Number of sprayer		200	200	200	200	100	20,000	20,000	20,000	20,000	80,000
					L	Number of hactare under herbicides application		2000	2000	2000	2000	100	200,000	200,000	200,000	200,000	800,000
				Conduct review meeting on farm mechanisation and oxenisation efficiency in agriculture	L	Number of review meetings		4	4	4	4	20000	80,000	80,000	80,000	80,000	320,000
Sub-total Component 2.1													**8,632,000**	**10,082,500**	**11,170,000**	**11,957,500**	**41,842,000**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Component 2.2. Commercial production and agro-processing for import substitution and domestic market development																	
a. Increase volume of high-value commodities for agro-processing	Increased milk production and processing (MT)	30,047	61,443	Provide dairy inputs and services	H	Number of high productive dairy heifers for demonstration and dissemination		1,250	1,250	1,250	1,250	2,200	2,750,000	2,750,000	2,750,000	2,750,000	11,000,000
					H	Number of diary farmers trained in fodder production	1,440	2,000	2,500	3,000	4,000	100	200,000	250,000	300,000	400,000	1,150,000
					H	Number of farmers receiving advice on dairy husbandry	3,000	4,000	5,000	6,500	8,500	100	400,000	500,000	650,000	850,000	2,400,000
					M	Number of min dairy processors/cooling facilities provided on pilot basis to selected MBG	6	1	2	2	1	65,000	65,000	130,000	130,000	65,000	390,000
	Increased beef herd size (million)	0.85	1.25	Rehabilitate dip-tank infrastructure and strengthen technical and O&M capacities for their management	H	Number of cattle treated against ticks	400,000	450,000	500,000	550,000	600,000	2	900,000	1,000,000	1,100,000	1,200,000	4,200,000
					H	Number of dip tanks rehabilitated	100	100	100	100	400	3,570	357,000	357,000	357,000	1,428,000	2,499,000
					M	Number of dip-tank users management groups established and trained	100	100	100	100	400	1,700	170,000	170,000	170,000	680,000	1,190,000
				Conduct preventive vaccination (foot and mouth, anthrax, black leg) for beef production	H	Number of animals vaccinated against FMD	185,000	190,000	200,000	210,000	215,000	2	380,000	400,000	420,000	430,000	1,630,000
					H	No of animals vaccinated against Black leg	200,000	250,000	300,000	350,000	400,000	2	500,000	600,000	700,000	800,000	2,600,000
					H	Number of animals vaccinated against LSD	200,000	250,000	300,000	350,000	400,000	2	500,000	600,000	700,000	800,000	2,600,000
				Intensify MBGs/Cooperatives	L	No of MBGs	150	15	40	64	28	2,500	37,500	100,000	160,000	70,000	367,500
	Increased red meat production and processing (MT)	44,779	91,569	Promote stall feeding	M	No of animals.	500	300	300	400	600	2,200	660,000	660,000	880,000	1,320,000	3,520,000

