



Food and Agriculture
Organization of the
United Nations

AgWA
Partnership for agricultural water for Africa



Institutional, Policy and Legal Evidence-Based Analysis of Agriculture Water Management in Malawi

Final Report

July 14, 2015

List of Acronyms

AgWA	: Partnership for agricultural water for Africa
ASWAp	: Agriculture Sector Wide Approach
AWM	: Agriculture Water Management
CAADP	: Comprehensive Africa Agriculture Development Programme
CSO	: Civil Society Organization
DAHLD	: Department of Animal Health and Livestock Development
EIA	: Environmental Impact Assessment
EKC	: Environmental Kuznets Curve
ENRM	: Environment and Natural Resource Management
FAO	: Food and Agriculture Organization of the United Nations
GoM	: Government of Malawi
GDP	: Gross Domestic Product
JSR	: Joint Sector Review
MAIWD	: Ministry of Agriculture, Irrigation and Water Development
MDG	: Millennium Development Goal
MGDS	: The Malawi Growth and Development Strategy
NCE	: National Environmental Council
NGO	: Non-governmental Organization
NAMA	: Nationally Appropriate Mitigation Action
NAPA	: National Plan of Action
OPC	: Office of the President and Cabinet
SPR	: Sector Performance Report
SWOT	: Strengths, Weaknesses, Opportunities and Threats
ToRs	: Terms of Reference
VLOM	: Village Level Operation and Maintenance
VNARMC	: Village Natural Resource Management Committee
WUA	: Water Users Association

Acknowledgements

This report has been compiled with the assistance of various key stakeholders who played different critical roles.

These include the FAO Malawi office which systematically coordinated the national activities including liaising with the relevant government machinery on the assignment, while the FAO Rome office provided the technical guidance and feedback on the scope and focus of the study.

The report is a culmination of concerted efforts of different stakeholders who have played different invaluable roles that led to this output. Deep and profound gratitude goes to the various government staff that graciously provided the literature and up to date information on the policy direction and investments activities relating to the different aspects of the agriculture water sector.

Unreserved profound appreciation goes to the various government officials, from different Ministries, who graciously provided official documents such as Budget Documents and the Annual Economic Reports for various Financial Years, which provided official data for the study. In the same vein, special thanks to the members of the National Technical Team who provided significant feedback on the issues raised in the study. All this was possible through the coordination of the Malawi National CAADP Focal Point, Mr Daisi Kachingwe based at the Ministry of Agriculture, Irrigation and Water Development Headquarters, who ably facilitated all the above stakeholder consultation activities.

Owing to the invaluable contributions of the various stakeholders at national and international levels, it can be proudly declared that this study output is a product of the candid and generously provided contributions of different agriculture water management stakeholders who have passion to see noticeable investments in the sector within the CAADP framework.

Notwithstanding the various forms of invaluable support and input obtained from various players which informed the report findings, all the errors, omissions and misrepresentations therein still remain the responsibility of the author.

Executive Summary

This study was commissioned by the Food and Agriculture Organization of the United Nations (FAO) under TCP/INT/3404 “Support to the pre- and post- CAADP compact process for improved agricultural water management” that seeks to foster agricultural water investments through effective implementation of the Comprehensive African Agriculture Development Programme (CAADP) compact and post-compact process, refinement of national agricultural water development strategies, and alignment to national strategies for food security strategies and programmes. In the case of Malawi, the study aimed to provide improved evidence-based analysis for urgent interventions and bankable projects that need to be updated and prioritized to facilitate scheduling of investments in high priority areas outlined in the Malawi’s National CAADP Investment Plan, the Agriculture Sector Wide Approach (ASWAp) and other related national investment frameworks. In so doing, the initiative envisages fostering partnerships around common agriculture water management (AWM) priorities.

The specific objectives of the study include: (i) performing a mapping exercise of the institutional setup, legislation and policy framework for the development of AWM projects in Malawi; (ii) analyzing policy and institutional environment for AWM in Malawi using the FAO developed diagnostic tools; (iii) identifying reforms, instruments, activities, and investments in Malawi to overcome obstacles to the development and scaling up of AWM projects; and (iv) conducting an evaluation of public expenditure allocations by assessing strategic priorities and political commitments, efficiency of public spending, and management of agricultural projects and programmes in the agricultural water sector in Malawi.

The study finds that, in terms of institutional set up, most AWM activities are being implemented by public institutions, namely, government ministries and departments, as there are few, if any, organized non-public institutions with a clear focus on such issues, reflecting limited private sector investments and civil society organizations in the sector. The institutional legal and policy frameworks governing the AWM sector are both old and new, with the old ones being as old as 20 years and the new ones being passed in Parliament three years ago. This implies that the national and international drive to promote agricultural water and energy sector development has the necessary supportive policy and legal framework in Malawi.

The agricultural water and energy sectors in Malawi are governed and guided by national policy frameworks supported by legal frameworks such as: the Irrigation Policy supported by an Irrigation Act, 2001; the National Water Policy supported by the National Water Resources Act, 2012; the National Energy Policy supported by an Energy Act. The close and strong linkages between institutions, policy and legal frameworks imply that a weakness in one aspect is likely to lead to failure in other aspects of the system. Strong institutions develop and enforce effective policy and legal frameworks, which in turn, provide political and legal support for the operations of the same institutions. This means that national efforts to promote AWM investments yield optimal national medium to long welfare benefits, only if such efforts take a comprehensive approach of considering all the following related aspects; i.e. having strong institutions that can enforce the available policy and legal instruments on one hand, and having

robust policy frameworks to legitimize the legal instruments , all of which are developed and coordinated by effective national policy institutions (government ministries and departments).

Further, the analysis finds that the Malawi Government is facing budgetary constraints, implying low national allocative efficiency to the different sectors, including the agricultural water and energy sub-sectors. Such financial challenges have become more pronounced with the recent withdrawal of funding from development partners to the Malawi Government, which according to the Ministry of Finance, Economic Planning and Development, amounts to a drop in total grants from 10.5 percent to 3.5 percent of national Gross Domestic Product (GDP). However, the current low funding challenge also provides an opportunity for the Government and stakeholders to explore alternate investment opportunities that could contribute to the much needed turn-around in the national economy.

Use of the agricultural water sector as Malawi's pathway out of the current economic challenges calls for sound economic analyses that demonstrate optimal economic growth and developmental benefits for the country emanating from increased investments in such areas.

An analysis of underlying causes for the challenges of low supportive political will, low resource availability, and inadequate capacity, shows that most institutions are caught up in a *vicious cycle of institutional ineffectiveness*, characterized by: low political will due to inadequate and un sustained compelling empirical evidence; inadequate human and technical capacity to generate the required compelling supportive information for the sector; low financing due to limitations in technical capabilities to mobilize resources; and inadequate stakeholder (including political) support due to limited compelling information to stimulate advocacy for the sector. It is crucial that policy managers find a way out of this vicious cycle.

With respect to institutional collaboration, the analysis finds that while most public institutions in Malawi recognize the importance of institutional collaboration, this concept is usually confined to having inter-ministerial supervisory structures in form of Sector Working Groups, Technical Working Groups, Steering Committees, amongst others. While these structures, where operational, do provide interdisciplinary inputs into the technical operations of the different projects, programmes and departments, they tend to die naturally even before their term of office expires mainly because they do not translate into joint or collaborative grass-root implementation of developmental activities to effectively contribute to the overall national policy objectives. Therefore, policy makers should redefine the concept of inter-sectoral or multi-disciplinary interventions in form of joint implementation of programmes and projects at grass roots levels, besides having multi-sectoral national coordinating structures.

Table of Contents

List of Acronyms.....	ii
Acknowledgements.....	iii
Executive Summary.....	iv
List of Tables	vii
List of Figures	vii
AGRICULTURAL WATER MANAGEMENT IN THE CONTEXT OF MALAWI	1
Objectives of the study	3
Conceptual framework for the study.....	3
Structure of the report.....	4
STEP 1: MAPPING OF INSTITUTIONAL, LEGAL AND POLICY FRAMEWORK FOR MALAWI’S AGRICULTURAL WATER MANAGEMENT SECTOR	4
1.1 Institutions and actors	5
Conclusions	9
1.2 Legal and regulatory frameworks	10
Conclusions	15
1.3 Policy frameworks.....	15
Conclusions	25
STEP2: DIAGNOSTIC EXERCISE- PERFORMANCE ASSESSMENT OF INSTITUTIONS, LEGAL AND POLICY FRAMEWORK	25
2.1 Institutions	25
Conclusions	33
2.2 Legal and regulatory frameworks	36
Conclusions	43
2.3 Policy frameworks.....	45
Conclusions	60
STEP3: ACTION MATRICES	64
3.1 Institutions	64
Conclusions	72
3.2 Legal and regulatory frameworks	73
Conclusions	80
3.3 Policy framework	80
Conclusions	92
STEP 4: INSTITUTIONAL AND POLICY INDICATORS	92
4.1 Strategic priorities and political commitment of government and development partners	92
4.2 Efficiency of the public spending in the irrigation and hydropower sector	92

STEP 5 - CONCLUSIONS AND IMPLICATIONS FOR POLICY.....	94
5.1 Final Action Matrix.....	97

List of Tables

Table 2.1: Mapping Malawi AWM Institutions.....	6
Table 2.2: Legal and Regulatory Framework for the AWM sector in Malawi.....	11
Table 2.3: Policy Frameworks for the AWM sector in Malawi.....	16
Table 3.1a: Institutional Performance Assessments.....	27
Table 3.1b: Step 2.1- Summary of conclusions of assessing the performance of key institutions.....	34
Table 3.2a: Diagnostics of Legal/ Regulatory Framework.....	37
Table 3.2b: Summary of conclusions of assessing the performance of legal and regulatory frameworks	43
Table 3.3a: Diagnostic of the Policy Frameworks	47
Table 3.3b: Summary of conclusions of assessing performance of Policy Frameworks.....	60
Table 4.1: Action Matrix of AWM Institutions	65
Table 4.2: Action Matrix for Legal Frameworks.....	74
Table 4.3: Action Matrix for Policy Frameworks.....	81
Table 5.1: Institutional and Policy Indicators.....	93
Table 6.1: Final Action Matrix	97

List of Figures

Figure 1: The 5- Step Tool in evidence- based AgWA analysis.....	4
Figure 2: Vicious Cycle of Institutional Ineffectiveness	72

OVERVIEW OF AGRICULTURAL WATER MANAGEMENT

Agriculture Water Management (AWM) involves a range of activities from managing rainfall, rivers, lakes and groundwater to infrastructure development, food production, capacity building, research and information and knowledge management. Structural AWM interventions such as soil and water conservation, water harvesting, irrigation and drainage infrastructure are common. For the sake of sustainability, non- structural aspects of AWM such as legislations, policies, institutions and associated actors are increasingly being recognized to complement AWM interventions and both elements can take the form of a single functional structure (adapted from FAO, 2006)¹. For example, the operation and maintenance of a dam, whether new or reconditioned requires a management system involving people. Non-structural aspects of AWM such as regulatory frameworks (e.g. policies and legislations) and institutional functions (water service delivery) as well as capacity building (e.g. research, information, and knowledge management) are important components of governance and management.

Within the development discourse, the goal of good AWM is sustainable management and utilization of water and associated resources (e.g. land, forests, and soil) for optimal agricultural production. With increasing demand for food and energy due to a large human population, sustainable agricultural is key – i.e. increasing food production while conserving the available finite fresh water resources. This requires governance mechanisms with good policy and regulatory frameworks. Unfortunately, experience worldwide has shown that poor governance tends to be one of the root causes of poor agriculture water management. Within a given context therefore it is important to understand the environment in which legislations, policies and institutions operate so as to identify key determinants of a given AWM goal. For example, one may want to ask what factors facilitate or hinder the influence of a given policy intervention in relation to efficiency of an irrigation scheme. A critical analysis of determinants of the enabling environment for a given AWM goal is often necessary and failure to do so can lead to poor investment in AWM and low levels of associated external support.

On the other hand, it is important to acknowledge that measuring and analyzing key attributes of the (dis) enabling environment such as human and institutional capacities can be a complex undertaking. What needs to be done to bring about improvements in the quality and cost-effectiveness of AWM is often known and comparatively straightforward; but how these necessary conditions can be brought about, and more importantly sustained over time is more difficult.

¹ FAO 2006. *Demand for products of irrigated agriculture in Sub-Saharan Africa*. FAO Water Reports No. 31. Rome, Italy. <ftp://ftp.fao.org/agl/aglw/docs/wr31e.pdf>.

In an effort to respond to this challenge, the Partnership for Agricultural Water for Africa (AgWA) has developed a tool to identify institutional and policy realities that can provide a practical basis for improving investment, design and implementation of AWM interventions. The tool constitutes a set of instruments which address the different aspects of water resources development in agriculture and helps to identify reforms/instruments/activities/investments which can overcome some of the challenges and obstacles that are inherent in development interventions. This report presents an analysis of a case study from Malawi.

AGRICULTURAL WATER MANAGEMENT IN THE CONTEXT OF MALAWI

Malawi has a range of natural resources including fertile soils for agriculture, water resources, and diverse flora and fauna. Due to high population growth and poverty, these natural resources are being depleted which has led to widespread deforestation, cultivation of and settlement in marginal areas, thus undermining and threatening the sustainability of the water resources. According to the State of Environment Report by the Ministry of Natural Resources, Energy and Mining (2010), Malawi is considered a water-stressed country despite its abundance of water bodies. In 1990, its renewable water resources per capita was less than 1 400 m³ with per capita water availability of only 961 m³ which is expected to decrease to 403 m³ by 2025, thus Malawi is worse off in terms of water availability than many other countries in the Southern African Development Community (SADC) region (Ministry of Natural Resources, Energy & Mining, 2010).

National efforts to manage demand and supply for water resources in Malawi is undertaken by specifically designated institutions, policies and legal frameworks. The major demand for water resources comes from agriculture (irrigation), hydropower, sanitation, navigation, fisheries, wildlife (flora and fauna), industrial use, and ecotourism (Ng'ong'ola, 1999; Government of Malawi- Water Resources Act, 2012; Government of Malawi, Annual Economic Report 2014). The multiplicity of water uses necessitates careful and coordinated investment in water resource harvesting and management especially in developing countries such as Malawi. Based on insights from the Environmental Kuznets Curve (EKC) hypothesis, it is envisaged that the significant economic growth rates the country has been able to attain in the past few years, and seeks to maintain in the coming years, are likely to lead to water resource depletion and pollution if commensurate supply side investments are not undertaken to meet the growing demand levels emanating from different sectors.

The important linkages between agricultural water investments, the attainment of national food security and development objectives necessitates inclusion of agricultural water investments in the national CAADP Investment Plans which reflect the renewed commitments of African countries to coherent and comprehensive investments in agricultural and related sectors as a pathway for broad based national economic growth. Countries like Malawi that already have their CAADP national investment plans should re-examine their plans to

determine the extent to which AWM issues have been incorporated, and if gaps exist, address such gaps.

Objectives of the study

In view of the above, this study seeks to support the Malawi post CAADP compact process by fostering agricultural water investments within the framework of Malawi's National CAADP Investment Plan, the ASWAp, and build evidence-based partnerships around commonly agreed priorities. More specifically, the study seeks to:

- (i) perform a mapping exercise of the institutional setup, legislation and policy framework for the development of agriculture water management projects in Malawi;
- (ii) analyze policy and institutional environment for agricultural water management in Malawi within the CAADP framework, and assess performance of institutions, legal frameworks and policies, using the diagnostic tools as developed and provided by FAO headquarters;
- (iii) develop an action matrix that identifies specific reforms, instruments, activities, and investments in Malawi to overcome obstacles to the development and scaling up of agriculture water management projects; and;
- (iv) conduct an evaluation of public expenditure allocations by assessing strategic priorities and political commitments, efficiency of public spending, and management of agricultural projects and programmes in agricultural water management sector in Malawi.

Conceptual framework for the study

The analysis of investments in the AWM sector in Malawi followed the steps laid down by FAO: a mapping exercise for the institutional, legal and policy frameworks; a diagnostic exercise discussing the investment expenditures for the agriculture and hydro power sectors in line with the given policy frameworks; development of an institutional and policy index that summarizes policy, institutional and budget data; the action matrix that brings out the actions and responsibilities of the various stakeholders including the possible changes that need to be effected. These steps are summarized in the schematic presentation (as Figure 1) below:

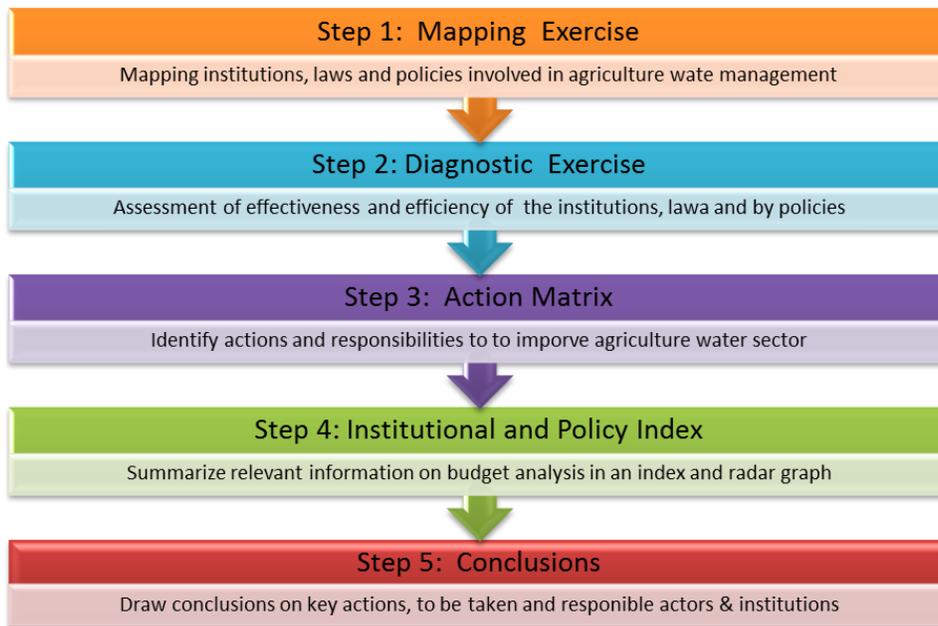


Figure 1: The 5- Step Tool in evidence- based AgWA analysis

The study was conducted using secondary data collected from various AWM institutions in Malawi. The focus of the study has been on national institutions because the development partners' undertakings, in the spirit of the Paris Declaration, align their activities to the national development frameworks. The secondary information was complemented by discussions with key technical staff and decision makers in the same institutions.

Structure of the report

The second chapter of the Report undertakes a mapping exercise for the institutional set up, legislation and policy framework for the development of AWM in Malawi. The third chapter undertakes an in-depth analysis of policy and institutional environment in Malawi using the diagnostic tool developed by FAO. The fourth chapter investigates reforms, instruments, activities and investments in Malawi that seek to overcome the identified obstacles. The fifth chapter evaluates the public expenditure allocations to decipher the level of government political commitments and priorities; and the sixth chapter provides a summary of issues and recommendations for decision makers.

STEP 1: MAPPING OF INSTITUTIONAL, LEGAL AND POLICY FRAMEWORK FOR MALAWI'S AGRICULTURAL WATER MANAGEMENT SECTOR

The mapping exercise comprises three major steps, i.e. the institutional, policy and legal framework analyses. The institutional mapping discusses the mandates and functions of the

national institutions involved in stimulating, coordinating and managing investments in the agriculture and water sector in Malawi; whereas the policy and legal mapping exercises seek to unveil the objectives of the various instruments and the related targets. Overall, the mapping exercise brings to the fore the critical governance factors that shape agriculture water development activities in Malawi.

1.1 Institutions and actors

Institutional mapping involves identifying the policy actors, geographical location of operation, organizational mandate and functions related to agricultural water management. Table 1.1 below provides the details.

Table 2.1: Mapping Malawi AWM Institutions

Step 1 a: Mapping of Malawi AWM institutions			
Institutions /actors	Geographical level(GL)/ Nature (N)	Mandate (AWM related)	Functions (AWM related)
Parliamentary Committee on Agriculture & Natural Resources	GL: National N : Public, formal non-profit making	(i) Ensuring that national budget allocations and policies (including to agricultural water & energy) reflect the aspirations and interests of the people of Malawi.	(i) Provide a forum for debate on needs and aspirations of people of Malawi (including AWM issues).
Office of the President and Cabinet	GL: National N : Public, formal non-profit making	(i) Provide advice to the President on policy matters (including agriculture water); (ii) Provide strategic leadership in development of government policies and programmes (including agricultural water & energy) and ensure implementation through monitoring and evaluation; (iii) Guide public entities in developing/ formulating government strategic priorities, practices and implementation of programmes (GoM, Output Based Budget, 2010/11)	(i) Provide strategic leadership in management of professional, accountable, effective, well motivated, response and non-partisan public service; (ii) Facilitate dialogue between government and stakeholders in the performance of government business; (iii) Ensure that government policies enhance the political and socio-economic development of the country.
Ministry of Finance, Economic Planning & Development	GL: National N : Public, formal non-profit making	(i) Provide economic advice through long term and medium term planning instruments- development of the Malawi Growth and Development Strategy (MGDS) for realization of Vision 2020, and the MDGs; (ii) Effectively coordinate climate change issues at national level; (iii) Ensure that public investment is directed towards identified national priority areas for sustainable economic growth and poverty	(i) Improve economic policy formulation, planning and analysis; (ii) Improve development planning, programming and coordination; (iii) Improve and sustain the national system for monitoring and evaluation of development policies, programmes and strategies.