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
				Establish organized markets	M	No of markets	12	1	4	5	4	15,000	15,000	60,000	75,000	60,000	210,000
	Increased white meat production, processing	69,097	141,296	Train local broiler and pig feed formulation	M	No of farmers	4,000	450	1,300	1,700	750	150	67,500	195,000	255,000	112,500	630,000
	Increased egg prod. (MT)	2,291	4,685	promote local feed production and formulation	M	No of farmers	2,500	250	850	1,100	500	150	37,500	127,500	165,000	75,000	405,000
	Increased collection and quality of hides	218,435	446,678	Enhance information on hides and skin trade	M	No of technical messages	8	25	25	25	25	1,000	25,000	25,000	25,000	25,000	100,000
	Increased collection and quality of skins	1,847,012	3,776,955	Establish rural/mini abattoirs	M	No of rural abattoirs	8	6	4	6	4	50,000	300,000	200,000	300,000	200,000	1,000,000
	Increased fish catch landing (MT)	45,000	60,000	Encourage adoption of appropriate on/off-shore fishing practices	M	Number of fishermen receiving info about appropriate fishing practice	150	250	250	250	250	150	37,500	37,500	37,500	37,500	150,000
					M	Number of off-shore fishing technology	1	2	2	2	2	50,000	100,000	100,000	100,000	100,000	400,000
					M	Number of fishers receiving information and training about off-shore fishing	200	500	500	700	900	300	150,000	150,000	210,000	270,000	780,000
				Develop area-specific fishery management plans	M	Number of management plan approved	3	3	4	4	4	50,000	150,000	200,000	200,000	200,000	750,000
b. Increased unit value of commodities (financial & non-financial support services)	Household agricultural income (USD/year)	280	600	Promote group and individual small scale agro-processing (e.g. horticulture, cassava, potato, pulses)	L	Number of cassava and sweet potato processing groups set up	60	70	80	90	100	500	35,000	40,000	45,000	50,000	170,000
					M	Number of cassava and sweet potato processing equipment distributed	15	50	95	130	150	2,500	125,000	237,500	325,000	375,000	1,062,500
				Disseminate info on small scale crop processing	M	No of farmers receiving information about transformation technologies for root crops	610,000	5,000	5,000	10,000	10,000	35	175,000	175,000	350,000	350,000	1,050,000
Sub-total Component 2.2													**8,137,000**	**9,064,500**	**10,404,500**	**12,648,000**	**40,254,000**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Component 2.3: Input and output market development through public-private partnerships																	
	Reduced spatial and temporal variability of prices			Expand market information system	M	Number of MIS bulletin	45	50	50	50	50	1,000	50,000	50,000	50,000	50,000	200,000
					M	Number of radio programmes prepared on MIS	45	50	75	100	125	1,000	50,000	75,000	100,000	125,000	350,000
				Build or rehabilitate market infrastructure	H	Number of new wholesale markets built	-	5	5	5	5	20,000	100,000	100,000	100,000	100,000	400,000
					H	Number of new collection points built	90	25	25	25	25	1,000	25,000	25,000	25,000	25,000	100,000
					H	Number of retail markets rehabilitated	-	10	10	10	10	15,000	150,000	150,000	150,000	150,000	600,000
	Access to credit by small and medium scale agro processors and traders	20%	60%	Financial leverage systems for private agro-business enterprise development (matching grants)	M	Number of systems developed and tested	-	-	1	-	-	1,500,000	-	1,500,000	-	-	1,500,000
				Provide non-financial business services and capacity strengthening to small and medium scale agro-processors.	M	Number of agro-processors trained	-	5	5	10	20	5,000	25,000	25,000	50,000	100,000	200,000
					M	Number of medium scale agric producers trained	-	2	10	20	40	5,000	10,000	50,000	100,000	200,000	360,000
Sub-total Component 2.3													**410,000**	**1,975,000**	**575,000**	**750,000**	**3,710,000**
Sub-total Focus Area 2																	**85,806,000**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Focus Area 3: Sustainable Land and Water Management																	
Component 3.1: Sustainable agricultural land management																	
Increase area under sustainable land management	Agricultural area (ha) under SLM increased	100,000	250,000	Promote technologies that maintain soil fertility and water management	H	No of groups receiving CA advice and planting material	5,400	280	560	1,120	1,240	500	140,000	280,000	560,000	620,000	1,600,000
	Estimated total soil loss (MT/ha/year)	20	13		H	No of hectares under conservation agriculture	47,526	10,000	17,500	25,000	77,500	150	1,500,000	2,625,000	3,750,000	11,625,000	19,500,000