Step 1 a: Mapping of Malawi AWM institutions

Institutions /actors	Geographical level(GL)/ Nature (N)	Mandate (AWM related)	Functions (AWM related)
		alleviation.	
Ministry of Agriculture, Irrigation and Water Development	GL: National N: Public, formal non-profit making	<ul style="list-style-type: none"> (i) Increase agriculture production and enhance food security through irrigation development; (ii) Achieve sustainable, integrated and equitable water resources development; (iii) Promote the empowerment of user communities to own, manage and invest in water resources development; (iv) Promote public and private sector participation in water resources management, development, supply and conservation. 	<ul style="list-style-type: none"> (i) Identify areas with irrigation potential in order to increase land under irrigation based on existing irrigation potential; (ii) Assist smallholder farmers to develop and manage new and existing irrigation schemes through establishment of local farmer organizations that can assume full ownership of existing irrigation schemes; (iii) Address specific problems that women face in irrigated agriculture in order to achieve greater participation in the small scale irrigation sector; (iv) Strengthen efforts towards water resources conservation, harvesting and protection in an integrated manner including promotion of development of small multipurpose community dams; (v) Create and enable environment for the public-private sector to participate in water supply and sanitation activities.
Ministry of Natural Resources, Energy and Mining	GL: National N: Public, formal non-profit making	<ul style="list-style-type: none"> (i) Promote coordination and collaboration in sound utilization and management of the natural resources (including water), energy and environment with full participation of government institutions, the private sector, NGOs, communities; (ii) Promote development, implementation and compliance of natural resources, energy and environment policies, programmes, legislation 	<ul style="list-style-type: none"> (i) Harmonize policies, strategies and programs, on Environment and Natural Resource Management (ENRM)(including water); (ii) Facilitate and strengthen participatory development, implementation and monitoring of natural resources, energy and environmental management activities; (iii) Capacity building in natural resources, energy and environmental policies, legislation and other issues; (iv) Monitor, analyze and predict weather and climate for early

Step 1 a: Mapping of Malawi AWM institutions

Institutions /actors	Geographical level(GL)/ Nature (N)	Mandate (AWM related)	Functions (AWM related)
		<p>and other related instruments;</p> <p>(iii) Promote capacity building in environmental education, public awareness and participation in sound natural resources, energy and environmental management practices;</p> <p>(iv) Provide efficient and responsive weather and climate services including provision of information on climate change.</p>	<p>warning purposes which is vital for advisory services in disaster management;</p> <p>(v) Increase access to affordable and modern energy services;</p> <p>(vi) Develop and improve the NAMAs and National Adaptation Plans;</p> <p>(vii) Ensure compliance of development projects (including AWM projects) to the EIA requirements.</p>
Ministry of Lands, Housing and Urban Development	GL: National N: Public, formal non-profit making	<p>(i) Enhance sustainable use and management of land and land based resources;</p> <p>(ii) Enhance cross border cooperation to ensure territorial integrity through strict observance of common international boundaries.</p>	<p>(i) Increase security of land tenure through land regularization, titling and registration;</p> <p>(ii) Undertake physical development planning to ensure orderly, equitable, sustainable spatial development at all levels;</p> <p>(iii) Physically demarcate and/or affirm all international boundaries.</p>
Ministry of Local Government and Rural Development	GL: National N: Public, formal non-profit making	<p>(i) To provide policy and legal framework for the efficient and effective operation of local assemblies;</p> <p>(ii) To promote an effective system of local governance and development;</p> <p>(iii) To provide linkages between the central and local governments (in all sectors including agriculture, water and energy).</p>	<p>(i) Transform rural areas through creation of a conducive environment for investment to stimulate sustainable economic growth;</p> <p>(ii) Provide rural people with capital for investment to stimulate economic growth;</p> <p>(iii) Promote value addition to agro-products and other natural resources;</p> <p>(iv) Support the vulnerable groups in society with access to basic needs of life (include agriculture water).</p>

Step 1 a: Mapping of Malawi AWM institutions

Institutions /actors	Geographical level(GL)/ Nature (N)	Mandate (AWM related)	Functions (AWM related)
Water Resources Board now National Water Resources Authority	GL: National N: Public, formal non-profit making	<ul style="list-style-type: none"> (i) Develop, principles, guidelines and procedures for allocation of water resources, and determine charges on water resource uses; (ii) Receive and determine applications for permits for water use; (iii) Regulate and protect water resources quality from adverse impacts; (iv) Manage and protect water catchments; (v) Advise the Minister on any dispute between agencies involved in water management. 	<ul style="list-style-type: none"> (i) Collect, collate and analyze data concerning the occurrence, flow, characteristics, quality and use any water or waste; (ii) Sample and analyze any water or waste; (iii) Provide information concerning the investigation, use, control, protection, management or administration of any water or concerning any waste; (iv) Provide a national monitoring and information system on water resources.
Water Boards (Northern, Lilongwe, Central Region, Blantyre, Southern Region)	GL: Regional, District N: Public, formal non-profit making	<ul style="list-style-type: none"> (i) Construct and maintain all such works as necessary and convenient for the purpose of creating, maintaining and extending waterworks for supplying water for domestic, public and business purposes (including agriculture water). 	<ul style="list-style-type: none"> (i) Enter contracts to supply water from its waterworks or water-borne sewage sanitation services to any person's water in any local authority, inside or outside the water-area.
Water Users Association (WUA)	GL: District, Local N: Public, formal non-profit making	<ul style="list-style-type: none"> (i) Manage, distribute, operate and maintain any works for the purposes of management of the water resource in its area of operation; (ii) Manage, rehabilitate, operate and maintain any works for the purposes of management of the water resource in its area of operation. 	<ul style="list-style-type: none"> (i) Resolve conflicts related to water abstraction licenses; (ii) Ensure equitable distribution of quantities of water abstracted from the source.

Conclusions

Table 2.1 shows that AWM activities are largely in the hands of public state institutions in Malawi, these include: the Ministries of Agriculture, Irrigation, and Water Development (which

merged with the two previous ministries of Agriculture and Food Security, and that of Irrigation and Water Development); the Ministry of Natural Resources, Energy and Mining; Ministry of Environment and Climate Change Management; Ministry of Local Government and Rural Development; Ministry of Lands, Housing and Urban Development; and the National Water Resources Authority. The private institutions such as Water Users Associations (WUAs) are just emerging –with those in urban areas largely focused on the provision of domestic water use while those in irrigation schemes promote AWM activities. The Water Boards, while operating multi-purpose dams largely focus on efficiency and effectiveness of water supply activities for urban domestic and industrial use though this is not clearly stipulated in the Act of Parliament that establishes these water boards.

Malawi has few non-governmental organizations (NGOs) or civil society organizations (CSOs) with explicit agricultural water development focus/ These organizations seek to promote household food security activities through adoption of conservation agriculture and irrigated farming. AWM activities are also part of various NGO food security interventions, and tend to be micro in nature and in geographical scope, some examples are the World Vision, Oxfam Malawi and Total Land Care.

1.2 Legal and regulatory frameworks

As stated in the mandates and functions of most public AWM institutions, their role is to formulate, review and monitor the legal and regulatory frameworks that guide the conduct of actors in the sector. It is therefore, imperative that the scope of the legal frameworks available in Malawi be documented and reviewed by summarizing their goals or missions, the specific targets and measures to attain the targets. Table 2.2 below provides the details.

Table 2.2: Legal and Regulatory Framework for the AWM sector in Malawi

Step 1 b: Legal/ Regulatory Framework for the AWM Sector in Malawi			
Legislation	Goal/Mission	Specific Target	Measure to Attain Target
The Malawi Constitution, 1995	<p>Defines Malawi's territory including water sources and bodies;</p> <p>Calls upon the State to actively promote the welfare and development of the people of Malawi.</p>	<ul style="list-style-type: none"> (i) Full recognition to the rights of future generations by means of environmental protection and the sustainable development of natural resources (including water); (ii) Sensible balance between the creation and distribution of wealth through the nurturing of a market economy and long-term investment in health, education, economic and social development programmes. 	<ul style="list-style-type: none"> (i) The State is required to progressively adopt and implement policies and legislation aimed at achieving different goals including environmental management.
Water Resources Act, 2012	<p>Provides for management, conservation, use and control of water resources, for the acquisition of rights to use water, and for the related matters.</p>	<ul style="list-style-type: none"> (i) Establishment of water catchment areas; (ii) Provisions for protected areas and conservation areas; (iii) Management of water courses; (iv) Provision for reservation of water resource and abstraction of water for domestic use, use of groundwater and rainwater harvesting. 	<ul style="list-style-type: none"> (i) Provides for National Water Policy and National Water Master Plan which have provide specific policy guidelines for the sector and these have to be gazetted; (ii) Establishes the National Water Authority and Catchment Area Management Committees to manage water resources; (iii) Provides guidelines for the establishment and operationalization of water user associations.

Step 1 b: Legal/ Regulatory Framework for the AWM Sector in Malawi			
Legislation	Goal/Mission	Specific Target	Measure to Attain Target
Water Works Act (No.17 of 1995)	Provides for sustainability in the regulation, development, management, financing, and provision of support services in the entire irrigation sector.	<ul style="list-style-type: none"> (i) Promotes and enables environment for irrigation development; (ii) Enhances and expands area (hectares) of irrigation and production; (iii) Protects water resources and catchment. 	<ul style="list-style-type: none"> (i) Provides for Policy, coordination and oversight of irrigation at all levels including: establishment of Irrigation Strategy policies; Establishment of Irrigation Development Service; (ii) Scales-up and maintains investments in the development of all irrigation categories. Designs a programme for progressive expansion of irrigation; (iii) Ensures integration of climate change adaptation and mitigation through appropriate measures and strategies.
Irrigation Act, 2001	Provisional for the sustainable development and management of irrigation and protection of the environment, from irrigation related degradations and matters.	<ul style="list-style-type: none"> (i) Increase irrigation efforts to enhance household food securities; (ii) Promote efficient water use in irrigation sector; (iii) Build strong capacities in irrigation management; (iv) Enhance sustainable development and management of irrigation sector. 	<ul style="list-style-type: none"> (i) Extending the available land under irrigation; (ii) Establishment of rules and regulations for water use in irrigation; (iii) Provision of training in the irrigation schemes on improved technology use and infrastructure; (iv) National Irrigation Board responsible for managing irrigation development to be established.
Cotton Act, 2012	Provides a more responsive legal framework for regulation of cotton production, marketing, processing, licensing, ginning and baling in light of the socio-economic and technological development.	<ul style="list-style-type: none"> (i) Improve the quantity and quality of cotton produced in Malawi, enhance value addition, facilitate compliance with international markets and diversify production of cash crops (including those 	<ul style="list-style-type: none"> (i) Establishment of the Cotton Council to support research and training of institutions in the cotton industry in Malawi; (ii) Provides for regulations of cotton varieties grown in Malawi, procedures for cotton processing and marketing in Malawi, and

Step 1 b: Legal/ Regulatory Framework for the AWM Sector in Malawi			
Legislation	Goal/Mission	Specific Target	Measure to Attain Target
		<p>produced with agricultural water investments) in Malawi;</p> <p>(ii) Promote growth and economic development by complimenting the tobacco industry.</p>	<p>procedures for application of license for cotton ginning in Malawi.</p>
Environment Management Act, 1996	To promote necessary and appropriate measures in protection and management of the environment and to conserve natural resources and to promote sustainable utilization of natural resources in accordance with this Act.	<p>(i) Promote a clean environment in Malawi;</p> <p>(ii) ensure the sustainable utilization of the natural resources of Malawi;</p> <p>(iii) Promote public awareness and participation in the formulation and implementation of environmental policies;</p> <p>(iv) Promote international relationship in the protection of the environment;</p> <p>(v) Promote scientific research, technological development and training relating to the protection of the environment.</p>	<p>(i) Duty of every person to take all necessary and appropriate measures to protect and manage the environment;</p> <p>(ii) People may bring an action in the High Courts to prevent or stop any act which is deleterious or which accelerate unsustainable depletion of natural resources;</p> <p>(iii) Coordinate the promotion of public awareness on the protection and management of the environment for sustainable utilization of natural resources;</p> <p>(iv) Recommend to the Government, on the advice of the Council, international or regional treaties, conventions or agreements relating to the protection and management of the environment;</p> <p>(v) Initiate, facilitate or commission research and studies on any aspect of environmental protection and management.</p>
Forestry Act 1997	To provide for participatory forestry, forest management, forestry research, forestry education, forest industries, protection and rehabilitation of environmentally fragile areas and international cooperation in	<p>(i) Create an enabling environment for sustainable administration and management of forests through set of regulations;</p> <p>(ii) Ensure sustainable management of forests on water catchment areas.</p>	<p>(i) Provides for management of forests on water catchment areas with emphasis on soil conservation,</p> <p>(ii) All indigenous forests and woodlands to be managed on sustainable basis which includes conservation of water, soil and biodiversity.</p>

Step 1 b: Legal/ Regulatory Framework for the AWM Sector in Malawi			
Legislation	Goal/Mission	Specific Target	Measure to Attain Target
	forestry and for matters incidental thereto or connected therewith.		
Local Government Act, 1998	To consolidate the law relating to local government and to provide for matters connected therewith or incidental thereto.	(i) The constitutional order based on democratic principles, accountability transparency and participation of the people in decision-making and development processes.	(i) To create the local institutions managing the governance systems, namely the local assemblies (now known as local councils), their powers and functions; (ii) Provide for mechanisms of financing the operations of the local councils.
Malawi Investment and Trade Center Act	To provide for effective trade and investment incentives through the creation of a true one-stop shop for registration for investment and export incentives, trade licensing and provision of market and investor information.	(i) Lobbying for and know about land zoning for investors; (ii) Owning and managing an up-to-date and relevant database of investment opportunities; (iii) Developing capacity to brand and market priority exports.	(i) The merger of the Malawi Export Promotion Council and the Malawi Investment Promotion Centre to create an one- stop shop centre for investors and exporters; (ii) Providing relevant Investment; (iii) Certificates that allow for effective after-sales services, possibly at a renewable fee.

Conclusions

The legal and regulatory review shows that Malawi has a number of legal and regulatory frameworks that govern the national investments and use of agriculture water resources in the country. Some legal frameworks are old while others - such as the Water Resources Act of 2012, are new. In any case, the legal instruments establish institutional arrangements for coordinating sectoral issues, defining the conduct of the players, the activities deemed as criminal and the accompanying penalties.

In spite of the diversity of the legal instruments, there is no clear evidence of conflicting provisions within or across the sub-sectors. This is a reflection of the in-depth consultative processes that characterize the development of the said instruments.

The institutional arrangements in most instruments shows a decentralized approach to their implementation as evidenced by the inclusion of the grassroot institutions such as village committees. However, the extent to which the targeted local institutions actually participate in the enforcement of the above legal instruments is an issue of empirical investigation.

1.3 Policy frameworks

The institutional and legal frameworks operate within given sectoral policy frameworks. This study proceeds to review these policy frameworks in the same manner as done for the legal frameworks review process; i.e. by highlighting specific AWM related objectives, and measures to attain those objectives. The policy frameworks can be identified into two broad categories, i.e. national overall policy frameworks such as the Malawi Growth and Development Strategy (MGDS) and the Vision 2020 and; the sectoral frameworks. Table 2.3 below provides the details.

Table 2.3: Policy Frameworks for the AWM sector in Malawi

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
<p>The Malawi Growth and Development Strategy 11, 2011-16 Seeks to achieve sustainable growth and development through investments in priority areas including agriculture; natural resources and environmental management (including water resources).</p>	<ul style="list-style-type: none"> (i) Promote biodiversity conservation programs; (ii) Enforce compliance to environmental and natural resource management legislation; (iii) Harmonize environment and natural resources management policies and legislation. 	<ul style="list-style-type: none"> (i) Improve coordination of environment and natural resource programmes; (ii) Develop capacity in various sectors for ENRM; (iii) Review various policies and legislations to mainstream environment and natural resource management issues in sectoral policies and programmes at national and local levels.
<p>Vision 2020 'By the year 2020, Malawi, as a god-fearing nation will be secure, democratically mature, environmentally sustainable, self-reliant with equal opportunities for and active participation by all having social services, vibrant culture and religious values and technologically driven middle-income economy.'</p>	<ul style="list-style-type: none"> (i) To promote Sustainable economic growth and development; (ii) To promote science and technology development; (iii) To reduce cases of food insecurity and malnutrition; (iv) Promote a sustainable natural resource and environment management; (v) Promote cultural values. 	<ul style="list-style-type: none"> (i) Develop economic infrastructures i.e. railways, water transport, airports etc.; (ii) Provide research on new technologies; (iii) Increase food crop production through development of irrigation schemes (iv) Prevent degradation and depletion of water resource (v) Promote cultural values supportive to natural resource, environment and water management.
<p>National Water Policy, 2007 To assess the performance of policy implementation and its impact on the overall socioeconomic and development of the country at all levels.</p>	<ul style="list-style-type: none"> (i) Achieve sustainable and integrated water resources development, conservation and management that provides equitable access and use of water to all individuals; (ii) Ensure the existence of strategic and contingency water resources development and management plans that guarantee availability of water in cases of droughts, floods; (iii) Promote user-friendly technologies to enable easy access to water and sanitation services by all manner of 	<ul style="list-style-type: none"> (i) Water services shall be provided using appropriate cost-effective technologies that are sustainable in the urban water services and for the rural areas, technologies shall conform to the Village Level Operation and Maintenance (VLOM) concept; (ii) Water planning shall incorporate disaster preparedness and management to cope with climate change and climate variability to minimize the impact of such changes on the socio-economic status of the nation; (iii) All water resources programmes shall adopt IWRM principles;

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
	<p>people;</p> <p>(iv) Promote and advocate water and sanitation services' pricing and charging systems that recognize water as both a social and economic good in order to institute cost recovery principles.</p>	<p>(iv) Water shall be treated not only as a social good but also as an economic good.</p>
<p>National Irrigation Policy, 2000 To provide a clear statement of the Government's aspirations for the irrigation sector and to highlight the strategy for attaining irrigation development objectives.</p>	<p>(i) Contribute to poverty alleviation by targeting resource poor smallholder farmers for irrigation development to enhance farm income and by supplementing the recommended strategies for rain fed agriculture outlined in Malawi's "The Agricultural and Livestock Development Strategy and Action Plan";</p> <p>(ii) Increase agriculture production and enhance food security through irrigation, which will ensure some production during droughts, and the dry season, and this will supplement rain fed agriculture;</p> <p>(iii) Extend cropping opportunities and provide a wider variety of crops in both wet and dry seasons to improve nutritional status, especially of children and women;</p> <p>(iv) Create an enabling environment for irrigated agriculture; by facilitating and encouraging the private sector to invest in irrigation development, and encourage rural communities to manage irrigation projects in order to fully utilize irrigable land in Malawi;</p>	<p>(i) Areas with potential for irrigation development, the role of irrigation in the agro-ecological production pattern will be established to determine the location, timing and conditions for irrigation. Priority will be given to development of those areas with the best chance of success taking into account social factors, cost effectiveness and financial viability;</p> <p>(ii) Irrigation extension training will be provided to MoAI to complement rain fed extension training agents in irrigation technology to advise farmers in irrigation schemes. Extension agents to be placed in EPAs where irrigation exists and where irrigation development is planned;</p> <p>(iii) Women will be encouraged to participate in small scale irrigation projects through public awareness campaigns that can allow women to go through exchange visits and seminars;</p> <p>(iv) Promote the establishment and growth of farmer-oriented financial intermediaries such as Savings and Credit Cooperatives (SACCOs), Village Banks etc. This will require examining the potential role of farmer owned intermediaries, identifying constraints to their formal establishment and operation, and developing and implementing policies that will actively promote establishment and growth of the organizations;</p> <p>(v) A research and development programme, will be</p>

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
	<ul style="list-style-type: none"> (v) Enhance human capacity for irrigated agriculture in the public, parastatal and private sector in order to facilitate effective research in irrigation technology; (vi) Marketing of irrigated produce. 	<p>established for the testing and further development of small water lifting devices small scale processing and labor saving technologies that are affordable to resource poor farmers. This program will include promotion of local manufacturing of these devices.</p>
<p>National Environmental Policy 2004</p> <p>Promotion of sustainable social and economic development through the sound management of the environment and natural resources.</p>	<ul style="list-style-type: none"> (i) Secure for all persons, now and in the future, an environment suitable for their health and wellbeing; (ii) Promote sustainable utilization and management of the country's natural resources appropriate, long term self-sufficiency in food, fuel wood and other energy requirements; (iii) Facilitate the restoration, maintenance and enhancement of the ecosystems and ecological processes essential for the functioning of the biosphere and prudent use of renewable resources; (iv) Promote the ecosystems management approach so as to ensure that sectoral mandates and responsibilities are fully and effectively channelled towards environment; (v) Enhance public education and awareness of various environmental issues and public participation in addressing them; (vi) Integrate sustainable environment and 	<ul style="list-style-type: none"> (i) Every person has a right to a clean and healthy environment and a duty to maintain and enhance the environment; (ii) Obligation for every person to take measures to promote sustainable utilization and management; (iii) Children and the youth should be sensitised in environmental issues to facilitate their participation in the conservation, protection and management of the environment as future custodians; (iv) Women should effectively participate in policy, program and project design and implementation to enhance their role in natural resource use and management activities; (v) Promotion of an ecosystems management approach; (vi) The use of renewable natural resources should be sustainable for the benefit of the present and future generations; (vii) Malawi's economy is highly dependent on natural resources. If these are depleted or degraded, long-term food security and sustainable economic growth will be seriously affected; (viii) The participation of the private sector, NGOs, and Community Based Organizations (CBOs), is critical to improved protection, conservation, management and

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
	<p>natural resources management into the decentralized governance systems;</p> <p>(vii) Promote local community, Non-Governmental Organisations (NGO) and private sector participation in managing environment.</p> <p>(viii) Promote the use and application of local knowledge and norms that facilitate management;</p> <p>(ix) Promote co-operation with other Governments and relevant regional and international organizations in the management and conservation of the environment.</p>	<p>sustainable utilization of Malawi's natural resources;</p> <p>(ix) Develop and regularly update environmental information systems to facilitate planning and decision-making at local, national and international levels.</p>
<p>National Climate Change Investment Plan, 2013 – 2018</p> <p>To develop a coordinated approach to climate mitigation and adaptation to reduce climate change impacts on food security, water availability and quality, and energy, which have overwhelmingly affected sustainable livelihoods, especially for rural communities.</p>	<p>(i) Develop well researched plans of activities to provide the foundation and basis for implementing comprehensive and coordinated actions that are geared towards arresting climate change and its hazards.</p>	<p>(i) ensure that the key priority areas of the actions to address climate change and its effects are timely and sufficiently supported with resources in order to ensure that the economy and society in Malawi develop to their full potential within a well-protected and sustainable environment;</p> <p>(ii) guide the GoM to allocate budgetary resources based on corresponding requirements and the optimal contribution of the sector to the key priorities of the MGDS II;</p> <p>(iii) Act as a platform for building human capacity that will form the basis for addressing these aforesaid phenomena.</p>

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
<p>National Energy Policy, 2003 To provide a transparent and dynamic operational framework for the Malawi Energy Sector (MES). It also provides guidelines on energy development, supply, use, distribution, pricing and industry governance.</p>	<ul style="list-style-type: none"> (i) Improving efficiency and effectiveness in energy supply industries; (ii) Improving security and reliability of energy supply systems; (iii) Increasing access to modern energy services; (iv) Enhancing economic development and rural transformation; (v) Improving energy sector governance by mitigating environmental, safety and health impacts of energy production. 	<ul style="list-style-type: none"> (iv) Undertake CSI Reforms through preparing a CSI Market reform Implementation Strategy and a change in CSI Market Structure; (v) Interconnection of the Malawian grid with that of Mozambique; (vi) Promote use of low cost electrification technologies and rationalize distribution margins to provide incentive to rural distributors; (vii) Provide price incentives to encourage the industrialization, modernization and diversification of agriculture, targeting irrigation; (viii) Undertake high profile campaigns to increase public awareness of the dangers of exposure to coal.
<p>National Food Security Policy, 2006 To significantly improve food security of the population through increasing agricultural productivity as well as diversity and sustainable agricultural growth and development.</p>	<ul style="list-style-type: none"> (i) Promote irrigation development and integrated water resources management; (ii) Promote water, environmental and land management for sustainable agriculture development; (iii) Promote fisheries and aquaculture development. 	<ul style="list-style-type: none"> (i) Encourage sustainable utilization of wetlands for agricultural use; (ii) Prevent water, soil and air pollution from agro-chemicals; (iii) Integrate fish farming/aquaculture into irrigation development programmes.
<p>National Livestock Development Plan & Strategy, 2003 To promote livestock productivity, improve livestock based incomes, and promote sustainable use of natural resources in partnership with other stakeholders while protecting the public against zoonotic diseases.</p>	<ul style="list-style-type: none"> (i) A SWOT analysis of the livestock industry which reveals, amongst others, inadequate capacity to conduct cost benefit analyses of livestock programs and inadequate promotion of livestock programs; (ii) Provides for specific goals of the Department of Animal Health and Livestock Development (DAHLD); (iii) Outlines the specific goals & strategies for the different sub-sector development 	<ul style="list-style-type: none"> (i) Promotion of animal breeding and disease control programmes; (ii) Market infrastructure development, eg slaughter houses; (iii) Private sector participation in livestock sector development; (iv) Enforcement of livestock regulations; (v) Gender mainstreaming in livestock sector programs.

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
	e.g., dairy, beef.	
<p>New Agriculture Extension Policy, 2000</p> <p>Promote improved agricultural extension services by ensuring that all farmers are better served through a pluralistic, demand driven agricultural extension services.</p>	<ul style="list-style-type: none"> (i) To provide for a new extension policy that would effectively respond to smallholder farmers challenges; (ii) To provide a framework that would guide roles of different stakeholders; (iii) To provide a framework for mutual understanding amongst stakeholders. 	<ul style="list-style-type: none"> (i) Setting clear extension provision guidelines to guide all actors involved in agricultural extension provision; (ii) Strengthening coordination amongst stakeholders involved in agricultural extension especially at district level; (iii) Promoting pluralism in extension service provision.
<p>National Greenbelt Initiative, 2009</p> <p>It seeks to increase production and productivity of agricultural crops, livestock and fish farming both inland and along the shores of Lake Malawi and the banks of Shire and other water bodies through the development of small-scale and large-scale irrigation schemes.</p>	<ul style="list-style-type: none"> (i) Increase production and productivity for crops, livestock and fisheries; (ii) Increase agricultural exports; (iii) Increase diversification and improve knowledge and operations of small-scale and large-scale farmers; (iv) Improve value chain linkages and operations; (v) Increase private sector participation in agricultural production; (vi) Add value through processing of raw materials; (vii) Create rural growth-centres along the greenbelt corridors. 	<ul style="list-style-type: none"> (i) Irrigation development and rehabilitation as a core component of the initiative; (ii) Credit and micro-finance development; (iii) Natural resource management; (iv) Research-based technology development, dissemination and utilization; (v) Infrastructure and market development.
<p>National Nutrition Policy & Strategic Plan, 2009</p> <p>To have a well nourished Malawi nation with sound human resource that effectively contributes to the economic growth and prosperity of the country.</p>	<ul style="list-style-type: none"> (i) Prevent and control the most common nutrition disorders among women, men, boys, girls in Malawi with emphasis on vulnerable groups; (ii) Increase access to timely and effective management of the most common nutrition disorders among women, men, boys, girls in Malawi by 2011 with emphasis on vulnerable groups; 	<ul style="list-style-type: none"> (i) Development of the Nutrition Act to include labelling, marketing, promotion and comprehensive mandatory standards for all marketed food products, street commercial and imported foods and food aid, street food vending and marketing of food supplements; (ii) Diversify the types of food stored in national strategic food reserves; (iii) Recognizes irrigation development as one of the measures for achieving nutritional

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
	(iii) Create an enabling environment for the effective implementation of nutrition services and programmes.	objectives/outcomes; (iv) Encourage adding value to produce meat and milk products; (v) Integrate fish farming/aquaculture into irrigation development programmes.
Crop Production Policy, undated Promoting a balanced diversified production of food and cash crops to meet country's requirements for food, foreign exchange and raising rural incomes.	(i) Promote and attract investment in crop water use efficiency; (ii) Accelerated growth and development of agricultural crops; (iii) Increased investment in climate suiting varieties and efficiency of agribusiness.	(i) Introducing irrigation schemes to reduce over reliance on rain fed production; (ii) Use of hybrid varieties; (iii) Identify of suitable agri-ecological areas where production of improved varieties will be encouraged.
National Fisheries and Aquaculture Policy, 2001 Maximizing the sustainable yield from the national waters of Malawi and man-made water bodies and to improve the efficiency of exploitation, processing and marketing of quality fish products, promote investment in the fishing industry, rural fish farming units and exploit all opportunities to expand existing and develop new aquatic resources.	(i) Mobilize communities to participate and play an active role in fisheries management and fish farming (aquaculture); (ii) Improve effectiveness and efficiency of the extension services; (iii) Distribute extension messages on fisheries and on environmental issues to sensitize the fishing communities; (iv) Motivate extension personnel to improve effectiveness by establishing functional personnel development plans; (v) Review research priorities to address actual fishing community needs/problems and make use of the indigenous fisheries knowledge.	(i) Promote and facilitate the introduction of fish farming in the rural communities; (ii) Design, test and introduce a monitoring and evaluation system for extension service; (iii) Produce extension messages based on needs assessment meetings and information collected in the fishing communities; (iv) Organize upgrade courses for the extension staff; (v) Conduct annual meetings for research and extension to exchange information and to develop joint work programs based on actual needs.
National Fisheries Strategic Plan, 2005 To facilitate the necessary institutional, legal,	(i) Improve livelihoods among rural	(i) Providing the opportunity for all stakeholders to develop their capacity to enhance the integrated

Step 1c: Policy Frameworks for the AWM Sector in Malawi		
Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
and administrative changes in the sector, and to increase the capacity of stakeholders involved in fish farming industry.	<p>smallholder fish farmers;</p> <p>(ii) Have a successful commercial aquaculture sector;</p> <p>(iii) Provide quality aquaculture services at a national and local level.</p>	<p>livelihoods approach, which includes aquaculture;</p> <p>(ii) Enhancing institutional capacity of NAC to develop medium to large-scale commercial fish farming technologies;</p> <p>(iii) Providing an appropriate credit, business training and technology package for small and medium-scale commercial fish farmers.</p>
<p>National Export Strategy, 2013-18 Identifying critical policy investment actions for stimulating an export lead national economic growth.</p>	<p>(i) Increasing exports diversification;</p> <p>(ii) Achieving sustainable economic growth and development through exports;</p> <p>(iii) Macro-economic stability through stable balance of payment position and employment opportunities in the export of goods and services.</p>	<p>(i) Policy reviews in different sectors;</p> <p>(ii) Capacity building for different stakeholders;</p> <p>(iii) Effective coordination of trade issues.</p>
<p>National Decentralization Policy, 1998 To consolidate democracy and realization of the country's development goal of poverty reduction through decentralization of political and administrative authority to district level.</p>	<p>(i) Create a democratic environment and institutions;</p> <p>(ii) Eliminate dual administrations (field administration and local government) at the district level with the aim of making public service more efficient, more economical and cost effective;</p> <p>(iii) Promote accountability and good governance at the local level in order to help Government reduce poverty;</p> <p>(iv) Mobilize the masses for socio-economic development at the local level.</p>	<p>(i) A new structure for the local government system, comprising traditional leaders, and interest groups at the district level;</p> <p>(ii) The functions of the local assembly (now known as local councils) which include promotion of infrastructural and economic development through district development plans, and mobilization of resources within and outside the district;</p> <p>(iii) Financing mechanisms for the new local government system.</p>
<p>National Land Policy, 2002 To ensure tenure security and equitable access</p>	<p>(i) Promote tenure reforms that guarantee security and instill confidence and</p>	<p>(i) Guaranteeing secure tenure and equitable access to land without any gender bias and/or discrimination to</p>

Step 1c: Policy Frameworks for the AWM Sector in Malawi

Policy Goal/ overall objective	Specific Objective(s)	Measure(s) to Attain Targets
to land, to facilitate the attainment of social harmony and broad based social and economic development through optimum and ecologically balanced use of land and land based resources.	fairness in all land transactions; (ii) Promote decentralized and transparent land administration; (iii) Establish a modern land registration system for delivering land services to all; (iv) Enhance conservation and community management of local resources.	all citizens of Malawi as stipulated under Article 28 of the Constitution; (ii) Instill order and discipline into land allocation and land market transactions to curb land encroachment, unapproved development, land speculation and racketeering; (iii) Promote community participation and public awareness at all levels to ensure environmentally sustainable land use practices, and good land stewardship.

Conclusions

The above analysis shows that each sectoral policy seeks to contribute to the national developmental goal of economic growth and development outcomes. However, these sectors are diverse in discipline and scope, and have explicit policy prescriptions. Most of them have either direct or indirect bearing for agricultural water and energy. The diversity of policy frameworks seeking to contribute towards national developmental goals is a reflection of the fact that attainment of national development requires a multi-sectoral approach.

Various policies recognize agricultural water development issues as critical for the attainment of specific policy objectives. For instance, besides the Irrigation Policy, the National Nutrition Policy & Strategy highlights irrigation development as being critical for attainment of household and national nutrition goals. In addition, the Crop Production Policy, National Food Security Policy and Green belt Initiative all refer to irrigation development as a critical strategy for agriculture, food security, economic growth and nutrition development in Malawi. Notwithstanding the inclusion or recognition of AWM issues in the different policy frameworks, the lead AWM policy framework in Malawi is the National Irrigation Policy (2000).

National policies are implemented through different activities funded from the National Budget approved by Parliament annually. Policy implementation reviews are undertaken as quarterly, semi-annual and annual reviews and are presented in Sector Performance Reports (SPR) which inform the high level national policy discussions and decisions of the Joint Sector Reviews (JSR). Some of which are submitted to the Office of the President and Cabinet (OPC) as the organizational performance assessment monitoring exercise. Recommendations from the JSR enable the decision makers in different sectors to identify critical gaps which need to be addressed for each sector to contribute to national poverty reduction goals and sustainable livelihood.

STEP 2: DIAGNOSTIC EXERCISE- PERFORMANCE ASSESSMENT OF INSTITUTIONS, LEGAL AND POLICY FRAMEWORK

Further to the mapping exercise which outlines the objectives and activities of the different institutional, legal and policy frameworks, the study proceeds to investigate the effectiveness, capacity and governance of the same. The diagnostic exercise seeks to investigate the abilities of the given frameworks to deliver on their mandates, and the major challenges that impinge on their work, and how the governance systems support or fail to support the establishments.

2.1 Institutions

The institutional diagnostic exercise seeks to analyse the effectiveness, capacity and governance aspects of the agricultural water and hydropower management institutions or those related to them. The analysis of effectiveness involves both quantitative and

qualitative dimensions of the institutional delivery capacity. The capacity analysis concerns the human, financial and technical capabilities of the concerned institutions; The governance analysis evaluates the relations between institutions, relations within institutions, and impact of external factors on the institutions.

The institutions analyzed include political institutions such as the Parliamentary Committee on Agriculture and Natural Resources which provides political oversight on the government policy and programmes; the Office of President and Cabinet as the overall overseer of national institutions; government ministries; parastatal organizations, and local private institutions such as WUAs. Table 3.1a below shows the details.

Table 3.1a: Institutional Performance Assessments. Step 2.1 a: Assessing Performance of Institutions								
Institution	Effectiveness		Capacity			Governance dimensions		
	Quantitative	Qualitative	Human	Financial	Technical	Institutions & stakeholders governance relationship	Dynamics of relations between different levels within institutions	External actors' influence
Parliamentary Committee on Agriculture & Natural Resources	Increased allocation to the agriculture & natural resources sector e.g. maintenance of the inputs subsidy program.	Public fora on various agriculture & natural resource issues.	Limited human capacity to technically analyze issues as the Parliamentary Budget Office is not yet set up.	Limited operational funds to supervise agriculture and ENR programs including the AWM ones.	Technical capacity depends upon the members appointed to the Committee.	Open door policy and interactions with various stakeholders including civil society.	Differences can arise with the committee due to differences in political party positions on issues.	Political Parties which the members represent.
Office of the President and Cabinet	Public Sector Reforms.	Public service management.	Limited human capacity to coordinate the entire cross cutting (inter-ministerial) initiatives.	Affected by budget constraints like any other govt. ministry/ department	OPC has a limited number of technical officers to guide on policy matters	It's readily available to guide ministries/ depts, but always overwhelmed with the diverse policy issues to attend to.		Political changes bringing in new policy priorities (when there is new govt. in place)
Ministry of Finance, Economic Planning & Development	Annual Budget Statements with financial allocations to Ministries and departments.	Technical guidance on budget preparation and project development.	Has the human capacity with some gaps as is the case	Limited funding to support inter-sectoral capacity	Has technical challenges/ gaps especially advanced	Save for inadequate funding challenges, the Ministry collaborates		Political inferences that impact on resource allocation decisions.

Table 3.1a: Institutional Performance Assessments. Step 2.1 a: Assessing Performance of Institutions								
Institution	Effectiveness		Capacity			Governance dimensions		
	Quantitative	Qualitative	Human	Financial	Technical	Institutions & stakeholders governance relationship	Dynamics of relations between different levels within institutions	External actors' influence
			with other govt. ministries; Faces staff turnover challenges.	development and coordination programs.	quantitative policy analysis tools such as CGE, & econometric modelling.	well with various ministries, private sector and civil society.		
Ministry of Agriculture, Irrigation and Water Development	Sustainable land management extension campaigns (led by the Land Resource Conservation Dept); Investment programs in irrigation schemes but not matching the demand levels (led by Irrigation Dept); Investments in multipurpose dams though very limited (in number and size);	Provides guidelines for stakeholder investments in irrigation development-including guidance to NGOs and local communities (e.g. WUAs); Effective in mobilizing development partners support; Inadequately linked to other public institutions working on ENRM issues.	Limited human capacity as evidenced by high vacancy rates (estimated to be 30-40%,(Ministry of Finance, 2011)	Most years faced with limited investment capital as well as operational resources	Has the technical capacity to deliver on a number of areas, but financial and human resource constraints	Collaborations with Civil society institutions exists though there is room for improvements ; Limited policy linkages between the public institutions dealing with AWM issues.	Limited policy coherence amongst the departments within the same Ministry; The Ministry was 2 different ministers of Agriculture & Food Security, & Irrigation and Water, which have just been merged in 2014.	Limited political will to support AWM issues- ie there is preference over input subsidies and consumption water.

Table 3.1a: Institutional Performance Assessments. Step 2.1 a: Assessing Performance of Institutions								
Institution	Effectiveness		Capacity			Governance dimensions		
	Quantitative	Qualitative	Human	Financial	Technical	Institutions & stakeholders governance relationship	Dynamics of relations between different levels within institutions	External actors' influence
	A number of policy and legal frameworks to guide water investments.							
Ministry of Natural Resources, Energy and Mining	Development of National Policies, Strategies and Actions e.g. National Climate Change Investment Plan, Nationally Appropriate Mitigation Actions (NAMAs) and National Adaptation Plan of Action; Environmental Impact Assessments of developmental programmes; Resource mobilization for ENRM.	Coordination with other public institutions on natural resource conservation issues; Awareness campaigns on natural resource conservation activities; Participation and alignment to international environment and natural resource conservation initiatives.	There are human capacity constraints-vacancy rates.	Limited financial resources to implement its planned activities.	Technical capacity challenges are related to financial and human resource capacities.	Has effective working relationships with civil society organizations.	The ministerial alignments that have been taking places over the past years (i.e. merging of departments and creation of new ministries seem to confuse the operations of some departments)	Low political will to support policy implementation and legal framework enforcement, hence negative effects towards AWM sub-sector; Increased demand for natural resources does not match with services of the Ministry.