					H	No of hectares under agro-forestry	49,858	10,000	15,000	20,000	25,000	500	5,000,000	7,500,000	10,000,000	12,500,000	35,000,000
				Promote community-based dambo management	L	Number of dambos (10ha) with agreement for sustainable land use	-	27	54	81	108	400	10,800	21,600	32,400	43,200	108,000
				Prevent river banks degradation	L	Length of streams/river bank protected for sustainable land use (km)	3,264	350	350	350	350	580	203,000	203,000	203,000	203,000	812,000
Sub-total component 3.1													6,853,800	10,629,600	14,545,400	24,991,200	**57,020,000**
Component 3.2: Sustainable agricultural water management																	
Increase area (ha) under sustainable irrigation through GBI	Area under sustainable irrigation (ha) increased	72,000	300,000	Rehabilitate existing irrigation schemes and construct new ones through the Greenbelt Initiative	H	Number of hectares under rehabilitated irrigation schemes	29,000	1,000	1,000	1,000	1,000	3,000	3,000,000	3,000,000	3,000,000	3,000,000	12,000,000
				Strengthen technical capacity for irrigation management	H	Number farmer groups receiving advice about irrigation techniques	1,000	130	140	150	160	4,000	520,000	560,000	600,000	640,000	2,320,000
	No of farmers growing irrigated crops	660,000	740,000	Develop new irrigation schemes with appropriate systems	H	Number of hectares under new irrigation schemes	2,000	10,000	10,000	10,000	10,000	14,000	140,000,000	140,000,000	140,000,000	140,000,000	560,000,000
				Establish rainwater harvesting systems (dams, box ridges)	H	Number of dams constructed	10	3	3	3	3	280,000	840,000	840,000	840,000	840,000	3,360,000
					H	Number of dams rehabilitated	15	5	5	5	5	150,000	750,000	750,000	750,000	750,000	3,000,000
				Promote water users associations	M	Number of Water Users Associations formed	11	60	100	100	150	2,200	132,000	220,000	220,000	330,000	902,000
					M	Number of WUA trained in technical and managerial capacities	60	65	70	75	80	7,200	468,000	504,000	540,000	576,000	2,088,000
Sub-total component 3.2													145,710,000	145,874,000	145,950,000	146,136,000	**583,670,000**
Sub-total Focus Area 3																	**640,690,000**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
4. Key support service: Technology generation and dissemination																	
Component 4.1: Results and market oriented research on priority technology needs and provision of technical and regulatory services																	
Increase maize productivity				Develop improved varieties	H	Number of improved varieties released	6	2	2	1	1	10,000	20,000	20,000	10,000	10,000	60,000
				Multiply breeder seed	H	Quantities of breeder seed multiplied (Kg)	5,000	5,000	6,000	7,000	8,000	10	50,000	60,000	70,000	80,000	260,000
				Increase distribution of improved maize seed	H	Quantities of maize basic seed produced (MT)	5	10	15	20	25	5,000	50,000	75,000	100,000	125,000	350,000
					H	Quantities of commercial improved seed certified (MT)	500	1,000	1,500	2,000	2,500	50	50,000	75,000	100,000	125,000	350,000
Decrease on farm pre and post harvest losses				Identify integrated post harvest technologies	H	No of new post harvest technologies identified and approved	3	3	4	4	5	20,000	60,000	80,000	80,000	100,000	320,000
Increase legumes and pulses productivity				Develop new pulses varieties	H	No. of new pulses varieties released	12	-	3	5	1	8,000	-	24,000	40,000	8,000	72,000
				Multiply breeder and basic pulse seed	H	Quantities of breeder pulses seed produced (MT)	600	7	9	9	9	5,000	35,000	45,000	45,000	45,000	170,000
					H	Qty of certified commercial pulses seed (MT)	60	75	90	105	120	75	5,625	6,750	7,875	9,000	29,250
				Conduct pulses seed quality control		Number of hectares inspected	1,000	700	800	1,000	1,000	50	35,000	40,000	50,000	50,000	175,000
Increase HH horticultural crops productivity				Develop improved horticultural technologies	M	Number of technical messages released related to horticulture	-	2	3	4	5	800	1,600	2,400	3,200	4,000	11,200
					M	Number of horticulture technologies released	10	11	12	13	14	8,000	88,000	96,000	104,000	112,000	400,000
					M	Number of farmers groups involved in horticulture seed multiplication	-	8	9	10	11	300	2,400	2,700	3,000	3,300	11,400
					M	Horticulture estimation methodology produced and distributed		-	-	1	-	15,000	-	-	15,000	-	15,000
Increase root and tubers crops productivity				Develop mother nurseries (vegetative multiplication)	L	Area under mother nurseries (ha)	15	20	30	40	50	650	13,000	19,500	26,000	32,500	91,000