Table 3.1a: Institutional Performance Assessments. Step 2.1 a: Assessing Performance of Institutions								
Institution	Effectiveness		Capacity			Governance dimensions		
	Quantitative	Qualitative	Human	Financial	Technical	Institutions & stakeholders governance relationship	Dynamics of relations between different levels within institutions	External actors' influence
Ministry of Lands, Housing and Urban Development	Policy and legal frameworks for land management and use; Land allocations for different investments including the AWM sector.	Land use distribution and monitors land use patterns; Usually accused of slow response to land allocations for private investments, and perhaps the same can be said of public investments including those for AWM purposes.	Also faces human resource capacity constraints.	Inadequate funded for capital investments and operations.	Technical challenges due to low capacity development activities.	Works with different institutions (public & private).	Close collaboration exists within the Ministry's departments.	The case of corruption in land allocations for investments sometimes emanate from the potential investors themselves; Inadequate political will on sector investments.
Ministry of Local Government and Rural Development	Policy and legal framework guiding the national decentralization drive; Guidelines on national decentralization.	Coordinates the decentralization activities of sector ministries and departments.	Has a human resource capacity constraint.	Inadequate funded for capital investments and operations.	Technical challenges due to low capacity development activities.			Currently with support by all ministries and departments including those in the AWM sub-sector.
Water Resources Board now National Water	Registers of all major AWM investments.	The new National Water Resource Authority is yet to be fully operational-	Currently, limited human resource capacity as	Limited funding to operationalize the Authority.				The Government is being slow in funding the setting up/ operationalizatio

Table 3.1a: Institutional Performance Assessments. Step 2.1 a: Assessing Performance of Institutions								
Institution	Effectiveness		Capacity			Governance dimensions		
	Quantitative	Qualitative	Human	Financial	Technical	Institutions & stakeholders governance relationship	Dynamics of relations between different levels within institutions	External actors' influence
Resources Authority		funding challenges.	the Authority is being set up.					n of the Authority.
Water Boards (Northern, Lilongwe, Central Region, Blantyre, Southern Region)	Multipurpose dams for the Water boards providing some water for minimal agricultural investment activities; Volumes of domestic and industrial water being provided to different stakeholders.	Operate commercially hence focus on water provision and collection of revenues.	Most Water Boards are well staffed, that is, have minimal human resource capacity challenges compared to ministries.	As commercial agencies, Water Boards have adequate operational funds, but challenged on investment funds.	Technical capacity available, where in deficit, outsourcing takes place.		Works closely with the consumers of their services; However, there are still challenges of communication gaps particularly related to billing of water services.	Government wants low water prices to enable access, whereas the Boards want cost recovery pricing systems; Illegal water abstractions and Government ministries/ department not paying their water bills
Water Users Association (WUAs)	Develops local by-laws for water catchment area conservation efforts;	The limited geographical scope, it makes their operations more appreciated by the	Most of them have limited human capacity	Often embroiled in financial mismanagement	Technical capacity challenges have been reported	Where there is effective management, the WUAs are able to solicit	Elite capture and weak organizational arrangements affecting the	Local political situations affecting WUA operations

Table 3.1a: Institutional Performance Assessments. Step 2.1 a: Assessing Performance of Institutions								
Institution	Effectiveness		Capacity			Governance dimensions		
	Quantitative	Qualitative	Human	Financial	Technical	Institutions & stakeholders governance relationship	Dynamics of relations between different levels within institutions	External actors' influence
	Local by-laws on distribution of water resources amongst users for agricultural or domestic consumption purposes.	local population hence enhances local participation.	challenges due, i.e. cannot afford to hire and maintain qualified staff.	issues due to corruption or simply management capacity challenges.	owing to low literacy levels & capacity to outsource competent technical expertise.	and obtain effective support from the different national institutions.	WUA operations	

Conclusions

According to Table 3.1a, Malawi has a diverse set of national and local institutions working to support investments in the agricultural water and energy sectors. Government ministries and departments are responsible for creation of policy and legal frameworks to guide the various sectors and sub-sectors, including the agricultural water and energy sub-sectors. Parastatal institutions such as Water Boards, the Malawi Energy Regulatory Authority, and the National Water Resources Authority working in the water sector are created and guided by legal instruments. Non-public sector institutions exist, and are largely local in nature.

The analysis further reveals that agricultural and energy sector institutions have a number of common challenges which need to be addressed if the country's institutions are to effectively and efficiently coordinate, promote and manage the two sectors. These challenges include: (i) low political will to ensure that public institutions perform according to their mandates and expectations; (ii) most ministries and departments have inadequate human, financial and technical levels to implement their mandates and programmes, these challenges are even more pronounced at local or district levels; (iii) instances of corruption and financial mismanagement in the use of public resources; (iv) low staff morale; (v) high vacancy rates (sometimes estimated at 30-40 percent) and; (vi) skewed focus towards domestic and industrial water supply provision (such as the Water Boards) compared to agricultural water and energy water provision. The last challenge might be caused by the fact that the National Irrigation Board which was supposed to spearhead agricultural water provision, is not yet in place.

The summary of conclusions in table 3.1b shows that the low human, financial and technical capacities cause a low national allocative efficiency of productive resources in the AWM sector. This translates into sub-optimal realization of sectoral or sub-sectoral goals and objectives. The low agricultural productivity, persistence of food insecurity challenges and low technical efficiency levels in different sectors are examples of this.

Consequently, Malawi as a country is not able to obtain optimal socio-economic benefits from the available investments or resource allocations to the AWM sector. In other words, owing to the apparent low investments in irrigation and energy sectors, Malawi food insecurity (due to high dependence on rain fed agriculture) and low energy supply levels persist.

It is also apparent from the foregoing diagnostics that most of the government ministries with related objectives have limited operational linkages. The most common form of inter-ministerial coordination is through participation in Sector Working Groups, Technical Working Groups or Project Steering Committees, which though important, only brings about limited operational efficiencies.

Effective inter-ministerial or inter-sectoral coordination could be obtained through joint sharing of and implementation of functions at all levels, particularly at grass roots levels, e.g. agricultural extension workers assisting in forestry catchment area protection- since

agriculture services require water from the same protected forest catchment areas. Such kind of institutional arrangement would help reduce the effects of low staffing levels which characterizes the public sector in Malawi in general, and in the agricultural water and energy sectors, in particular. Table 3.1b provides the summary of conclusions of assessing the performance of institutions.

Table 3.1b: Step 2.1- Summary of conclusions of assessing the performance of key institutions

Table 3.1b: Step 2.1- Summary of conclusions of assessing the performance of key institutions		
Institution	Function(s) underperforming	Causes of the institutional underperformance (Capacity, Governance)
Parliamentary Committee on Agriculture & Natural Resources	Inadequate supervision of technical operations of government departments	<p>Capacity: Limited technical capacity to independently scrutinize developmental programmes including ENRM interventions and come up with policy;</p> <p>Governance: Sometimes the members’ party political inclinations take precedence over technical considerations.</p>
Office of the President and Cabinet	Inadequate performance monitoring and guidance of ministries and public institutions	<p>Capacity: Limited technical capacity within OPC to guide the technical operations of the various ministries, and overwhelmed with administrative matters;</p> <p>Governance: No systems or policy for fostering inter-ministerial collaborations, and reward performance –oriented policy managers.</p>
Ministry of Finance, Economic Planning & Development	Inadequate budgetary allocations towards ENRM functions	<p>Capacity: limited financial resource availability against competing national needs;</p> <p>Capacity: Limited capacity to build the capacities of sectoral ministries to generate empirically compelling projects proposals for resource mobilization.</p>
Ministry of Agriculture, Irrigation & Water Development	Inadequate resource mobilization for AWM activities	Capacity: Inadequate technical capacity to produce compelling technical evidence to sustain political will towards agricultural

Table 3.1b: Step 2.1- Summary of conclusions of assessing the performance of key institutions

Institution	Function(s) underperforming	Causes of the institutional underperformance (Capacity, Governance)
		water interventions.
	Non-functional agriculture water institutions.	Governance: Inability to obtain political support towards implementation of legally constituted institutions e.g., National Irrigation Board.
	Inadequate coordination with the Natural Resource management ministry and within the departments.	Governance: Limited political will to foster inter-sectoral collaboration; and limited appreciation of the benefits of inter-sectoral or inter-ministerial collaboration.
Ministry of Natural Resources, Energy & Mining	Limited collaboration with the agriculture ministry and even within the same Ministry departments.	Governance: Limited political will to strengthen policy collaboration at various levels.
	Inadequate resource mobilization for ENRM functions.	Capacity: Inadequate capacity to develop technically appealing evidence to general sustained political support towards investments in the ENR sector.
	Ineffective or non-operational institutions provided in the legal frameworks.	Governance: Low political will to fully implement the given legal provisions, e.g. establishment of the Forest Board.
Ministry of Lands, Housing and Urban Development	Inability to deal with land disputes affecting irrigation development	Governance: largely because the new Land Bill is yet to be passed into law.
Ministry of Local Government and Rural Development	Not able to provide capacity to local councils to conceptualize, develop development proposals and mobilize adequate resources for their own developmental needs.	Capacity: This is a reflection of financial and technical capacity challenges.
National Water Resources Authority	Limited functionality to effectively guide the water resources sector.	Capacity: Limited funding from government to operationalize the Authority.
	Limited collaboration with MERA to coordinate water & energy linkages.	Governance: sluggish institutional drive to define the operational collaboration modalities.

Table 3.1b: Step 2.1- Summary of conclusions of assessing the performance of key institutions		
Institution	Function(s) underperforming	Causes of the institutional underperformance (Capacity, Governance)
Water Boards	Limited pursuit of agricultural water and energy developmental needs	Capacity: low financial capacities to develop real multipurpose dams.
Water Users Associations	Limited geographical and functional scope of operations.	Capacity: caught up in a vicious cycle of low human, financial and technical capacities to manage water resources.

2.2 Legal and regulatory frameworks

Diagnostics of sectoral legal frameworks, just like the institutional framework analysis, also investigated three major aspects of the frameworks, namely (i) the specific targets it seeks to achieve, (ii) its effectiveness, and (iii) governance dimensions. Effectiveness analysis involved strengths and weakness of the legal framework in general terms but more specifically in terms of extent of support towards AWM issues. On the other hand, analysis of governance dimensions focused on: (i) formal and informal systems as established by the given legal framework; (ii) readiness to change as espoused by the framework, concerned stakeholders and enforcement systems, and; (iii) possible sources of resistance to change in legal framework implementation or review. Table 3.2a shows the detailed analyses of the legal frameworks.

Table 3.2a: Diagnostics of Legal/ Regulatory Framework

Step 2b: Diagnostics of Legal/Regulatory Framework						
Primary Legislation	Specific Targets	Effectiveness		Governance dimensions		
		Strengths	Weaknesses	Formal/Informal aspects	Readiness to change	Resistance to change
Malawi Constitution, 1995	Provides full recognition to the rights of future generations by means of environmental protection and the sustainable development of natural resources (including water).	Promotes sensible balance between the creation and distribution of wealth through the nurturing of a market economy and long-term investment in health, education, economic and social development.	Is neither specific nor binding on management of environmental and natural resource management affairs.	Envisages the establishment of legal and institutional arrangements to implement the constitutional provisions on sustainable natural resource utilization, including water resources.	National Policy direction as envisioned in MGDs and sectoral Ministries/ departments have shown readiness to put the constitutional provisions into practice as evidenced by the various sectoral policy and legal frameworks.	Inadequate political will to review the National Constitution to provide for clear frameworks on natural resource management issues including agricultural & energy water issues.
Water Resource Act, 2012	Establishment of Water Catchment Areas, Water Catchment Area Management Authorities and; National Water Resources Authority.	Promotes water reservation.	Not explicit on AWM; inefficient agricultural water uses and; inadequate resources.	Formation of National Water Resource Authority (board governing water issues).	The responsible Ministry is ready to operationalize the Act.	Low political will hindering full implementation of the Act provisions- as evidenced by inadequate funding to operationalize the NWRA.
	Provisions of protected areas and conservation areas.	Provide guidelines for water conservation and management.	Inadequate expertise/ capacity and equipment, e.g. to determine the number of reliable water sources.			
	Management of water courses.	Recognizes the role of water hence promotes	Not explicit on AWM.			

Step 2b: Diagnostics of Legal/Regulatory Framework						
Primary Legislation	Specific Targets	Effectiveness		Governance dimensions		
		Strengths	Weaknesses	Formal/Informal aspects	Readiness to change	Resistance to change
		its management.				
	Provision for reservation of water resource and abstraction of water for domestic use, use of groundwater and rainwater harvesting	Promote investments in water resource for its sustainability and availability.	Lack of facilities for rainfall harvesting.			
Water Works Act (No. 17 of 1995)	Promote an enabling environment for irrigation development	It supplements rain fed production.	Limited number of expertise and the financial capacity.	The NWRA was established to facilitate issues governing work.	The implementing ministry is yet to govern the Act.	Inadequate funds allocated to the sector for proper functionality.
	Enhances and expands area (hectares) of irrigation and production	Promotes higher yields per hectare through irrigation development.	Not explicit on agricultural water investments e.g., irrigation facilities.			
	Protected water resources and catchment.	Provides guidelines for water protection and conservation.	Unclear on the rules governing the policies.			
Irrigation Act, 2001	Increased irrigation investments to enhance household food security	Recognizes the role of agriculture for increased food security.	Does not provide details on the choices of crops under different irrigation systems.	Establishment of the Malawi Irrigation Board to manage irrigation activities.	The government is ready to support irrigation activities in its budget allocation.	Low political will in maintaining the schemes that are old and not functioning.
	Promotes efficient water use in irrigation	Provides for Policies to coordinate and	Does not provide for specific			

Step 2b: Diagnostics of Legal/Regulatory Framework						
Primary Legislation	Specific Targets	Effectiveness		Governance dimensions		
		Strengths	Weaknesses	Formal/Informal aspects	Readiness to change	Resistance to change
	sector.	promote irrigation development.	incentives for investments in agriculture water.			
	Build strong & effective capacities in irrigation development.	Promote stakeholder participation in water resources management.	Failure to provide financial assistance as incentives for the communities.			
	Enhance sustainable development and management of irrigation sector.	Increased community participation in irrigation development.	Limited knowledge or technical know how on irrigation technologies.			
Environment Management Act, 1996	Promoting a clean environment in Malawi.	Provision of rules/guidelines to environmental protection.	No specific sector policies and legislation.	Establishment of National Council for the Environment (NCE), and Environmental Impact Assessment Committee.	The ministry of Environment is committed in implementing the Act provisions in managing environmental & natural resources (including agricultural water sources).	Corruption to enforce the laws, e.g. charcoal still being made in local communities and passing through road blocks.
	Ensuring the sustainable utilization of the natural resources of Malawi	Putting in place institutions to reinforce the laws i.e. national parks;	Inadequate capacity and training both at individual and institutional levels.			
	Promoting public awareness and participation in the	Recognizes the role of community and the private sector in	Limited commitment by communities.			

Step 2b: Diagnostics of Legal/Regulatory Framework						
Primary Legislation	Specific Targets	Effectiveness		Governance dimensions		
		Strengths	Weaknesses	Formal/Informal aspects	Readiness to change	Resistance to change
	formulation and implementation of environmental policies.	encouraging environment development.				
	Promoting international relationship in the protection of the environment.	Recognizes the need to enhance knowledge and understanding of the environment resources.	Not explicit on agriculture water.			
	Promoting scientific research, technological development and training relating e protection of the environment.	For sustainability purposes, the strategy focuses on integrated environmental resources management.	Inadequate data set on new technologies.			
Forest Act, 1997	Promote enabling environment for sustainable administration and management of forests through set of regulations.	Promote sustainability through proper management of forest.	Inadequate updated information and data on deforestation	Formation of Forestry Board to conduct its forest operations in Malawi.	The readiness to change is insufficient.	Low community buy-in, due to lack of viable alternative livelihood sources.
	Promotes sustainable management of forests on water catchment areas.	Encourages water availability through storage.	Not explicit on water management (including agriculture water);			

Step 2b: Diagnostics of Legal/Regulatory Framework						
Primary Legislation	Specific Targets	Effectiveness		Governance dimensions		
		Strengths	Weaknesses	Formal/Informal aspects	Readiness to change	Resistance to change
Fisheries Act, 2007	To be a dynamic, high performance, consultative and client focused Department that promotes, builds and ensures sustainable development, utilization and management of the fisheries resources in Malawi.	The Department of Fisheries has experienced staff, legal instruments in place conducive fisheries policy and adequate number of vehicles and vessels.	Low staff motivation; Minimal livelihood alternatives to fish farming by fishing communities.	Relates its implementation to the development of Fisheries Policy & Strategic Plan, and the National Aquaculture Strategic Plan.	Generally, there is compliance by most fishing communities to the regulations governing the fishing practices.	Corruption cases by local fisheries management; Non-compliance by the local fisheries communities.
Local Government Act, 1998	To promote infrastructural and economic development through the formulation, approval and execution of district development plans (including agricultural water); and To mobilize resources within the local government area for governance and development.	Gives powers to the local councils to mobilize financial, human and technical resources for their own developmental programs (including agricultural water investments).	Not elaborate on agriculture, natural resources (including agricultural water and energy development).	Provides for creation of institutional arrangements (structures) that would serve the developmental interests of the citizens in a district (including agricultural water & energy development).	Local communities have come to appreciate the role of local assemblies for the developmental needs.	Low political will to develop capacity for the local councils to be effective local governments.

Step 2b: Diagnostics of Legal/Regulatory Framework						
Primary Legislation	Specific Targets	Effectiveness		Governance dimensions		
		Strengths	Weaknesses	Formal/Informal aspects	Readiness to change	Resistance to change
Cotton Act, 2012	Improve the quality and quantity of cotton produced in Malawi, enhance value addition, facilitate compliance with international market standards and diversify production of cash crops in Malawi.	Enhance restrictions on the importation of cotton seed, multiplication and breeding of uncertified seeds.	Ineffective policy guidelines on harnessing alternative cotton seed rather than the local ones.	The diverse cotton industry players sometimes make it difficult for them to come up with one common position.		Inadequate political will to enforce laws/regulations for law violators.
Malawi Investment and Trade Center Act; 2007	To promote trade negotiation capacity and protect unfair external competition.	Promote investments in domestic industry and export activities for home made good (harnessing export trade).	The Act is not able to deal with all factors hindering/discouraging foreign investors, e.g., unstable macro-economic conditions.	The Centre operations are well supported by the National Export Strategy which seeks to address all the multi-sectoral supply side constraints to export development.	Government has shown strong political will to enforce the Act, thus address the administrative red tape towards domestic & foreign investments (including in agricultural water & energy development); However, effectiveness of the Act provisions of the Centre being a One Stop Centre is yet to be seen.	Corruption to enforce the law, e.g. smuggling of goods passing through unrecognized borders, road blocks, and goods entering the country without being checked by MBS.

Conclusions

Diagnostics of the legal framework in Table 3.2a show that the Malawi Constitution makes reference to the need for appropriate state interventions in the area of ENRM (including agricultural water sources). This is followed by a need for specific legal and regulatory provisions with a focus on AWM.

It is evident from the critical legal framework diagnostics that a number of common challenges emerge, these include: (i) lack of linkages between the legal instruments as evidenced by the fact that the legal frameworks make little or no references to each other as they define the scope of work and functionalities of merely the institutions they create – for instance, the National Water Resources Act (2012) makes little reference to the Irrigation Act (2001); (ii) some of the legal frameworks are old (10-18 years), hence not sufficiently up to date to the current national socio-economic environment. In some sectors such as forestry and environment, there are efforts to revise the legal instruments; (iii) most legal instruments seek to control behavior of agents or stakeholders in the sectors, with minimal focus on creating incentives for investment in the sector; (iv) some legal resource management instruments, particularly the older ones, tend to be productionist in approach, with minimal scope for the value chain development of the industry or sector they seek to direct and; (v) there is generally a low political will towards implementation of legal instrument provisions, such that most of the provisions in the instruments are not being fully implemented. Examples are the Irrigation Board created in Irrigation Act, the Forest Board in the Forest Act, , the National Water Resources Board in the National Water Resources Act; these institutions are not fully operational. Table 3.2b provides the summary of conclusions of assessing the performance of legal and regulatory frameworks.

Table 3.2b: Summary of conclusions of assessing the performance of legal and regulatory frameworks		
Primary Legislation	Specific Objective not being achieved	Reasons behind the specific objective not being achieved: Formal/Informal aspects (F/I), Readiness (Rd) and resistance (Rs) to change
Malawi Constitution, 1995	The call upon the State to invest in environment and natural resource management.	F/I: Weak and uncoordinated establishments of effective legal and institutional arrangements to implement the constitutional provisions on sustainable natural resource utilization, including water resources; Rd: There is a sluggish on-going constitutional review process to incorporate ENRM issues; Rs: Low political will to conclude the constitutional review process; not certain if ENRM and investment issues are part of the constitutional review process issues.
Water Resources Act, 2012	Protection of water resources and investments in water resource harvesting and utilization	F/I: Low political will to expedite setting up of the coordinating institution known as National Water Resource Authority to governing water resource issues; Rd: Ministry ready to operationalize the Act;

Table 3.2b: Summary of conclusions of assessing the performance of legal and regulatory frameworks		
Primary Legislation	Specific Objective not being achieved	Reasons behind the specific objective not being achieved: Formal/Informal aspects (F/I), Readiness (Rd) and resistance (Rs) to change
		Rs: the Act is not very clear on linkages with the agriculture water development initiatives.
Water Works Act (No. 17 of 1995)	Generation of adequate water for domestic, industrial and other uses	F/I: Creates the City and Regional Water Boards to provide water for domestic, industrial and not clear on water for agricultural and energy development; Rd: The Boards are operational, commercially, but not able to mobilize resources for significant agricultural water investments; Rs: Inadequate investment funding to expand the role of water Boards to provide water for multi- purpose uses.
Irrigation Act, 2001	Coordination of irrigation development interventions in Malawi	F/I: Low political will to effect the Act as the National Irrigation Board to management irrigation development issues is yet to be operational; Rd: stakeholders' limited drive to lobby for implementation of the Act , and a review of the Act; Rs: Insufficient funding for the irrigation development to enable it fully contribute to national development.
Environment Management Act, 1996	No actual implementation of the Act	F/I: Inadequate political will to fully operationalize the Act as environmental crimes are not socially viewed as serious offences; Rd: The Act is being reviewed and currently there is a draft Environmental Management Bill yet to be presented to Parliament; Rs: Low political will to expedite the passing of the new Act; minimal inter-sectoral collaboration in the current Act besides in the top structures.
Forest Act, 1997	Protection of forest resources from deforestation and degradation	F/I: The institutions created by the Act e.g., the Forest Board and Forest Fund, yet to be operational even 18 years after the Act was passed; some of the Act provisions have become meaningless with time; Rd: There is a new draft Forest Bill that is yet to be presented and debated in Parliament; Rs: Low political will to implement the institutional arrangements for the Act; not certain if there will be full political will to implement the new Act.
Fisheries Act, 2007	Effective fishery resource management and investments in	F/I: Implementation of the Act is well stipulated through the Fisheries Policy and

Table 3.2b: Summary of conclusions of assessing the performance of legal and regulatory frameworks		
Primary Legislation	Specific Objective not being achieved	Reasons behind the specific objective not being achieved: Formal/Informal aspects (F/I), Readiness (Rd) and resistance (Rs) to change
	fish farming and conservation of water resources	Strategic Plan, and the National Aquaculture Strategic Plan; Rd: Some fishery communities not being ready to comply with the Act; Rs: Corruption which affects full compliance with the Act; low political will to support full implementation of the Act.
Local Government Act, 1998	Decentralization and devolution of power from Central Government to the local councils to promote democratic and citizen participation- the process is not complete as envisaged (more powers are still at central government level)	F/I: The District Council institutional arrangements are sometimes not fully functional; Rd: Illiteracy rates affecting local citizens' effective participation especially in decision making structures; Rs: Low political will to fully decentralize the Central Govt. functions.
Cotton Act, 2012	The Cotton Council to coordinate the cotton value chain development issues not yet set up	F/I: Diversity of cotton farmers' interests groups which are not able to fight for one common agenda; Rd: The cotton stakeholders inability to push for or lobby for the Act implementation; cotton market dynamics affecting the cotton production levels; Rs: Low political will to fully operationalize the Act.
Malawi Investment and Trade Center Act; 2007	Mobilization of domestic and foreign investments into the agriculture and natural resources sectors (including agriculture & energy sub-sectors)	F/I: Rd: The present political to support the Center is being compromised by the unfavorable macro-economic environment; Rs: private sector compliance with investment requirements; corruption amongst the private sector.