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
					L	Construct/rehabilitate tissue culture laboratory	2	2	-	1	-	200,000	400,000	-	200,000	-	600,000
Increased unit value of agricultural export ('000 MK/MT) by commodity				Improve compliance to market standards (grading, packaging)	M	Number of SPS laboratories set up	-	1	2	3	1	75,000	75,000	150,000	225,000	75,000	525,000
					M	Number of import permits and export licenses issued	4,000	4,000	5,000	6,000	7,000	25	100,000	125,000	150,000	175,000	550,000
					M	Number of technicians/inspectors trained in SPS	-	10	20	30	40	1,000	10,000	20,000	30,000	40,000	100,000
				Enhance border posts-produce inspections	M	Number of border posts infrastructure provided	-	1	2	2	-	200,000	200,000	400,000	400,000	-	1,000,000
Increase volume of high-value commodities for agro-processing				Develop local dairy feed formulation	L	Number of local feed formulae developed	2	-	1	-	1	40,000	-	40,000	-	40,000	80,000
				Develop local poultry feed formulae	L	Number of poultry feed technologies relased	2	-	1	1	-	50,000	-	50,000	50,000	-	100,000
				Develop and adapt agro-processing technologies	H	Number of root crop agro-processing technologies released	2	-	1	-	1	15,000	-	15,000	-	15,000	30,000
Increase area (ha) under sustainable land management (SLM)				Develop soil fertility and water conservation technologies	H	Number of Soil and water conservation technologies developed	-	4	4	4	4	20,000	80,000	80,000	80,000	80,000	320,000
Increase area (ha) under sustainable irrigation				Rehabilitate existing irrigation infrastructure in research stations	H	Number of infrastructure rehabilitated	-	4	2	3	-	100,000	400,000	200,000	300,000	-	900,000
Sub-total 4.1													1,675,625	1,626,350	2,089,075	1,128,800	**6,519,850**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Component 4.2: Efficient farmer-led extension and training services																	
Increase maize productivity	Rate of adoption of priority technologies increased	40%	70%	Promote good agricultural practices (GAP)	H	Number of farmers receiving advice on maize varieties and GAP	600,000	990,000	1,177,500	1,290,000	1,440,000	5	4,950,000	5,887,500	6,450,000	7,200,000	24,487,500
Decrease on farm pre and post harvest losses				Promote improved on-farm storage technologies (food, seed)	H	Number of farmers receiving training and tools on storage technologies (physical, chemical)	600,000	990,000	1,177,500	1,290,000	1,440,000	8	7,920,000	9,420,000	10,320,000	11,520,000	39,180,000
				Disseminate messages on post harvest handling	L	Number of messages on post harvesting	4	4	5	5	6	800	3,200	4,000	4,000	4,800	16,000
Increase legumes and pulses productivity				Promote new varieties and good agricultural practices for legumes	H	No. of farmers receiving advice on legumes GAP (incl. indigenous vegetables)	600,000	700,000	800,000	900,000	1,000,000	7	4,900,000	5,600,000	6,300,000	7,000,000	23,800,000
Increase HH horticultural crops productivity				Promote dissemination of improved technologies in horticulture	M	Number of farmers being trained in horticulture techniques	-	5,000	5,000	5,000	5,000	25	125,000	125,000	125,000	125,000	500,000
Increase volume of high-value commodities for agro-processing				Provide research, extension and marketing services for irrigation systems users	M	Number of farmer groups receiving advice on irrigation production and marketing of rice/horticulture	1,000	1,200	1,400	1,600	1,800	100	120,000	140,000	160,000	180,000	600,000
					M	Quantities of improved rice seed multiplied(MT)	300	400	500	650	850	500	200,000	250,000	325,000	425,000	1,200,000
Increased unit value of commodities (financial & non-financial support services)				Increase knowledge and skills in agro-processing technologies	H	Number of extension staff trained in agro-processing technologies and equipment for activities	30	300	250	100	100	10,000	3,000,000	2,500,000	1,000,000	1,000,000	7,500,000
					M	Number of farmer groups trained in agro-processing	70	100	150	100	24	5,000	500,000	750,000	500,000	120,000	1,870,000
					M	Facilitate procurement of agro-processing machinery	70	100	150	100	25	7,000	700,000	1,050,000	700,000	175,000	2,625,000
Sub-total 4.2													22,418,200	25,726,500	25,884,000	27,749,800	**101,778,500**
Sub-total Key Support Service Research																	**108,298,350**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
5. Key support service: Institutional strenghtening and Capacity building																	
Component 5.1: Strenghtening public management systems																	
Strengthen mobility in the ministry and districts				Undertake Procurement services	H	Number of motor vehicles procured	68	40	40	40	40	70,000	2,800,000	2,800,000	2,800,000	2,800,000	11,200,000
					H	Number of motor cycles procured	300	100	100	100	100	7,000	700,000	700,000	700,000	700,000	2,800,000
Improve infrastructure quantity and quality				Rehabilitation of soil and seed laboratories at Chitedze	M	Number of laboratories rehabilitated	-		1	1	1	65,000	-	65,000	65,000	65,000	195,000
				Rehabilitate staff houses	M	Number staff houses and offices rehabilitated		30	30	30	30	30,000	900,000	900,000	900,000	900,000	3,600,000
				Construct staff houses	M	Number of offices rehabilitated		30	30	30	30	50,000	1,500,000	1,500,000	1,500,000	1,500,000	6,000,000
				Upgrade institutional training infrastructure	M	Number of training centres upgraded	2	3	3	3	3	155,000	465,000	465,000	465,000	465,000	1,860,000
				Rehabilitation of district agriculture offices	M	Number staff houses and offices constructed		1	1	1	1	150,000	150,000	150,000	150,000	150,000	600,000
				Rehabilitation of buildings for weather observation stations	M	Number of buildings rehabilitated	-	2	2	2	2	10,000	20,000	20,000	20,000	20,000	80,000
Improve equipment quantity and quality				Procure assorted office equipment	M	Assorted equipment procured		25	25	25	25	20,000	500,000	500,000	500,000	500,000	2,000,000
				Procure Laboratory Research equipment	M	Laboratory Research equipment procured	-		1	-	1	300,000	-	300,000	-	300,000	600,000
				Procure Weather stations Equipment and spare parts	M	Weather stations Equipment and spare parts procured	-	100	100	50	50	7,000	700,000	700,000	350,000	350,000	2,100,000
				Procure Farm inputs and equipments for Land Conservation and crop Experimentation	M	Farm inputs procured	-	1	-	-	-	200,000	200,000	-	-	-	200,000
Sub-total 5.1													7,935,000	8,100,000	7,450,000	7,750,000	**31,235,000**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
Component 5.2: Capacity building of the public and private sector																	
Strengthening institutional capacity				Collaborate continously with partners	L	Number of technical meetings conducted	-	4	4	4	4	500	2,000	2,000	2,000	2,000	8,000
				Conduct stakeholder meetings with government sectors, NGO, Bilateral and multilatel partners and the private sector	L	Number of stakeholder meetings, annual and bi-annual,and consultative for establishment of a business coalition for nutrition	-	4	4	4	4	15,000	60,000	60,000	60,000	60,000	240,000
				Coordinate creation of gender, nutrition, HIV and AIDS officers positions in ASWAp line ministries and departments	L	Departments with gender, HIV/AIDS and nutrition offices positions	3	10	10	15	20	1,000	10,000	10,000	15,000	20,000	55,000
				Institutionalize farmer-led extension services	M	Number of male and female staff trained on developed concept	-	1,000	1,000	1,000	1,000	500	500,000	500,000	500,000	500,000	2,000,000
				Revise agriculture extension policy	L	Policy revised to include private extension service provision	-	1	1	1	1	20,000	20,000	20,000	20,000	20,000	80,000
				Formulate strategies in response to farmer demand	L	Number of strategies developed	1	3	3	3	3	20,000	60,000	60,000	60,000	60,000	240,000
				Strengthen stakeholder panels	L	Number of stakeholder panels oriented	84	100	100	50	50	250	25,000	25,000	12,500	12,500	75,000
				Conduct annual sectoral review meeting	L	No. of meetings	-	1	1	1	1	12,000	12,000	12,000	12,000	12,000	48,000
Improve capacity of staff in the ministry	Staff vacancy rate (%) reduced	31%	12%	Recruit technical experts	M	Number of consultants hired	-	2	2	2	2	50,000	100,000	100,000	100,000	100,000	400,000
				Recruit staff	M	Number of staff recruited	-	200	200	250	250	50	10,000	10,000	12,500	12,500	45,000
	Capacity building programme in place	N	Y	Carry out sector wide capacity building assessment	M	Report		1				100,000	100,000	-	-	-	100,000
				Implement institutional reform programme	M	Number of meetings			1	1	1	300,000	-	300,000	300,000	300,000	900,000
				Conduct orientation of newly recruited staff in policies and programs	L	Number of orientation sessions conducted	-	200	200	250	250	100	20,000	20,000	25,000	25,000	90,000
				Implement long term training programme international	H	Number of staff trained	-	50	50	50	50	15,000	750,000	750,000	750,000	750,000	3,000,000

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
				Implement long term training programme national	H	Number of staff trained	-	50	50	50	50	10,000	500,000	500,000	500,000	500,000	2,000,000
				Implement short training programme	H	Number of staff trained		500	500	500	500	2,000	1,000,000	1,000,000	1,000,000	1,000,000	4,000,000
				Conduct short term training for subject matter specialists	H	Number of workshops conducted		15	15	15	15	2,000	30,000	30,000	30,000	30,000	120,000
	M&E, HR, planning and financial management systems functioning			Conduct preparatory baselines	H	Number of baseline		1		1		500,000	500,000	-	500,000	-	1,000,000
				Agriculture systems development	H	Number of statistical Reports		4	4	4	4	375,000	1,500,000	1,500,000	1,500,000	1,500,000	6,000,000
				Carryout cost benefit analyses	H	Number of reports		1	1	1	1	600,000	600,000	600,000	600,000	600,000	2,400,000
				Carryout Core Function analysis and capacity assessments	H	Number of reports		2	2	2	2	600,000	1,200,000	1,200,000	1,200,000	1,200,000	4,800,000
				Studies on adoption and qualitative feedback on activities	L	Number of studies		3	3	3	3	50,000	150,000	150,000	150,000	150,000	600,000
				International technical assistance on:Planning & Budgeting	L	Number of TAs in place		12	12	12	12	25,000	300,000	300,000	300,000	300,000	1,200,000
				National technical assistance on: Planning and Budgeting	L	Number of TAs in place		12	12	12	12	10,000	120,000	120,000	120,000	120,000	480,000
				International technical assistance on:M&E	M	Number of TAs in place		12	12	12	12	25,000	300,000	300,000	300,000	300,000	1,200,000
				National technical assistance on: M&E	L	Number of TAs in place		12	12	12	12	10,000	120,000	120,000	120,000	120,000	480,000
				International technical assistance on:Financial Management	L	Number of TAs in place		12	12	12	12	25,000	300,000	300,000	300,000	300,000	1,200,000
				National technical assistance on: Financial management	L	Number of TAs in place		12	12	12	12	10,000	120,000	120,000	120,000	120,000	480,000
				International technical assistance on:HRM	L	Number of TAs in place		12	12	12	12	25,000	300,000	300,000	300,000	300,000	1,200,000
				National technical assistance on: HRM	L	Number of TAs in place		12	12	12	12	10,000	120,000	120,000	120,000	120,000	480,000
				Carry out strategic environmental assessment	L	Number of reports		1			1	250,000	250,000	250,000	250,000	250,000	1,000,000
Sub-total 5.2													9,079,000	8,779,000	9,279,000	8,784,000	**35,921,000**
Sub-total Key Institutional strenghtening and capacity building																	**67,156,000**