2.3 Policy frameworks

In order to obtain a proper appreciation of the role of policy framework in Malawi's AWM sector, an in-depth analysis of the objectives, effectiveness, and governance of the different

policies is conducted. In this way the ability of the policy frameworks to realize the specific targets and to solve problems was analyzed. This analysis commences with the national policy frameworks such as the MGDs II, the Vision 2020 and the proceeds of the various sectoral and sub-sectoral frameworks. Table 3.3a on the next page shows the outcome of this diagnostic exercise of policy frameworks.

To simplify the analysis, the effectiveness of the policy framework was appraised by looking at major strengths and weaknesses of policies in relevant sectors (e.g. water, energy, agriculture, land, etc.) as well as plans and strategies.

Table 3.3a: Diagnostic of the Policy Frameworks

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
Malawi Growth and Development Strategy II (2011-16)	Strongly advocates for compliance to environmental and natural resource management legislation	Helps to mainstream ENRM in various sectors including agriculture.	Its strength as a guiding policy framework depends on political will.	The MGDS has is well recognized and accepted as national policy framework for the country, however very few ministries refer to it in their day to day planning and program implementation.	The Malawi Government, through the Ministry of Finance, Economic Planning & Development is monitoring and reviewing MGDS implementation – a process which will inform the subsequent frameworks.
	Promote harmonized environment and natural resources management policies and legislation.	Helped to review various policies and legislations to mainstream the environmental management issues in sectoral policies and programs at national and local levels.	Weak enforcement of environmental legislation and policies in the sectoral ministries and departments.		
Vision 2020	Promotes sustainable economic growth and development	Promote developing economic infrastructures i.e. railways, water transport, airports etc.	Low political will to foster the nation’s vision’s targets e.g., Malawi becoming a middle income country with GDP per capita of at least US\$ 1,000.	The MGDS is supposed to be a policy strategy for Vision implementation- though there is little reference to it compared to the MGDS.	At the national level, there are some times when policy makers refer to the Vision in the policy discourse.

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	Promotion of Sustainable natural resource and environment management	Preventing degradation and depletion of water resource.	Not detailed targets for the various sectors as well as in between period towards 2020.		
National Water Policy, 2005	Seeks to achieve equitable, sustainable and integrated water resources development, conservation and management	Ensure water of acceptable quality for all the needs in Malawi.	The Policy, like most others, does not provide, clear incentives for investing in water management activities.	The water policy focuses much on water for consumption, with little, on water for agriculture and even energy investment purposes.	The ministry and other private sector in water development do collaborate on water development related activities.
	Ensures the existence of strategic and contingency water resources development and management plans	Promote water availability at all times.	The Policy is not explicit in addressing agriculture water management, i.e. water for agriculture purposes.		
	Promotes user-friendly technologies to enable easy access to water and sanitation services by all manner of people;	The policy recognizes the stakeholders in water resource development.	There is no clear mechanism on how stakeholders engage in the use of the technologies.		
	Promotes and advocates for water and sanitation services' pricing and charging systems that recognize water as both a social and economic good in instituting cost	Promotes investment in water resources development.	The policy does not cover issues of hydro-power in relation to water.		

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	recovery principles				
The Green Belt Initiative, 2009	Increasing production and productivity of agricultural crops, livestock and fish farming both inland and along the shores of Lake Malawi and the banks of Shire and other water bodies through the development of small-scale and large-scale irrigation schemes	Provides diverse agricultural water investments as a premise for national socio-economic development, i.e. it requires multi-sectoral support with multi-sectoral benefits; Demonstrates high level of political will towards agricultural water investments in Malawi.	It has no legal backing hence its implementation is dependent upon political will of the Government in office; Requires high costs investments, whose specific economic gains are not yet explicit, e.g. GDP growth rate due to increase in Greenbelt investments.	The Green Belt Initiative is housed in the OPC for ease of highest political coordination; Collaborates well with different sectoral ministries.	The Initiative is at implementation stage hence currently not much need for changes.
National Irrigation Policy, 2000	Irrigation development to enhance farm income and by supplementing the recommended strategies for rain fed agriculture outlined in Malawi's Development Strategy and Action Plan.	The policy encourages investment in irrigation development.	The policy does not clearly indicate how it supports other agriculture sector policies, e.g. Livestock Development Policy.	The National Irrigation Board yet to be set hence the Department of Irrigation still coordinates all irrigation development initiatives.	The Ministry of Agriculture and Irrigation undertakes regular studies to gain deeper understanding of the dynamics of the sector.

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	Increase agriculture production and enhance food security through irrigation, which will ensure some production during droughts, and the dry season, and this will supplement rain fed agriculture	Promotes national food security due to supplementary production.	Ambiguity of the policy in how it contributes to the country's food security, nutrition and economic growth objectives.		
	Promoting rural communities to manage irrigation projects in order to fully utilize irrigable land in Malawi	Recognizes the role of community in irrigation development.	Limited knowledge amongst communities on the crops that do well under irrigation schemes.		
National Environmental Policy, 2004	Promote secured environment for all persons, now and in the future, an environment which is good for health and wellbeing.	Enhance awareness on the importance of sound environmental management.	Though recognizing the role of water for agriculture purposes, it does not envisage high level investment such as multipurpose dams for agriculture, energy and other related services.	The activities of responsible Ministry are well complimented by NGOs.	The responsible Ministry and stakeholders undertaking several reviews, resulting in Action Plans, Policy Review and even review of the governing legal framework.
	Promote sustainable utilization and management of the country's natural resources appropriate,	Promotion of cooperation between Government, local communities in the management and sustainable utilization of	Weak policy implementation and political will towards environmental management issues.		

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	long term self-sufficiency in food, fuel wood and other energy requirements	natural resources and the Environment.			
	Promote cooperation with other Governments and relevant regional and international organizations in the management and conservation of the environment.	Policy is guided by several international conventions and treaties to which Malawi is a signatory.	Low political will affecting intergovernmental collaboration, as already recognized in the policy.		
National Energy Policy 2003	Improving efficiency and effectiveness in energy supply industries	Establishment of institutions which aim to manage energy supply, e.g. the Malawi Energy Regulatory Authority (MERA).	Does not envisage inter-ministerial or inter-sectoral synergies in terms of energy generation sources, e.g. electricity generation and water sector (including agricultural water).	Observed overlapping roles and responsibilities in regulating water usage between MERA and the new National Water Resources Authority.	There are on-going debates between MERA and the National Water Resources Authority (NWRA) created by the Water Resources Act.
	Improving security and reliability of energy supply systems	Recognizes the overdependence of electricity generation on water from Lake Malawi which “makes Malawi’s power generation system very vulnerable to the considerable variations in the lake’s levels and, hence,	Conflicting interests/demands for use of water by sectors not adequately addressed by the policy.		

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
		flow rates on the Shire” (Energy Policy, 2003).			
	Increasing access to modern energy services;	Provide for development of small and medium hydropower projects.	The policy does not specify the use of water whether for energy or others.		
	Enhancing economic development and rural transformation;	Investing in the energy and water resource.	Requires significant financial resources and technical knowhow for investments.		
	Improve sector governance by mitigating environmental, safety and health impacts of energy production.	Development of realistic hydro risk mitigation plans and measures.			
National Food Security Policy, 2006	Promote irrigation development and integrated water resources management	Recognizes the importance of promoting irrigation development and integrated water resources management.	Does not relate different water resource uses, i.e. the use of water for agriculture with hydropower or domestic use.	Limited financial capacity to facilitate its operation.	Corroborate with other development sectors in mobilization of finances in developing agriculture.
	Promote water, environmental and land management for sustainable agriculture development	Enforcement of regulations to minimize water, environment and land contamination.	Does not recognizes the role of agricultural activities in pollution of water sources.		

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	Promote fisheries and aquaculture development among communities				
National Nutrition Policy and Strategic Plan, 2009	Increase food availability in terms of quantity and quality that is accessible to all households at all times	Promote water utilization in production.	Limited policy clarity about good agricultural practices and investments to achieve nutritional objectives.	The Department of HIV & AIDS and Nutrition is relatively new but has strong political will to mainstream nutrition issues in many sectors including agriculture.	Various institutions have shown interest to mainstream nutritional issues in their programs. Hopefully, such stakeholder support can be sustained.
	Promote irrigation development and integrated water resources management	Recognizes the importance of multipurpose dams in attainment of national food security and nutritional objectives.	Does not recognize the multiple water resource uses.		
	Promote fisheries and aquaculture development;	Enhances diversity in food and income sources.	Too diverse set of interventions to achieve nutritional objectives.		
National Climate Change Investment Plan, 2013 - 2018	To develop a coordinated approach to climate mitigation to reduce climate change impacts on food security, water availability and quality, and energy, which have overwhelmingly affecting	Promote country development through mitigation and adaptation actions to the impacts of climate change.	Poor incentives and low morale of staff to make the sector more attractive for investment.	Most sectors are mainstreaming climate change issues, but there is still a challenge of weak enforcement in the rules and regulation to protect	Established partnership with Global Climate Finance (help vulnerable individuals to climate change in its Green Climate Fund).

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	sustainable livelihoods especially for rural communities			the environment for its sustainability.	
National Livestock Development Plan & Strategy, 2003	To promote livestock productivity, improve livestock based incomes, and promote sustainable use of natural resources in partnership with other stakeholders while protecting the public against zoonotic diseases	The value chain approach which ensures inclusion of all aspects of livestock development.	<p>The Strategy does make clear reference or linkage with the Crop and Irrigation sectors despite the important roles played by these two to realization of its objectives;</p> <p>Though limited private sector participation in livestock sector is recognized, the Strategy is not clear on how it can achieve a turn-around in that respect.</p>	<p>The Department of Animal Health and Livestock Development (DAHLD) has minimal interactions with other agriculture sector departments;</p> <p>More interactions between the DAHLD and the livestock private sector.</p>	<p>Livestock sector policies and programmes are in constant review and necessary changes being effected;</p> <p>The DAHLD does not have capacity to effectively advocate for fiscal policy changes that have bearing on livestock industry. This is largely being done by the civil society.</p>
New Agriculture Extension Policy, 2000	Promote improved agricultural extension services by ensuring that all farmers are better served through a pluralistic, demand driven agricultural extension service	The pluralistic and demand driven extension service approach responds well to the market liberalization and democratic principles.	<p>Low small holder farmers' demand for extension service (e.g. on agricultural water investments) due to being used to old training and visit extension approaches;</p> <p>Limited number of extension service providers, besides the Government extension</p>	The Policy has led to creation of critical district /local level agricultural institutions, some of which are operational.	The Ministry is constantly reviewing the farmers & stakeholders response to the policy implementation, and necessary corrective actions are being taken.

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
			system, more especially in remote rural areas.		
Crop Production Policy, undated	National food self sufficiency	Promote proper water utilization in production for different crops.	The policy does not link with the national livestock policy objectives; and fails to realize the role of markets in attainment of crop productivity objectives.	The institutional mechanisms for effecting the optimal research- extension-farmer linkages recognized in the policy are not effective.	The bulk of the Malawi Government agriculture sector budget (over 10% of national budget) goes to supporting crop production activities.
	Promotes appropriate technologies (including irrigation technologies) to farmers to attain high yields	Promotes technologies that help farmers attain high yields (possibly including agricultural water technologies).	Low adoption of high yielding technologies by farmers due to a number of policy & institutional factors.		There are national dialogues on the effectiveness of the heavy/ biased crop sub-sector support, - as part of the review of the Malawi's agriculture sector performance in 50 years of independence.
	Promotes crop diversification to meet household and national income as well as food security objectives	Promotes crop diversification as a livelihood risk mitigation measures for farmers as well as the national economy.			
National Fisheries and Aquaculture Policy, 2001	To mobilize communities to participate and play an active role in fisheries management and fish	Recognizes the role of communities in aquaculture and fishery development.	Does not clearly provide mechanisms through which stakeholders engage with each other at	The Fisheries department has serious human and financial resource constraints to	Establishment of BVC's to participate in fisheries by the department (promoting

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	farming (aquaculture)		various levels.	effectively implement the policy at local levels.	community awareness).
	To improve effectiveness and efficiency of the extension services	Provides for farmer training to fishing communities as part of the fish farming extension service delivery.	Does not relate fish farming to other forms of agricultural farming (e.g. through multi-purpose dams development).		
	To distribute extension messages on fisheries and on environmental issues to sensitize the fishing communities	Raises awareness on the fishing communities on the possible environmental effects of their activities.	Poor communication systems between farmers and the extension workers.		
	To motivate extension personnel to improve effectiveness by establishing functional personnel development plans	Provides continued capacity building for extension workers to enhance their technical know-how.	Lack of incentives/award for good work lead to low staff morale hence engagement in corrupt activities.		

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/ dialogue/ compromises
National Aquaculture Strategic Plan, 2005	To facilitate the necessary institutional, legal, and administrative changes in the sector, and to increase the capacity of stakeholders to enable:	Focuses on smallholder fish farming (fish ponds) hence has the capacity to contribute towards broad based poverty reduction.	Little linkage with other related sectoral development policies and strategies save for references to the National Fisheries and Aquaculture Policy and Fisheries Act;	The implementation strategy for National Aquaculture Strategic Plan is well integrated into the District or local development structures.	Since the Strategy was for a 10 year period, i.e. 2005 to 2015, a review process at the end of the time period will bring out issues for improvement including need for high costs water investments for fish farming.
	(a) Improved livelihoods among rural small-holder fish farmers (b) A successful commercial aquaculture sector (c) The provision of quality aquaculture services at a national and local level		Not explicit on multi-purpose water investment such as dams for aquaculture development- since the focus is on small holder farmers.		
National Policy of Action (NAPA)	Achieve the status of a nation with sustainable food security and increased agro-based incomes	Increase agricultural productivity and ensure environmental sustainability.	Not clear on relationship with agricultural water development.	Inadequate political will to enforce laws/ regulations/ policies due to corruption.	Local authorities, NGOs, Donors, other Government Departments to coordinate in dealing with issues of corruption.
	Reduce the number of households that run out of food stocks from 60% to 20% by 2015	Expand and strengthen access to agricultural inputs for vulnerable groups.	Low political will from the government to enhance the policy.		

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	Reduce people living in poverty from 65% to 33% by 2015	Develop enabling policies and associated institutional reforms and regulatory frameworks, including improved infrastructure and access to markets, capital and financial services.	Corruption and financial mismanagement.		
National Export Strategy, 2013-18	Identifying critical policy investment actions for stimulating an export led national economic growth	It recognizes the importance of coordination and coherence between different agricultural water related initiatives and frameworks such as the Greenbelt Initiative, ASWAP, National Irrigation Policy and the National Export Strategy, to ensure that investments in new irrigation schemes and rehabilitation reap the greatest economic rewards through secure market linkages that will ensure crops can be sold and value addition maximized.	The Policy outlines a too broad set of multi-sectoral investment requirements for realization of its objectives, hence the difficulty to pinpoint the specific factors that could drive a viable export led growth; A number of factors recognized as critical for export led growth are outside the domain of the responsible lead ministry, e.g. stable economic environment.	The success of the strategy depends on the collaboration of different players, of which the private sector faces challenges of limited knowledge on improved technologies for value addition (economic challenges).	The responsible Ministry and business community are constantly monitoring the developments in both domestic and international markets to find areas of further reform and investments.
National Decentralization Policy, 1998	To eliminate dual administrations (field administration and local government) at the district level with the aim of making public service more efficient, more economical and cost	Integrates governmental agencies at the district and local levels into one administrative unit, through the process of institutional integration, manpower absorption, composite budgeting and provision of	Inadequate political will to enforce legal provisions that would support the decentralization processes, e.g. capacity building at local council levels to effective the local citizenry	The work of responsible institutions such as Local Councils and Local Government Finance Committee to implement the policy objectives is	The Ministry of Local Government and Rural Development is monitoring the decentralization process and working on areas of further reform.

Step 2.c: Diagnostics of Policy Frameworks					
Policy	Specific Policy Objective	Effectiveness		Governance Dimension	
		Strengths	Weakness	Formal/informal aspects	Readiness for reform/dialogue/compromises
	effective	funds for the decentralised services; Diverts the centre of implementation responsibilities and transfers these to the districts.	developmental affairs.	being affected by challenges of low funding, corruption and capacity levels.	
	To promote accountability and good governance at the local level in order to help Government reduce poverty	Enhances development at local level.	Ineffective or unclear regulations guiding the decentralization policy implementation processes.		
National Land Policy, 2002	To ensure tenure security and equitable access to land, to facilitate the attainment of social harmony and broad based social and economic development through optimum and ecologically balanced use of land and land based resources.	Recognizes the existence of land related conflicts for agriculture, and states that “decline in soil fertility because of over use or improper agricultural techniques has encouraged encroachment in forestland, conservation areas, watershed, wildlife and national parks” (National Land Policy, 2002).	The policy has not effectively addressed the concerns of corruption instances on land distribution issues especially involving foreign individuals; In spite of having an elaborate National Land Policy, there are several reported cases of irrigation development initiatives being negatively affected by land disputes (GoM, Annual Economic Reports, 2010, 2014).	The Ministry responsible for Lands is being supported by a number of NGOs on community sensitization in land affairs including women access to land.	There are still on-going debates on land access, management and information services and new Government has promised to deal with such matters.

Conclusions

The policy framework diagnostics in Table 3.3a shows that Malawi has an adequate number of policy frameworks governing the operations of the environment, natural resources and agriculture sectors (including agricultural water and energy sub-sectors). The importance of multi-stakeholder participation is recognized in most frameworks, and stakeholder resistance to change is minimal, save for from the political circles.

Policy implementation and review processes have diverse challenges, but the most relevant ones are: (i) limited linkages amongst the frameworks; (ii) low political will to implement the policies, e.g. the irrigation development projects being negatively affected by land disputes despite the country having an elaborate National Land Policy; (iii) some policies such as those relating to agriculture extension provision, food and nutrition security attainment are not backed by legal instruments which compromises their implementation; and (iv) some policy frameworks are old do no relevant policy directions exist- and need revision. The summaries are in Table 3.3b below:

Table 3.3b: Summary of conclusions of assessing performance of Policy Frameworks

Step 2.c: Summary of conclusions of assessing performance of Policy Frameworks		
Policy	Specific objective(s) not achieved	Reasons behind the specific objective not being achieved: Formal/Informal aspects (F/I), Readiness (Rd) and resistance (Rs) to change
Malawi Growth and Development Strategy 2 (2011-16)	Stable macro-economic environment and increased investment to achieve sustainable broad based economic growth	F/I: Weak enforcement of alignment and sectoral policies and programs to MGDS Rd: Rs: low political will to adhere to the policy prescriptions of the framework.
Vision 2020	Malawi moving towards a vibrant and middle income country with a minimum GDP per capita of US\$1000	F/I: Not well linked or incorporated in sectoral activities Rd: Rs: Low political will to work towards attainment of Vision aspirations; No Strategic Plan to give interval targets for the periods prior to the Year 2020 for measuring extent of achievements.
National Water Policy, 2007	Sustainable and integrated water resources development, conservation and management that provides equitable access and use of water to all individuals	F/I: Limited focus on agricultural water but emphasis on domestic and industrial water use purposes Rd: Used as a basis for resource

Step 2.c: Summary of conclusions of assessing performance of Policy Frameworks		
Policy	Specific objective(s) not achieved	Reasons behind the specific objective not being achieved: Formal/Informal aspects (F/I), Readiness (Rd) and resistance (Rs) to change
		<p>mobilization for water sector investments</p> <p>Rs: Low political will to fully implement the policy</p>
The Green Belt Initiative, 2009	Diverse agricultural water investments as a premise for national socio-economic development, which requires multi-sectoral support with multi-sectoral benefits	<p>F/I: Fluctuations in political will towards its implementation</p> <p>Rd: Potential greenbelt communities beneficiaries readiness to participate in the initiative</p> <p>Rs: Land disputes for irrigation and related developmental activities</p>
National Irrigation Policy, 2000	Coordinated and increased investments in irrigation sector development	<p>F/I: The Irrigation Board not in place; Not clear linkages with other agricultural and natural resource policies</p> <p>Rd:</p> <p>Rs: Low and fluctuating policy commitment towards the irrigation sector, evidenced by insufficient funding levels</p>
National Environmental Policy, 2004	Promotion of cooperation between Government and local communities in the management and sustainable utilization of natural resources and the Environment	<p>F/I: Weak national and local level institutions to implement the policy</p> <p>Rd:</p> <p>Rs: Low political will, inadequate funding and capacity to mobilize resources for the sector</p>
National Energy Policy, 2003	Improved security and reliability of energy supply systems	<p>F/I: Limited private sector participation and investments in the sector</p> <p>Rd:</p> <p>Rs: Not clearly linked with other sectoral policy frameworks e.g., water resources sector</p>
National Food Security Policy, 2006	Promotion of irrigation, water sector, environmental and land management sectors for sustainable agriculture development	<p>F/I: implementation dependent on good will of various sectors or sub-sectors who already have their own policy objectives</p> <p>Rd:</p>

Step 2.c: Summary of conclusions of assessing performance of Policy Frameworks		
Policy	Specific objective(s) not achieved	Reasons behind the specific objective not being achieved: Formal/Informal aspects (F/I), Readiness (Rd) and resistance (Rs) to change
		Rs:
National Nutrition Policy and Strategic Plan, 2009	Increase food availability in terms of quantity and quality that is accessible to all households at all times through various interventions including the water sector	F/I: Too much planned interventions with some of their outputs not clearly linked Rd: Rs: Traditional attitudes on nutrition security which yield sub-optimal results
National Climate Change Investment Plan, 2013 - 2018	a coordinated approach to climate mitigation and adaptation to reduce climate change impacts on food security, water availability and quality, and energy	F/I: weak institutional capacities to drive the climate change agenda Rd: Rs: Fluctuations in political commitment towards climate change interventions
National Livestock Development Plan & Strategy, 2003	Promotion of livestock productivity, improve livestock based incomes, and promote sustainable use of natural resources in partnership with other stakeholders while protecting the public against zoonotic diseases	F/I: Limited linkages with other sectoral policies; limited private sector participation Rd: Rs: Traditional approaches to livestock management systems
New Agriculture Extension Policy, 2000	Demand driven agricultural extension services providing farmers choices of services provides	F/I: Some extension services provides have very limited geographical scope due to limited capacities; weak institutions especially at village level Rd: Rs: illiteracy levels amongst smallholder farmers affecting the capacity to demand services
Crop Production Policy, undated	National food self sufficiency through efficient utilization of technologies and resources includes agricultural water	F/I: Not accompanied by a Strategic Plan for implementation Rd: Rs: Limited linkage to other policies
National Fisheries and Aquaculture Policy, 2001	To mobilize communities to participate and play an active role in fisheries management and fish farming (aquaculture)	F/I: Limited capacity to enforce the policy in general and particularly in mobilizing fish communities to participate in fishery management at grass root level as desired

Step 2.c: Summary of conclusions of assessing performance of Policy Frameworks

Policy	Specific objective(s) not achieved	Reasons behind the specific objective not being achieved: Formal/Informal aspects (F/I), Readiness (Rd) and resistance (Rs) to change
		<p>Rd:</p> <p>Rs: Non-cooperative communities in fishery management; corruption in fishery management</p>
National Aquaculture Strategic Plan, 2005	Facilitation of the necessary institutional, legal, and administrative changes in the sector, and to increase the capacity of stakeholders	<p>F/I: weak local aquaculture farmers organizations to implement the Strategic Plan activities</p> <p>Rd:</p> <p>Rs: Low farmer capital base for aquaculture investments</p>
National Policy of Action (NAPA)	Increase agricultural productivity while ensuring environmental sustainability	<p>F/I:</p> <p>Rd:</p> <p>Rs: Low funding levels leading to limited participation of various institutions</p>
National Export Strategy, 2013-18	Identification of critical policy investment actions for stimulating an export lead national economic growth	<p>F/I: Uncoordinated multi-sectoral involvement in the various activities to address exports supply side constraints</p> <p>Rd:</p> <p>Rs: Unscrupulous behavior of some private sector players</p>
National Decentralization Policy, 1998	Elimination of dual administrations (field administration and local government) at the district level with the aim of making public service more efficient, more economical and cost effective	<p>F/I: Limited functionality of local council structures established under the Policy</p> <p>Rd:</p> <p>Rs: Low political will to enforce legal provisions that would support the decentralization processes, e.g. capacity building at local council levels</p>
National Land Policy, 2002	Ensures tenure security and equitable access to land, to facilitate the attainment of social harmony and broad based social and economic development through optimum and ecologically balanced use of land and land based resources	<p>F/I: Ineffective stakeholder participation to affect the much needed implementation</p> <p>Rd:</p> <p>Rs: Corruption, low political will to deal with land disputes which affects both public and private investments</p>

STEP 3: ACTION MATRICES

For each of the challenges identified in the diagnostics exercise of the previous chapter, the causes are examined, and possible corrective actions are proposed. Suggestions of responsible institutions to deal with the possible solutions are also provided.

3.1 Institutions

The action matrix for institutions covers political institutions as well as technical ministries which develop, implement and review technical interventions. The analysis starts with the challenges identified in the diagnostics section whose possible causes and corrective actions are discussed. On the causes, four possible categories of causes are envisaged, and these include: capacity limitations; governance systems; political inferences; climate change, amongst others. Table 4.1 below shows the details.

Table 4.1: Action Matrix of AWM Institutions

Step 3: Action Matrix of Institutions				
Institution	Functions underperforming	Causes of the institutional underperformance (e.g. Capacity; Governance; Politics; Climate Change)	Proposed Actions	Responsible Institution/ Stakeholder
Parliamentary Committee on Agriculture & Natural Resources	Inadequate monitoring and review of investments in the agriculture and natural resources sector; Inadequate lobbying for Parliamentary allocations to the agriculture & energy water management sector.	Being politicians, members of the Committee are often influenced by their party positions on agriculture & natural resource management issues rather than objective assessments of the sector issues; In certain instances, some Committee members are technically competent to appreciate the intricacies associated with benefits and challenges of the AWM sector- hence not able to advocate for increased Parliamentary allocations to the sector.	Strong evidence-based advocacy agenda for the Committee members; Training sessions for the Committee members to enhance their appreciation of the significance of AWM sector issues, including visits successful case study sites.	Joint effort of Ministry of Agriculture, Irrigation and Water Development and the Ministry of Natural Resources, Energy and Mining.
Office of the President and Cabinet (OPC)	Inadequate facilitation of inter-ministerial collaboration, including those dealing in agriculture and energy water sector issues; Low staff motivation to design and implement effective agricultural water and energy development initiatives.	Focus on management of administrative matters of Government systems rather than technical operations; Political interferences that negate the public sector reforms such as Performance Management systems that OPC puts in place.	Where possible, the OPC is to coordinate the inter-ministerial AWM activities, especially during the initial programme development stages; Based on the current political will for reforms, OPC is to continue with the Public Sector Reforms which should result in effective Results Based Management systems - that would result in the development of the AWM sector.	Office of the President and Cabinet itself.
Ministry of Finance, Economic	Inadequate mobilization of financial resources for AWM sector	Overwhelmed with competing demands for the limited public resources by different sectors	To allocate resource to sectors based on the evidence of their contributions to national	Ministry of Finance, Economic Planning and Development.

Step 3: Action Matrix of Institutions				
Institution	Functions underperforming	Causes of the institutional underperformance (e.g. Capacity; Governance; Politics; Climate Change)	Proposed Actions	Responsible Institution/ Stakeholder
Planning & Development	Inadequate technical guidance on how sectors can undertake technical analyses to illustrate the significant contributions of agriculture & energy water sector contributions to national development.	expenditure demands; Low staff morale in the Ministry to enforce the available technical guidance on project development and management, including use of Cost Benefit Analysis tools (Net present Values, Benefit Costs Ratios, and Internal Rate of Returns) to strengthen the cause of critical national development projects such as those in AWM sector.	economic growth and poverty reduction; Adherence to the principles that only projects with credible national socio-economic benefits to be included in the Public Sector Investment Programme (PSIP) framework.	
Ministry of Agriculture, Irrigation and Water Development	Inadequate inter ministerial coordination with affiliated Ministries dealing with natural resource management activities - such that agriculture frontline extension system is not able to use the NRM legal instruments to enforce water catchment area protection objectives; Inadequate capacity in water resources data collection, research, including for AWM aspects, at local/ grassroots level.	Culture of working in silos by public institutions- hence each institution sticks to its own logframe; inadequate technical capacity to quantify and appreciate the benefits of NRM activities (especially in the long term) particularly at local levels; Inadequate human, financial and technical capacity at all levels.	Enhance synergies between agriculture and natural resource management ministries/ departments to promote efficient use of technical, human and financial resources, particularly at grass roots levels; develop and implement a common or joint communication and advocacy strategy for increased investments in agriculture water management activities; Establish a Water Resources Institute as a water sector skills and technologies development centre, with teaching and research facilities in hydrology, hydrogeology, water quality, water supply and sanitation and civil engineering (Ng'ongola, 1999).	Ministry of Agriculture, Irrigation and Water Development (MIWD) Office of the President and Cabinet (OPC).
	Limited investments in	Policy bias towards the Agriculture	Undertake more technical	

Step 3: Action Matrix of Institutions				
Institution	Functions underperforming	Causes of the institutional underperformance (e.g. Capacity; Governance; Politics; Climate Change)	Proposed Actions	Responsible Institution/ Stakeholder
	<p>multipurpose dam infrastructures to adequately take care of conflicting water use objectives, e.g. for energy, domestic and industrial use & agricultural or irrigation development.</p>	<p>Inputs Subsidy Program at the expense of other equally important challenges such as agricultural water conservation and harvesting; Decline in surface and ground water supply levels due to climate changes hence promoting water related conflicts; low political will to support compliance requirements- in fact, there are times when politicians disown the good agriculture water management principles and practices for political gain; Lack of political will to ensure service delivery; as a result, most public institutions do not have service charters to commit public institutions to provision of quality policy guidance services.</p>	<p>analyses economic benefits of AWM investments that should inform the increased public financial resource allocations to the sector; undertake specific investment promotions in AWM sector under the Malawi Investments and Trade Centre; Ensure conducive policy environment for investments in AWM investments.</p>	
	<p>Inability to implement/enforce the legal provisions e.g. the Water Resources Act, 2012; and the Irrigation Act, 2001</p>	<p>Inadequate financial capacity to establish institutions to enforce legal provisions; Insufficient political will to implement the legal frameworks.</p>	<p>Increase budget through lobbying.</p>	<p>MIWD</p>
<p>Ministry of Natural Resources, Energy and Mining</p>	<p>Inadequate coordination with other relevant ministries and departments, e.g. in agriculture sector.</p>	<p>Long standing culture of working in silos even when the premise for closer technical interlinkages is evident; Inadequate political leadership to foster interministerial or inter-departmental joint programming and delivery on common AWM targets.</p>	<p>Take advantage of the current government policy on ministerial and departmental alignments to foster closer collaborations amongst the various ministries and departments on AWM issues.</p>	<p>OPC</p>
	<p>Inadequate effective catchment</p>	<p>Weak institutional capacity and</p>	<p>Strengthen the monitoring</p>	<p>Ministry of Natural</p>

Step 3: Action Matrix of Institutions				
Institution	Functions underperforming	Causes of the institutional underperformance (e.g. Capacity; Governance; Politics; Climate Change)	Proposed Actions	Responsible Institution/ Stakeholder
	conservation and river bank protection initiatives.	corrupt practices in natural resource management especially in the catchment areas.	systems for catchment area management within the existing legal framework; Introduce incentive systems for the front line staff engaged in catchment area conservation activities; Explore the possibility of establishment of the River Basin Management institutions to protect critical national water catchment areas.	Resources, Energy and Mining.
	Land use (agro-ecological) zoning guidelines for protecting water catchment areas not clear to most stakeholders including the rural communities.	Inadequate financial, technical and human capacity especially at local levels; Insufficient political will to support implementation/enforcement of land zoning initiatives under the National Land Use Policy.	Increased human, technical and financial capacity building at district levels to enforce the existing policy and legal frameworks.	Ministry of Lands, Housing and Urban Development
	Incidences of land tenure disputes relating to irrigation/ AWM development initiatives (GoM, Annual Economic Reports, 2010, 2012, and 2014)	Low political will to solve or deal with land tenure disputes involving land for irrigation or AWM development in different parts of the country; Lack of knowledge of negative socio-economic implications of persistent or growing land conflicts relating to irrigation/ AWM development.	Sensitization of political leaderships and local communities on negative welfare effects of the persistent land conflicts relating to irrigation/ AWM development.	Ministry of Lands, Housing and Urban Development in collaboration with Ministry of Agriculture, Irrigation and Water Development.
	Inadequate policy guidance on mainstreaming of AWM in the District Development Plans (compared to other water uses)	Inadequate political will towards devolution and decentralization of technical programs-. This is evidenced by the fact that technical departments at the district council level are still operating under their mother line ministries which sometimes give policy	Need to strengthen evidence-based advocacy for decentralization and power devolution, including for the AWM sector.	Office of the President and Cabinet and the Ministry of Local Government and Rural Development.

Step 3: Action Matrix of Institutions				
Institution	Functions underperforming	Causes of the institutional underperformance (e.g. Capacity; Governance; Politics; Climate Change)	Proposed Actions	Responsible Institution/ Stakeholder
		directions that are not in line with the district development priorities.		
Ministry of Lands, Housing and Urban Development	Incidences of land tenure disputes relating to irrigation/AWM development initiatives (GoM, Annual Economic Reports, 2010, 2012, and 2014)	Inadequate human, financial and technical capacity at district level to design, implement and monitor agricultural water development programs.	Capacity building at district level to develop sound project concepts, mobilize resources, implement and monitor technical programmes, including AWM related ones.	Ministry of Agriculture, Irrigation and Water Development
	Absence of operational institutional mechanisms for enforcement of the legal provisions of the Act; Limited investments in multipurpose dams that would provide agricultural water services, besides other water uses.	Low political will to operationalize the National Water Resources Authority as stipulated in the Act, nor to link it to the Malawi Energy Regulatory Authority (MERA) which deals in energy issues including hydropower.	Set up the institutional machinery for the National Water Resources Authority as stipulated in the Act of Parliament.	Ministry of Agriculture, Irrigation and Water Development; Controller of Statutory Co-operations.
Ministry of Local Government and Rural Development	Absence of operational institutional mechanisms for enforcement of the legal provisions of the Act; Limited investments in multipurpose dams that would provide agricultural water services, besides other water uses; Limited investments in catchments area	Weak capacities to manage water catchment areas that are under encroachment threats by local communities.	Strengthen collaboration between the Water Boards and the yet to be set up National Water Resources Authority on water catchment area conservation.	Ministry of Agriculture, Irrigation and Water Development.

Step 3: Action Matrix of Institutions				
Institution	Functions underperforming	Causes of the institutional underperformance (e.g. Capacity; Governance; Politics; Climate Change)	Proposed Actions	Responsible Institution/ Stakeholder
	conservations/management; Limited catchment area management by the WUAs.			
National Water Resources Authority (formerly Water Resources Board)	Absence of operational institutional mechanisms for enforcement of the legal provisions of the Act Limited investments in multipurpose dams that would provide agricultural water services, besides other water uses Limited investments in catchments area conservations/management Limited catchment area management by the WUAs	Limited human, financial and technical capacities to sensitive members and the communities at large on implications of poor catchment area management.	Strengthen the sensitization campaigns in areas under jurisdiction.	WUAs.
		Limited capacity to deal with local political interferences in natural resources management issues that promote encroachment into water catchment areas.	Capacity building for the WUAs to adhere to their principles and withstand unnecessary political interferences.	Ministry of Agriculture, Irrigation and Water Development and; WUAs.
National Water Resources Authority (formerly Water Resources Board)	Absence of operational institutional mechanisms for enforcement of the legal provisions of the Act	Low political will to operationalize the National Water Resources Authority as stipulated in the Act, nor to link it to the Malawi Energy Regulatory Authority (MERA) which deals in energy issues including hydro power.	Set up the institutional machinery for the National Water Resources Authority as stipulated in the Act of Parliament.	Ministry of Agriculture, Irrigation and Water Development; Controller of Statutory Cooperation.
Water Boards (Northern, Lilongwe, Central Region, Blantyre,	Limited investments in multipurpose dams that would provide agricultural water services, besides other water uses	Weak management systems to collect adequate financial resources to invest in multipurpose dams.	Operationalize the National Water Resources Authority to ensure that it performs its legal provisions.	Ministry of Agriculture, Irrigation and Water Development.

Step 3: Action Matrix of Institutions				
Institution	Functions underperforming	Causes of the institutional underperformance (e.g. Capacity; Governance; Politics; Climate Change)	Proposed Actions	Responsible Institution/ Stakeholder
Southern Region)	Limited investments in catchments area conservations/management	Weak capacities to manage water catchment areas that are under encroachment threats by local communities.	Strengthen collaboration between the Water Boards and the yet to be set up National Water Resources Authority on water catchment area conservation.	Ministry of Agriculture, Irrigation and Water Development.
Water Users Association (WUAs)	Limited catchment area management by the WUAs.	Limited human, financial and technical capacities to sensitive members and the communities at large on implications of poor catchment area management.	Strengthen the sensitization campaigns in areas under jurisdiction.	WUAs.
		Limited capacity to deal with local political interferences in natural resources management issues that promote encroachment into water catchment areas.	Capacity building for the WUAs to adhere to their principles and withstand unnecessary political interferences.	Ministry of Agriculture, Irrigation and Water Development and; WUAs.

Conclusions

Table 4.1 above shows that national institutions are caught up in a *vicious cycle of ineffectiveness*, characterized by low political will due to inadequate and unsustainable empirical evidence and advocacy, inadequate human and technical capacity to generate information, low financing due to limited capacity to mobilize resources, and inadequate stakeholder support due to limited information on returns to resource investments. The schematic picture in Figure 2 below presents the details:

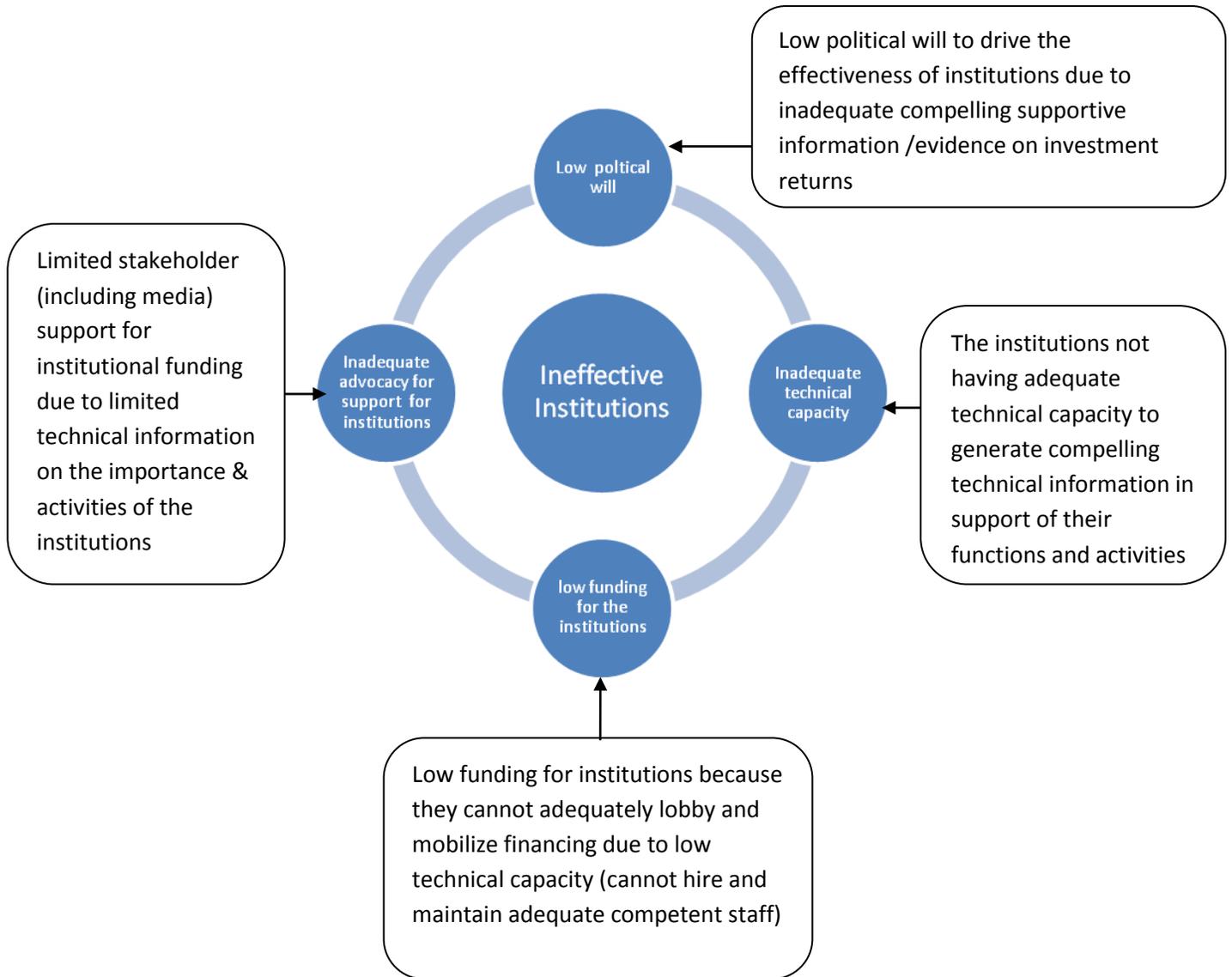


Figure 2: Vicious Cycle of Institutional Ineffectiveness

The pathways out of the *vicious institutional ineffectiveness cycle*, in which most lead sectoral institutions find themselves, can come from any point within the cycle. Although

political will is the most likely source to escape this cycle. Specific actions are suggested in Table 4.1 and largely relate to operationalization and strengthening of the various institutions that already have been provided for in the different policy and legal frameworks. This could be followed by capacity building for the institutions at various levels; adhering the agreed principles for policy and programme management, and undertaking technical analyses in order to generate public support for the institutions and their investment initiatives. In so doing, the responsible institutions, particularly the policy makers or managers, will be taking the necessary steps towards an escape out of this cycle.