Strategic Objective	Final outcome indicator	Status (09-10)	Target (13/14)	Action	Priority	Output indicator	Status 2009/10	Target 2010/11	Target 2011/12	Target 2012/13	Target 2013/14	Unit cost ($US)	Budget 2010/11	Budget 2011/12	Budget 2012/13	Budget 2013/14	TOTAL
6. Cross cutting issues																	
Component 6.1: Mainstreaming of gender and HIV/AIDS																	
HIV related morbidity and mortality minimized	Proportion of staff accessing supplementary feeding at workplace	3.4%	7.0%	Increase capacity of staff and farmer to mainstream gender, HIV and AIDS in ASWAP interventions	H	Number of staff trained	963	1,200	1,600	2,000	2,400	2,511	3,013,216	4,017,621	5,022,026	6,026,432	18,079,295
				Promote accountability to gender, HIV and AIDS mainstreaming among ASWAp implementers	M	Policies reviewed		1	2	2	2	251,101	251,101	502,203	502,203	502,203	1,757,709
	Reduced staff attrition			Sensitise staff on HIV and AIDS	M	Number of sessions conducted		200	200	200	200	1,256	251,101	251,101	251,101	251,101	1,004,405
Gender disparities reduced	% of vulnerable groups (incl. women, youth, elderly) accessing FISP	47%	50%	Generate and disseminate knowledge on gender, HIV and AIDS in the agricultural sector	M	Number of action research studies conducted	-	3	3	3	4	251,101	753,304	753,304	753,304	1,004,405	3,264,317
	% of vulnerable people involved in decision making	30%	50%	Develop and implement visibility strategy for gender, HIV and AIDS mainstreaming	L	Visibility strategy developed	-	1	1	1	1	313,877	313,877	313,877	313,877	313,877	1,255,507
				Establish focal points for gender and HIV/AIDS	L	Number of focal points established	-	2	-	-	-	62,775	125,551	-	-	-	125,551
					L	Number of farmer groups trained	963	500	550	650	700	1,256	627,753	690,529	816,079	878,855	3,013,216
Sub-total Cross-cutting issues: Mainstreaming gender and HIV/AIDS													5,335,903	6,528,634	7,658,590	8,976,872	**28,500,000**
GRAND TOTAL																USD	**1,752,003,800**