3.2. Legal and regulatory frameworks

The action matrix for legal and regulatory frameworks discusses the underlying causes of each of the previously identified challenges of legal frameworks (at the diagnostics stage), and proceeds to propose remedial actions by responsible institutions or stakeholders. It is envisaged that if proposed actions are implemented as proposed, Malawi's agricultural water and energy sub-sectors would have robust legal frameworks to effectively guide the operations of the sub-sectors and promote the much needed investments therein. Table 4.2 below shows the details.

Table 4.2: Action Matrix for Legal Frameworks

Step 3.2: Action Matrix for Legal and Regulatory Frameworks				
Legislation	Associated Problem(s)	Reasons behind (governance, effectiveness, other)	Proposed Actions	Responsible
Malawi Constitution, 1995	Only provides broad national policy aspirations on environment and natural resource issues, and does not provide targets nor penalties for failure to achieve those targets.	Governance: low political will to affect Constitutional amendments to clarify various issues of national interest, including natural resource utilization (including agricultural & energy generation waters); other: the Constitutional provisions on ENR are very brief, leaving specific details to the responsible sector ministries to provide details that build on the provisions of the National Constitution.	The need to include agricultural water and energy sector issues in the undergoing National Constitutional review processes.	Ministry of Agriculture, Irrigation and Water Development; Law Commission.
Water Resource Act, 2012	Not clear on AWM issues and investments.	Governance: AWM issues are left out (possibly to the Irrigation Act, 2001) - hence a demonstration of lack of coherence amongst legal instruments which is a reflection of institutional coordination challenges.	Need to identify the synergies between the Water Resources Act and the Irrigation Act during the implementation stage.	Ministry of Agriculture, Irrigation and Water Development.
	Low political will to operationalize the Water Resources Act	Governance: While there is hope that the Act will be implemented by setting up the institutions provided for in the Act, the national drive towards that direction is slow.	The ministries of Agriculture, Irrigation and Water Development & and Natural Resources, Energy and Mining to expedite the process of working out the mechanisms for close collaboration between the proposed National Water Resources Authority and the existing Malawi Energy	Ministries of Agriculture, Irrigation and Water Development ; Ministry of Natural Resources, Energy and Mining; Department of Statutory Cooperation.

			Regulatory Authority (MERA).	
	Inefficiencies in agricultural water use comprised use of the already minimal agricultural water resources.	Effectiveness: The Act does not provide for upstream measures to enable effective use of investments in water, i.e., how does water use affect subsequent socio-economic activities?	Establish and/or strengthen national water use information services to guide potential investors; Undertake more analyses to establish the viability of various forms of water investments (including agricultural & energy generation water uses).	Ministry of Agriculture, Irrigation and Water Development.
	Insufficient financial resources for agricultural water activities such as dam construction for multipurpose water use and storage.	Other: The Malawi Government is generally facing budgetary constraints following the withdrawal of budget (amounting to \$600.0 m per annum- almost 10% of national GDP) support by its development partners.	Ministry of Finance, Economic Planning & Development to consider provision of start-up operational resources of the Act institutions since they can latter on be self sufficient.	Ministry of Agriculture, Irrigation and Water Development; Ministry of Finance, Economic Planning & Development.
Water Works Act (No 17, 1995)	Over-emphasis on water extraction for domestic and industrial use leaving out agricultural and energy water uses.	Governance: The focus on water for domestic and industrial use is also a reflection of disjointed policy & programmatic planning that covers several aspects of water use (including agricultural water) from a single investment.	The Act needs to be revised to include Agricultural and energy water uses in the water investments by Water Boards.	Ministry of Agriculture, Irrigation and Water Development; Ministry of Justice and Constitutional Affairs.
	Failure to prevent pollution of gathering grounds, the water-works and the water therein.	Capacity: limited technical & financial capacities by the Water Boards to carry out their mandates.	Increased investments in human capacity development, particularly at the local levels.	Ministry of Agriculture, Irrigation and Water Development.
	Weak institutional financial and technical capacities to invest in multipurpose dams to generate water for multiple uses (including agricultural & energy purposes).	Effectiveness: The Act does not provide for penalties for inefficiencies in financial management and water resource utilization.	Financial prudence to avoid loss of water revenue by Water Boards, so as to realize funds for investing in the sector (to include agriculture & energy needs).	Ministry of Agriculture, Irrigation and Water Development.
Irrigation Act, 2001	Lack of standards and guidelines for the development and management of irrigation and drainage.	Governance: limited investment in irrigation development particularly in institutional capacity for the	Promote and implement technologies that use agricultural water efficiently	Ministry of Agriculture, Irrigation and Water Development.

		irrigation sector at the grass roots level.	(drip irrigation, drought-resistant crops).	
	Lack of specific incentives for irrigation development resulting in malfunctioned irrigation schemes due to lack of maintenance.	Effectiveness: Limited capacity to maintain and operate schemes at the county and community levels; Other: Financial constraints by government to effectively maintain irrigation schemes.	Clear guidance to the local communities <i>on the commodity value chain development for their commodities to enable them generate adequate return on their irrigation investments-</i> hence enable them effectively operate and maintain irrigation schemes.	Ministry of Agriculture, Irrigation and Water Development.
	Inability to manage expertise in the irrigation sector resulting in unregistered irrigation consultants operating in the Irrigation sector.	Other: the Irrigation Act is not fully operationalized, that is, the Irrigation Board, as envisioned in the Act, has not yet been put in place.	The Irrigation Act needs revision to define workable institutional arrangements to implement its provisions.	Ministry of Agriculture, Irrigation and Water Development.
	Much of the national irrigation potential of 400,000 hectares has by far not been reached- despite the well-known potential for increased agricultural productivity, national incomes and broad based economic growth.	Governance: Government focus or prioritization of irrigation sector depends upon the political agenda of the ruling party- hence variations in prioritization of the irrigation sub-sector; Other: While the positive socio-economic benefits of irrigation development are generally recognized, this is not usually supported by technical analyses pointing specific economic benefits- hence supporting the cause for the AWM investments.	Cost Benefit Analysis (CBA) and other related analytical instruments of the Irrigation sub-sector investments to help sustain national policy prioritization of the sector.	Ministry of Agriculture, Irrigation and Water Development.
Cotton Act, 2012	Limited linkage with other sectors/ sub-sectors:- Though seriously seeking to promote cotton production and productivity in	Governance: Absence of linkage with other legal frameworks (such as those related to agricultural water management) is a reflection	The responsible Ministry should adopt a policy of ensuring that specific legal frameworks being developed are well linked.	Ministry of Agriculture, Irrigation and Water Development;

	Malawi, the legal framework is silent on the role of other laws such as the Irrigation Act and Irrigation Department itself (dealing in agricultural water management), in the attainment of cotton sub-sector objectives.	of a broader challenge of operating in silos.		
	Limited financial resources to implement the Act provisions e.g. setting up the Cotton Council.	Other: budgetary challenges, coupled with low political will, affecting implementation of the legal provisions of the Cotton Act.	The Ministry responsible to assure Ministry of Finance that the Cotton Council is initially in need of resources, and can thereafter be self-sustaining.	Ministry of Agriculture, Irrigation and Water Development;
	Limited cotton production using irrigation systems.	Effectiveness: the Act and possible the Cotton Policy do not attempt to take advantage of the national irrigation drive to improve cotton production and productivity levels.	Awareness campaigns on benefits of cotton value chain development systems that utilize irrigation (agricultural water) to realize its full potential.	Ministry of Agriculture, Irrigation and Water Development.
Environment Management Act, 1996	Inadequate multi-sectoral collaboration or coordination in environmental management issues affecting the ENR management efforts.	Governance: rigid bureaucratic systems and competing interests among sectors preventing closer and effective inter-institutional collaboration in management of the environmental issues.	Establishment of the proposed National Environmental Management Agency could mainstream environmental management issues across various sectors (including AWM sector) as well as foster institutional collaboration.	Ministry of Natural Resources, Energy and Mining.
	Low community participation in environmental management activities (including conservation of AWM catchment area activities).	Governance: the environmental management policy makers and stakeholders need to do more to convince local communities of the benefits of participation in environmental management activities against t being exploiters of the same ENR capital base.	Direct and indirect benefits for individual and community participation in ENR management to be further clarified in revised ENR policy and legal frameworks to stimulate community participation.	Ministry of Natural Resources, Energy and Mining.
	Weak enforcement for environmental legislation	Effectiveness: limitations in human and financial capacity to effectively enforce the various ENR legal provisions.	An inclusive approach in ENR management that brings on board various stakeholders hence minimizes the costs on one sector or government	Ministry of Natural Resources, Energy and Mining. Civil society, e.g.

			ministry/department.	Centre for Environmental Policy.
Forestry Act, 1997	Limited inclusive approach: While the Act seeks to adopt an inclusive approach in forest management, the Village Natural Resource Management Committee, and Forest Officers that confiscated forest produce from protected forest areas leave out other government officers, such as the Agriculture front line staff.	Governance: The limited inclusive approach by the Forestry Act, 1997 is an indication of the general problem of operating in silos even if in the wake of limited financial, technical and human resources.	The responsible Ministries to realize the benefits of multi-sectoral approaches in natural resource management (including water catchment area management).	Office of President and Cabinet; Ministry of Natural Resources, Energy and Mining.
	Inadequate human capacity of institutions responsible for forest management.	Capacity: limited knowledge and resources for a forest and natural resource management activities.	Provision of training to communities on afforestation (tree planting initiatives).	Ministry of Natural Resources, Energy and Mining.
	Consistently high rate of poverty resulting in depletion of natural resources and competitive uses of water.	Other: increased demand for natural resources for subsistence as well as for commercial purposes, e.g., selling of charcoal as source of income.	Promotion of the use of alternative energy sources such as electricity in place of biomass energy.	Ministry of Natural Resources, Energy and Mining.
	Forest fires affecting natural resource base include agricultural water catchment areas.	Other: limited security to safeguard forests.	Provision of guidelines on forest management (fire breaks).	Ministry of Natural Resources, Energy and Mining.
Local Government Act, 1998	A sluggish decentralization process of various sectoral activities (including AWM activities).	Governance: low political will towards decentralization, hence continued power concentration at national level.	Case study analyses that demonstrate the effectiveness of the decentralization process need to be highlighted as basis for further the decentralization agenda in various sectors including the AWM.	Ministry of Local Government and Rural Development.
	Capacity challenges at local level to design, implement and review developmental programmes (including those related to AWM sector)	Other: The general budgetary constraints faced by the government and district councils in particular, affecting the local capacity development initiatives; Governance: low political will	Strengthen the district councils' capacity development agenda till the objectives for so doing are met.	Ministry of Local Government and Rural Development.

		towards decentralization process is evidenced by limited human, technical and financial capacity development at local council levels.		
Malawi Investment and Trade Center Act	While administrative challenges related to domestic and foreign investment can be easily addressed by the Centre, the same does not apply for policy and economic environmental factors such as concerns over unstable exchange rate volatility, high inflation & interest rates, and low effective demand, low technical expertise on the labor market.	Governance: Poor economic policy management because of lack of commitment to fiscal discipline – reflected by high government domestic borrowing which results in inflationary pressures.	The economic management policy to be supported by a legal framework that would limit government borrowing appetite from both domestic and international markets; Promotion of domestic investments using agricultural water that can stimulate exports, hence foreign exchange, employment and government revenue, hence reduced temptation for macro-economic policy misbehavior.	Ministry of Finance, Economic Planning & Development; Ministry of Industry and Trade; Ministry of Agriculture, Irrigation and Water Development

Conclusions

Table 4.2 shows the need to review the available legal frameworks, starting with the Malawi Constitution itself. The on-going constitutional review needs to look at clear provisions for the protection of the country's natural resource capacity base (including adequate provisions for protection of agricultural water and energy sources). This would ensure sustained national trust for investment in natural resource management issues by any government that may come into office. It is therefore of the utmost importance to work with the Ministry of Justice and Constitutional Affairs on the inclusion of environmental issues in the Constitutional Amendment.

The challenges of the ineffective legal instruments can be attributed to the low political will to implement the legal provisions. In addition, the Malawi Government is facing budgetary constraints, which now has been exacerbated by the recent withdrawal of development partners' budgetary support due to fiscal fraud known as the "cash gate scandal" uncovered in September, 2013. The lost budgetary support is estimated to represent a drop in grants from 10.5 percent to 3.5 percent of the country's GDP (Ministry of Finance, Economic Planning and Development, Annual Economic Report, 2014). The budgetary constraints are affecting the implementation of the legal provisions through reduced capacity of the institutions.

In addition, the analysis shows inherent deficiencies of legal instruments. For instance, most legal instruments do not provide for inter-organizational implementation of its laws; this minimizes the opportunity for public institutions to capitalize on each other's institutional capabilities through sectoral synergies. Policy makers should therefore consider reviewing the current Acts in order to foster multi-sectorial collaboration (i.e. Forest Act and Environmental Management Act).

Furthermore, the penalties for offences committed have become very insignificant due to changes in the economic environment including depreciation of the local currency over time. For instance, the Forestry Act, 1996 stipulates a penalty of MK 5 000 (currently about US\$10, whereas at the time implementation in 1996 it was around US\$250) for forest destruction. Because the Malawi economy faces rapid changes that change local currency values, legal provisions need to be reviewed periodically so that the punitive measures continue to make meaningful sense. Other remedial measures include capacity building for stakeholders involved in law enforcements.

3.3 Policy framework

This subchapter will analyze each of the identified policy framework limitations under the diagnostics exercise and propose remedial policy actions by the responsible institutions. Details of this analysis are presented in Table 4.3 below.

Table 4.3: Action Matrix for Policy Frameworks

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
Malawi Growth and Development Strategy11, 2011-16	Its strength as a guiding national policy framework depends on political will.	Governance: Low political will towards a sustainable national developmental approach.	Sustained provision of clear policy information on implications of sudden policy shifts to political masters, civil society and citizenry at large.	Office of President and Cabinet; Ministry of Finance, Economic Planning Development.
	Weak enforcement of environmental legislation and policies in the sectoral ministries and departments formulated in response to the national policy frameworks such as the MGDS.	Governance: Sometimes the policy & legal provisions are over ambitious, e.g. the National Council for the Environment required the Chief Secretary and all Principal Secretaries to be part of the Council, and fully attend the Council meetings. Other: Lack of clarity on the negative effects of not enforcing the prescribed policy positions in the MGDS itself and the related sectoral frameworks, i.e., would failure to implement a particular policy aspect it lead to low economic growth?	Ensure realistic institutional arrangements for implementation of national or sectoral frameworks; To ensure that the OPC takes leadership over sectoral issues that are multi-sectoral in nature; All policy recommendations to be evidence-based, with clear socio-economic implications for implementation or lack thereof.	Office of President and Cabinet; Ministry of Finance, Economic Planning Development.
Vision 2020	Low political will to foster the nation's vision's targets e.g., Malawi becoming a middle income country with GDP per capita of at least US\$ 1,000.	Governance: low political will as governments change from time to time; Others: Some of the targets appeared to be very ambitious and difficult to attain, e.g. being middle income country.	Revise the National Vision in light of the new developments and insights relating to climate change, NRM principles and practices, and benefits of AWM investments.	Office of President and Cabinet; Ministry of Finance, Economic Planning & Development.

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
	Limited detailed targets for the various sectors as well as in between period towards 2020.	Others: the Vision document itself lacks clarity or has limited strategies for accomplishing objectives and technical basis for its stated aspirations, hence limited commitment towards its implementation.	Provide for an annex to the Vision 2020 with interval targets for different sectors to accomplish/meet as we move towards the Year 2020; Provide some technical analyses to justify the stated aspirations, and relate the Vision aspirations with the MDGs. Include AWM issues.	Ministry of Finance, Economic Planning & Development.
National Water Policy, 2007	The Policy, like most others, does not provide, clear incentives for investing in water management activities.	Others: Strategic plans for water conservation and mitigation of the effects of water scarcity and flooding are not included in the Water Policy (Ministry of Natural Resources, State of Environment Report, 2010);	Safeguarding the water quality by promoting participation of rural community organizations.	Ministry of Agriculture, Irrigation and Water Development; Natural Resources, Energy and Mining (Environmental Affairs Department).
	Weak coordination among stakeholders in the water sector.	Governance: Rural water supply schemes are implemented without agreed policy and legal framework.	Improving coordination amongst key government ministries/departments in water resources research, data collection, analysis, storage, dissemination and investments.	Ministry of Agriculture, Irrigation and Water Development (Water Department).
	Inadequate investments in major multipurpose dams.	Governance: Inadequate knowledge of the concept of major storage dams by national stakeholders; Effectiveness: Limited financial capacity towards investments in	Enhancing participation of other sectors in major dams investments as well as NGOs and the private sector; Mobilization of resources for investments in major storage	Ministry of Agriculture, Irrigation and Water Development

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
		major storage dams.	dams.	
	No specific policy and legislation for multipurpose dams' development despite the need for multipurpose dams and its potential.	Governance: Limited political will towards multipurpose dam investments.	Legal and regulatory reforms to guide and provide concrete incentive systems for the development of multipurpose dams.	Ministry of Agriculture, Irrigation and Water Development.
	Hydropower generation being constantly threatened by low Lake Malawi levels and Shire River flows.	Governance: Inadequate coordination of different sectoral investment initiatives relating to hydro-power generation and other water catchment area uses.	Enhancing sectoral coordination to promote multipurpose water uses as well as water catchment area management.	Ministry of Agriculture, Irrigation and Water Development; Ministry of Natural Resources, Energy and Mining.
Nation Irrigation Policy, 2000	The policy does not clearly indicate how it supports other agriculture sector policies, e.g. Livestock Development Policy.	Effectiveness: The Irrigation Policy was prepared at a time when other sub-sectoral policies were still under development.	The revised/ updated National Irrigation Policy to link other relevant sub-sectoral issues such livestock development; Policy implementation process already integrates other sub-sectors though there is room for improvement.	Ministry of Agriculture, Irrigation and Water Development.
	Limited knowledge amongst communities on the crops that do well under irrigation schemes.	Effectiveness: Limited irrigation extension capacity to deliver an effective irrigation development strategy for smallholder farmers.	More training for irrigation extension front line staff; Close linkage between Irrigation, Agricultural Extension and Crop Departments on delivery of effective irrigation extension	Ministry of Agriculture, Irrigation and Water Development.

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
			messages.	
	Ambiguity of the policy in how it contributes to the country's food security, nutrition and economic growth objectives.	Others: While the policy seeks to put 20% of irrigable land under irrigation, and increase crop yields, it does not indicate how this would translate into national food security, nutrition, and broad based economic growth.	The Irrigation Department to consistently highlight quantifiable national food security, nutrition, and income benefits for investments/ use of irrigable lands in Malawi as part of the campaigns to sustain political support towards the sub-sector.	Ministry of Agriculture, Irrigation and Water Development.
The Green Belt Initiative	Implementation dependent upon political will of the Government in office.	Effectiveness: Absence of returns to investment analyses to support the Initiative.	Investment analyses calculate the investment requirements.	Office of President and Cabinet; Ministry of Agriculture, Irrigation & Water Development.
	High investment requirements combined with minimal, if any, returns to investment analyses.		Risk minimization strategies associated with large scale investments need to be elaborated.	Office of President and Cabinet; Ministry of Agriculture, Irrigation & Water Development.
National Environmental Policy, 2004	Though recognizing the role of water for agriculture purposes, it does not envisage high level investment that would attain multiple objectives such as multipurpose dams for agriculture, energy and other related services.	Effectiveness: The oversight on part of the policy framers of the need for multipurpose water investments is simply a capacity challenge issue which has been addressed over time.	The revised Environment Management Policy is expected to take such issues into account; Recognition of high cost water investments with significant environmental impacts can help strengthen the cause for the Policy implementation.	Ministry of Natural Resources, Energy and Mining.