APPENDIX 5: SUMMARY OF TENTATIVE RESOURCE COMMITMENT TO THE ASWAP

Summary of resources commitment by donor, area of focus and year								
Category I	Donor	TYPE	AREA OF FOCUS	2010/11	2011/12	2012/13	2013/14	Total
	Norway/FAO		Crop diversification and water management	2,000,000	1,000,000	1,000,000	1,000,000	5,000,000
	Italy/FAO		Crop diversification	300,000	200,000	200,000	50,000	750,000
	USAID		FEWSNET	1,000,000				1,000,000
	FAO		Fish ponds	310,000				310,000
	FAO		Food security	300,000				300,000
	UNDP		Food Stability	1,500,000				1,500,000
	Norway		Promote exports	4,000,000	3,000,000	2,000,000	1,000,000	10,000,000
	USAID		Strategic Analysis and knowledge (SAKSS)	500,000				500,000
	USAID		Malawi Daily Development Alliance	2,500,000				2,500,000
	USAID		I-LIFE	33,000,000				33,000,000
	USAID		Development Alliance	4,000,000	3,000,000	3,000,000	2,000,000	12,000,000
	USAID		Development Credit Authority	700,000				700,000

	USAID		Malawi horticultural Network	500,000	500,000			1,000,000
	USAID		C-FISH	1,000,000				1,000,000
	JICA		Animal husbandry	400,000				400,000
	JICA		Irrigation policy monitoring and evaluation	400,000				400,000
	JICA		Land Management	1,500,000	1,000,000	1,000,000		3,500,000
	JICA		Water management	3,000,000				3,000,000
	Flanders/FAO		Water management	5,000,000				5,000,000
Total				61,910,000	8,700,000	7,200,000	4,050,000	81,860,000
Category II	WB	C	Capacity Building	32,000,000				32,000,000
	EC EDF10	B	Food security	85,000,000				85,000,000
	IFAD	C	Commercial agriculture, agro-processing and market development	8,000,000				8,000,000

	ADB	C	Commercial agriculture, agro-processing and market development	7,000,000				7,000,000
	DFID	C	Food security	5,000,000	5,000,000	5,000,000	5,000,000	20,000,000
	ADB	C	Food security	6,600,000				6,600,000
	ADB	C	Water management	5,000,000				5,000,000
	ADB	C	Agricultural Sector Support Programme	20,000,000				20,000,000
	Norway	C/D	All programs	10,000,000	10,000,000	15,000,000	15,000,000	50,000,000
	WB/IFAD	C	Water management	40,000,000				40,000,000
Total				218,600,000	15,000,000	20,000,000	20,000,000	273,600,000
Category III	GOM	A	PE					66,833,826
			ORT					33,011,471
	GOM& Partners	C	SUBSIDY	143,450,000				143,450,000
Total								243,295,297
Total ASWAP								598,755,297
Total ASWAP costs								1,601,546,650
Deficit								1,002,791,353

APPENDIX 5: TERMS OF REFERENCES FOR THE ASWAP SECRETARIAT AND KEY STAFF POSITIONS

The ASWAp will require the following:
(a) Good communication between the different elements of the organizational structure;
(b) Submission of work plans and reports on time and, as necessary, their consolidation prior to transmission for decision; and
(c) That the Partnership Forum and the Management and Technical Working Groups are convened and minutes prepared on their deliberations
(d) That development partners have a contact point for day-to-day communication with the ASWAp on technical, administrative and management matters, and on financing.

6.1 The TORs of the ASWAp Secretariat are as follows:

a) Receive and consolidate annual work plans and budgets prior to their submission to the Executive Management Committee for endorsement;
b) Ensure timely reporting by various departments of the MoAFS, other participating ministries and districts;
c) Draft the Annual Implementation Report for endorsement by the Executive Management Committee;
d) Prepare other documentation as required for annual progress reviews;
e) Convene, draft agenda for, and minute meetings of the Executive Management Committee, the Management and Technical Working Groups, and the Partnership Forum;
f) Prepare proposals and position papers as required for endorsement by the Executive Management Committee or the Permanent Secretary, MoAFS as appropriate;
g) Monitor the development partners' compliance with the Code of Conduct and Memorandum of Understanding on the ASWAp; and
h) Liaise with the development partners, responding to requests for information and arranging *ad hoc* meetings outside the cycle of meetings for the various bodies and structures responsible for ASWAp delivery.

6.2 Summary Job Descriptions for Key Staff

6.2.1 Head of Secretariat (ASWAp Coordinator)

He or she will be responsible for the work of the Secretariat and report to the PS directly or through the CAETS or DAPS.

Responsibilities

Key responsibilities shall include:

1. Review and consolidation of ASWAp annual work plans and budgets prior to their submission to the Executive Management Committee for endorsement;
2. Coordination of the preparation and submission of the draft Annual Implementation Report for endorsement by the Executive Management Committee;
3. Preparation of relevant documentation as required for annual progress reviews;
4. Serve as Secretary for the meetings of the Executive Management Committee and Partnership Forum;

5. Preparation of proposals and position papers as required for endorsement by the Executive Management Committee or the Principle Secretary, MoAFS as appropriate;
6. Monitoring the development partners' compliance with the Code of Conduct and Memorandum of Understanding on the ASWAp; and
7. Liaising with the development partners, responding to requests for information and arranging *ad hoc* meetings outside the cycle of meetings for the various bodies and structures responsible for ASWAp delivery.
8. Linking with various stakeholders at national and international level involved in ASWAp activities
9. Providing leadership and supervision to staff under the Secretariat
10. Undertaking any other responsibilities as may be assigned by the PS or the Executive Management Committee

6.2.2 Deputy Coordinator (Technical)

Under the general leadership of the ASWAp Coordinator he or she shall be responsible for the management operations of the ASWAp. Specific responsibilities shall include:

1. Preparation and consolidation of reports of Technical Working Groups
2. Advising Directors and technical staff on matters of implementation of the ASWAp
3. Monitoring implementation of technical work plans and programmes by various key stakeholders
4. Identification and facilitation of capacity building needs for effective implementation of approved programmes
5. Facilitation of development and or review of technical systems, policies and guidelines
6. Serve as a Secretary of Technical Working Groups
7. Undertake any other duties that may be assigned by the ASWAp Coordinator as appropriate.

6.2.3 Deputy Coordinator (Management)

Under the general leadership of the ASWAp Coordinator he or she shall be responsible for the technical operations of the ASWAp. Specific responsibilities shall include:

1. Development and review of annual programmes and budgets for the Secretariat
2. Preparation and consolidation of reports of the Management Working Group
3. Coordination and facilitation of development and review of management systems (finance, procurement, ICT, HR etc) relevant to effective implementation of ASWAp
4. Facilitation of leadership and management development needs assessment among key stakeholders in liaison with Heads of divisions and departments.
5. Supervision of ASWAp support staff
6. Serve as a Secretary of the Management Working Group
7. Undertake any other duties that may be assigned by the ASWAp Coordinator as appropriate.