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
	Weak policy implementation and political will towards environmental management issues.	Governance: Limited political will towards environmental management issues is affecting implementation of a highly ambitious developed policy framework.	Raise awareness of politicians and population of the environmental and socio- economic benefits of environmental management activities.	Ministry of Natural Resources, Energy and Mining; Civil Society involved in environmental affairs.
	Low political will affecting intergovernmental collaboration, as already recognized in the policy.	Governance: There is laxity on the part of the responsible Ministry which hopes for mainstreaming of environmental issues in different sectors with minimal awareness raising. Others: Limited funding for environmental activities.	The responsible Ministry to mobilize adequate resources to help achieve its cause.	Ministry of Natural Resources, Energy and Mining.
National Energy Policy, 2003	Does not envisage inter-ministerial or inter-sectoral synergies in terms of energy generation sources e.g. electricity generation and water sector (including agricultural water).	Governance: Low political will to affect inter-sectoral coordination of developmental sectors.	Ensure coordination of Energy & Environmental and Natural Resource management activities as is the case with the Shire River Basin Management programme which is a multi-sectoral investment programme with multiple investments and benefits.	Ministry of Natural Resources, Energy and Mining.
	Conflicting interests/demands for use of water by sectors not adequately addressed by the policy.	Others: Limited investments in multi-purpose water programmes coupled with inefficient use of energy supplies.	Invest in multi-purpose hydro-power energy production facilities.	Ministry of Natural Resources, Energy and Mining.
	The policy does not specify the use of water whether for			

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
	energy or others.			
	Policy implementation requires significant amount of financial resources and technical know-how for investments.	<p>Governance: Limited political commitment to investments in sector.</p> <p>Others: Limited provision of financial resources for development of hydro-power projects.</p>	Strengthen evidenced based advocacy activities for the energy and related sectors.	Ministry of Natural Resources, Energy and Mining.
National Food Security Policy, 2006	Does not relate the different water resource uses, i.e. for agriculture, hydropower or domestic use.	Others: Deliberate policy of having scope of developmental policy objectives in the name of being focused.	Responsible authorities to have a broader policy perspectives which form a premise for inter-sectoral coordination to achieve optimal results.	Ministry of Agriculture, Irrigation and Water Development.
	Does not recognize the role of agricultural activities in pollution of water sources.	“ “	“ “	
National Nutrition Policy and Strategic Plan, 2009	Limited policy clarity on specific on the required good agricultural practices and investments to achieve nutritional objectives.	Effectiveness: The responsible Department which developed the Policy & Strategic Plan did not have competences to include critical agricultural investment information.	The revised policy and strategic plan should be able to provide critical suggestions on how the different sectors and sub-sectors are to make investment to achieve the desired nutritional outcomes.	Department of HIV & AIDS and Nutrition.
	Does not recognize the multiple water resource uses.	Others: This is possibly a reflection of technical oversight on the part of the policy formulators.	There is need for the policy formulators to recognize the limitations/challenges faced by the different sectors (including competing water resource use) who are partners to the policy	

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
			agenda.	
	Too diverse set of interventions to achieve nutritional objectives.	Others: The responsible department was ambitious to raise the profile of nutrition agenda hence attempted to bring on board a diversity of issues.	The revised policy and strategy should be focused based on the implementation experience of this framework.	The same as above.
Crop Production Policy, undated	The policy does not link with the national livestock policy objectives; Fails to realize the role of markets in attainment of crop productivity.	Others: The policy, like others, suffers from narrow focus approach that assumes that linkages with other sectors are automatic and need not be deliberately promoted.	The policy makers of the Ministry to ensure that departments within the same ministry formulate policies that would promote integrated interventions rather than individualistic approaches.	Ministry of Agriculture, Irrigation and Water Development.
	Low adoption of high yield technologies by farmers due to a number of policy & institutional factors such as access to credit.	Effectiveness: This challenge is a reflection of ineffectiveness of the current production oriented approach which ignores the commodity value chain requirements.	The value chain approach whose benefits are well known needs to be integrated in all agricultural development frameworks, particularly the one relating to crop production sub-sector.	Ministry of Agriculture, Irrigation and Water Development.
National Fisheries and Aquaculture Policy, 2001	Does not clearly provide mechanisms through which fisheries stakeholders (including those from other sectors) engage with each other at various levels.	Others: The policy focus that leaves out other stakeholders is a reflection of individualist approach to development.	The policy managers in the Ministry to ensure that sectoral policies are not coherent with each other but have deliberate commitments towards supporting each other during implementation.	Ministry of Agriculture, Irrigation and Water Development.
	Does not relate fish farming to other forms of agricultural farming (e.g. through multi-	”	”	Ministry of Agriculture, Irrigation and Water Development.

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
	purpose dams development)			
	Poor communication systems between farmers and the extension workers.	Effectiveness: Poor communication is usually a capacity challenge which could be addressed through close inter-sectoral collaboration which has been left out in the policy.	A revised policy and strategy should be able to address such apparent shortcomings.	Ministry of Agriculture, Irrigation and Water Development.
	Lack of incentives/ award for good work lead to low staff morale hence engagement in corrupt activities	Governance: The low staff morale challenge is national problem which only the highest policy makers can help to reverse through tangible public sector policy reforms	The new Public Sector reforms, including the new salaries, may help to boost staff morale challenges	Ministry of Agriculture, Irrigation and Water Development
National Aquaculture Strategic Plan, 2005	Little linkage with other related sectoral development policies and strategies, save for references to the National Fisheries and Aquaculture Policy and Fisheries Act.	Governance: Just as indicated before, this individualistic approach is a reflection of lack political will towards inter-sectoral coordination of developmental initiatives.	The responsible department & ministry need to learn from the process of mainstreaming cross cutting issues such as gender, HIV and AIDS, climate change in the different sectors.	Ministry of Agriculture, Irrigation and Water Development.
	Not explicit on multi purposes water investment such as dams for aquaculture development- since the focus is on small holder farmers.	Others: This is possibly are reflection that aquaculture development is considered purely a smallholder farmer issue hence no need for inclusion of large multi-purpose dams.	The Ministry to reconsider the smallholder participation and integration into mutli-purpose dams development and use so that such investments are seen to benefit smallholder farmer populations.	Ministry of Agriculture, Irrigation and Water Development.
National Climate Change Investment	Weak enforcement of environmental legislation and	Governance: non prohibitive punitive measures for those found guilty in breaking	The responsible Ministry to hold consultative meetings with the Judiciary and other law	Ministry of Natural Resources, Energy and

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
Plan, 2013 - 2018	laws.	environmental laws.	enforcement agencies on interpretation and enforcement of laws relating to natural resource and environmental management processes.	Mining; Ministry of Justice;
	Poor incentives and low capacity staff to make the sector more attractive for investment.	Others: The responsible Ministry has limited capacity building drive resulting in inadequate technical capacity levels even for critical positions.	The responsible Ministry needs to work on capacity requirements to have specialists who can provide compelling empirical evidence to support investments in the sector.	Ministry of Natural Resources, Energy and Mining.
National Livestock Development Plan & Strategy, 2003	The Strategy does make clear reference to or linking with the crop and irrigation sectors despite the important roles played by these two to realization of its objectives.	Governance: The belief that since technical departments have to work out mechanisms for achieving its objectives without or with minimal support from outside.	Policy direction on the need for inter sectoral policy coherence and inter linkages can help address the endemic policy disjointedness challenge.	Ministry of Agriculture, Irrigation and Water Development, DAHLD in particular.
	Though limited private sector participation in livestock sector is recognized, the Strategy is not clear on how it can achieve a turn-around resulting in a private sector lead livestock industry development.	Effectiveness: The traditional productionist approach characterizes the policy makers approach to livestock development. However, with limited financial resources challenges the approach is now changing.	The responsible department needs to develop elaborate private sector development mechanisms while leaving the department to focus more on policy and legal framework development, enforcement and review.	Ministry of Agriculture, Irrigation and Water Development, DAHLD in particular.
New Agriculture Extension Policy, 2000	Low small holder farmers' demand for extension services (e.g. on agricultural water investments) due to being used to old training and visit	Effectiveness: high levels of illiteracy amongst the smallholder farmers which makes the need to timely demand agricultural extension services	Review the policy to identify the famers who can demand and be provided with demand driven extension services as envisaged in the policy, while others may still	Ministry of Agriculture, Irrigation and Water Development

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
	extension approaches.	more important.	be reached on approaches.	
	Limited number of extension service providers, besides the Government extension system, more especially in remote rural areas.	Effectiveness: Low income levels amongst farmers imply that they cannot pay for private sector agricultural extension services.	Continue with the current ASWAp approach of supporting civil society organizations to provide agricultural extension services to farmers on behalf of government.	Ministry of Agriculture, Irrigation and Water Development.
National Export Strategy, 2013	The policy outlines a broad set of multi-sectoral investment requirements for realization of its objectives; hence the difficulty is to pinpoint the specific factors that could drive a viable export led growth.	Effectiveness: By being so inclusive, the policy seeks to effect structural changes in the national economy (removal of all supply side constraints) that would enable the country to effectively participate in the regional and global export market.	Implementation of the policy demands high level of political will.	Ministry of Industry and Trade.
	A number of factors recognized as critical for export led growth are outside the domain of the responsible lead ministry- e.g. stable economic environment.	Governance: The responsible Ministry assumes that it has capacity to follow up with each of the different institutions to implement what has been identified as critical for export sector development.		
National Land Policy, 2002	The policy has not effectively addressed the concerns of corruption instances on land distribution issues especially involving foreign individuals.	Governance: Low political will to address the land allocation. Other: Inadequate data on land resources distribution across the country.	Civil society involvement in land affairs; Capacitation of the media to correctly report on land matters.	Ministry of Lands, Housing and Urban Development Civil Society Media Houses

Step 3.3: Action Matrix for Policy Framework				
Policy Goal/Mission	Associated problems	Reasons behind (governance, effectiveness, others)	Proposed action(s)	Responsible
	In spite of having an elaborate National Land Policy, there are several reported cases of irrigation development initiatives being negatively affected by land disputes	Governance: No political will to address land disputes most of which have some form of political support.		
National Decentralization Policy, 1998	Inadequate enforcement of legal provisions that would support the decentralization processes, e.g. capacity building at local council levels to effective the local citizenry developmental affairs.	Governance: Some policy makers at Capitol Hill have not fully bought into the concept of decentralization hence sometime make decisions that go contrary to the decentralization agenda.	Capacitation of local councils to review and make suggestions for improvement of the current policy and legal framework governing the decentralization process; Capacitation of the media to correctly report on decentralization issues.	Ministry of Local Government and Rural Development; Media houses
	Ineffective or unclear regulations guiding the decentralization policy implementation processes.	Governance: Low political will towards support to the decentralization process.	"	"

Conclusions

According to Table 4.3, there is need for effective stakeholder participation and capacity building to stimulate active cooperation in the various policy frameworks. Stakeholder support is critical for resource mobilization for the AWM sector since Malawi is characterized by competing national investment needs. In addition, projects within AWM tend to demand high amounts of financial resources (such as resources for multi-purpose dams) which makes it more important to actively involve politicians into the decision-making process of AWM projects. Capacity building amongst policy makers is also required to appreciate the relevance of policy stability and instability.

Table 4.3 also shows that some of the policy targets are ambitious, hence challenging to achieve (such as those in Vision 2020). The corrective action is to have realistic policy aspirations supported by effective implementation strategies. In addition, some policy frameworks lack strategic plans, which hinder the actual implementation (Ministry of Natural Resources, Energy & Mining, State of Environment Report 2012).

Furthermore, an insufficient number of policy frameworks recognize, refer to and indicate implementation synergies with other related policy sectoral frameworks. In fact, it's the policy incoherence that translates into the incoherence of legal frameworks resulting in poor service delivery, ultimately translating into low investment in the agricultural water and energy sectors, hence low national economic growth and development. This implies that effective development of the agricultural water and energy industry in Malawi would require some form of multi-sectoral support as has been the case with other issues that have appeared multi-sectoral such as: HIV and AIDS, gender mainstreaming, climate change, public sector reforms.

STEP 4: INSTITUTIONAL AND POLICY INDICATORS

This analysis reviews the government and development partners' commitments to the agricultural water and energy sectors in Malawi by analyzing the budgetary allocations to these sectors. This analysis is conducted at two levels:

4.1 Strategic priorities and political commitment of government and development partners

Analyses of strategic priorities and political commitment of the Malawi Government and development partners towards the two sectors were conducted through an analysis of the 2013/14 and 2014/15 budgets. The indicators to show the public and donor investment priorities and commitment to water management for agriculture are: i) irrigation projects budget in agricultural public budget; ii) irrigation projects budget in total public budget; and iii) irrigation projects budget in total donor budget (IDB).

4.2 Efficiency of the public spending in the irrigation and hydropower sector

This aspect of commitment analysis examines the level of decentralization and participation in both sectors as well as the timely utilization of budgetary appropriations as a measure of efficiency of governance and the credibility of public budget. Table 5.1 shows all these indicators for which values would have to be assigned.

Table 5.1: Institutional and Policy Indicators

Institutional and Policy Indicators			
Dimensions	Sub-dimensions and indicators	Values	Values
		2013/14 FY	2014/15 FY
		MK (millions)	MK (millions)
Strategic priorities and political commitment of government and donors	Total Public Budget	638 151.00	742 753.00
	Total Agricultural Budget	135 471.00	140 666.00
	In-Total Donor Budget (IDB)	240 313.00	175 010.00
	Total Irrigation projects budget	12 933.00	22 538.71
	Irrigation projects budget in total public budget (%)	2.03	3.03
	Irrigation projects budget in total agricultural budget (%)	9.55	16.02
	Irrigation projects budget in total donor budget (IDB) (%)	5.38	12.88
	2.1. Decentralization and participation		
Efficiency of the public spending in the irrigation sector	Total public spending in irrigation by Central government units (MK' million)	12 625.00	22 222.71
	Share of public spending in irrigation by Central government units (%)	97.62	98.60
	Total public spending in irrigation by ADDs (Regional Agric-offices) (MK' million)	224.00	224.00
	Share of public spending in irrigation by County Government units (%)	1.73	0.99
	Total public spending in irrigation by districts (Local Councils) (MK' million)	84.00	92.00
	Share of public spending in irrigation by districts (Local Councils) (%)	0.65	0.41
		2.2. Timely utilization of budgetary appropriations	
	Share of actual spending on planned public spending for irrigation projects	177% ²	
Spending in Hydropower energy	Total Public Budget	638 151.00	742 753.00
	In-Total Donor Budget (IDB)	240 313.00	175 010.00
	Total hydropower projects budget	9 665.00	18 059.00

² Utilization is 177%, largely due to the EU funding which was not budgeted for.

Institutional and Policy Indicators			
Dimensions	Sub-dimensions and indicators	Values	
		2013/14 FY	2014/15 FY
		MK (millions)	MK (millions)
	Total domestic hydropower projects budget	800.00	170.00
	Total donor hydropower projects budget	8 865.00	17 889.00
	Total hydropower projects budget in total public budget (%)	1.51	2.43
	Hydropower projects budget in total donor budget (IDB) (%)	4.02	10.32
	Total domestic hydropower projects budget as a share of the total hydropower budget (%)	8.28	0.94
	Total donor hydropower projects budget as a share of the total hydropower budget (%)	91.72	99.06

Source: computed from Ministry of Finance, Economic Planning & Development, Draft 2014/15 Financial Statement, Budget Document No.3

Table 5.1 shows increased budgetary allocations towards the irrigation sector in 2014/15 compared to 2013/14. The high shares of expenditures at national level compared to district level is attributable to the fact that the major irrigation projects/investments are budgeted at national levels, and coordinated therefrom. The same can be said about hydropower projects which are centrally coordinated hence they do not appear in regional and district budget allocations. Table 5.1 also shows that budgetary allocations to hydropower projects are increasing mainly because of development partners contributions (e.g. the USA Millennium Challenge Account for power generation).

STEP 5 - CONCLUSIONS AND IMPLICATIONS FOR POLICY

This study has analyzed the extent of national commitment towards investments in the agricultural water and energy sectors in Malawi in the institutional, legal and policy frameworks.

1. The study finds that national and international drive to promote agricultural water and energy sector development has the necessary supportive policy and legal framework in Malawi. This is evidenced by the fact that the sector is being governed and guided by national policy frameworks which are usually supported by legal frameworks. For instance, the Irrigation Policy is supported by an Irrigation Act, 2001; and National Water Policy is supported by the National Water Resources Act ,2012; the energy policy has an

Energy Act; the Environmental Management Plan has the Environmental Management Act, 1996 which is being revised into a new Bill; just to mention a few;

2. National policy and strategic frameworks are usually accompanied by targets which implementing institutions seek to achieve. However, some national policy and strategic frameworks do not have such elaborate, achievable targets and milestones (even those in the area of agricultural water development); which makes it difficult to evaluate policy ex-post. As for the policy and strategic frameworks that do include targets, many are not achieved. This lack or failure to achieve of targets results in a deficiency of significant corrective policy actions and has implications for the responsible policy managers;
3. The Malawi Government is facing challenges of low funding levels due to withdrawal of donors funding (about US\$600 million/year, almost 10 percent of the country's GDP). This has serious implications for the implementation of AWM interventions. The Government and stakeholders should explore other investment opportunities in AWM that could bring about a turnaround in the national economy. The exploration of investment opportunities should be guided by in-depth economic analyses that generate tangible investment returns of each of the conceived investment projects /opportunities. In relation to the above, the budgetary constraints should steer the Government to enforce the rarely implemented fiscal disciplinary measures to public water institutions such as Water Boards, which have capacity to generate adequate revenues to finance AWM developmental initiatives in form of multipurpose dams which can be used for both agricultural development and energy generation purposes;
4. The concept of multi-purpose dams is well known in Malawi amongst policy makers as well as national stakeholders. However, the current investment in this sector is low because multi-purpose dams require high financial investments. Consequently, the country has small multi-purpose dams with limited scope that only provide for domestic and industrial water use and some minimal agriculture production purposes excluding energy generation. The limited national budget constraint strengthens the need for the AWM development agenda to be fully supported by sound economic analyses that demonstrate clear quantifiable national and local economic benefits of such investments;
5. It can be observed that, although the Malawi Government has been promoting AWM investments, promotional efforts have produced minimal outcomes due to incomplete or unsystematic efforts analyzing upstream value chain development opportunities. This means that besides the national growth and equity outcomes alluded to earlier on, effective agricultural water and energy investment proposals should clearly indicate the benefits to all actors along the value chain;
6. There are strong links between institutions, policy and legal frameworks to the extent that a weakness in one likely leads to failures in other aspects of the system. Strong institutions develop and enforce effective policy and legal frameworks, which in turn, provide the political and legal support for the operations of the institutions. This means that if national efforts to promote AWM investments are to yield optimal national

medium to long welfare benefits, such efforts have to jointly consider all the three related aspects; i.e., whether the sector has strong institutions that can enforce the available policy and legal instruments, and whether the policy frameworks are robust enough to be considered legitimate;

7. The challenge of low political will is evidenced by the fact that a number of policy, legal and institutional frameworks that have been proposed in the past, especially in the areas of irrigation development, environment, natural resource management, and climate change adaptation and mitigation, have either been partially implemented or not implemented at all. This confirms the need to operationalize the Malawi Irrigation Board under Irrigation Act, 2001; the setting up of the National Environmental Management Agency under the Environmental Management Act, 1996 and the National Forest Development and Management Fund under Forest Act, 1996, amongst others;
8. Different analyses suggest several other institutional arrangements that could foster AWM. The suggested institutional arrangements include the Water Resources Research Institute, as proposed by Ngo'ngola (1999), the Catchment Management Authority, the Malawi Commission on Climate Change, amongst others. Stakeholders and the Malawi Government have the responsibility to ensure that such institutions are put in place;
9. Some legal and policy frameworks such as the Forest Act 1996 are outdated and have minimal relevance. The penalties are too low to ensure enforcement of the law. While new or revised policy and legal instruments have been proposed, the delays in finalizing such instruments are an indication that the country is slow in responding to the changing socio-economic environment. This is detrimental to Malawi's AWM agenda and national economic growth in general;
10. The analysis reveals that most institutions are caught up in a vicious cycle of ineffectiveness, characterized by low political will due to inadequate and insufficient compelling empirical evidence, inadequate human and technical capacity to generate the required information, low financing due to inability to convince those with resources which in itself is also due to limited technical capacities, and inadequate stakeholder support due to the same limited compelling information. During the validation workshop it was discussed that the only way to escape this vicious cycle of ineffectiveness is to mobilize more resources, however this is inherent in this vicious cycle;
11. Institutional collaboration in Malawi is usually defined in terms of inter-ministerial supervisory structures in form of Sector Working Groups, Technical Working Groups, Steering Committees, amongst others. While these structures, where operational, do provide interdisciplinary inputs into the technical operations of the different projects, programmes and departmental activities, they tend to die naturally even before their term of office expires. Even when an inter-ministerial management committee is operational, this does not automatically translate into collaborative inter-ministerial implementation of developmental activities at the grassroots levels. Hence the inefficiencies in law and policy enforcement, which are exasperated by pervasive low

human capacity. For instance, the Forestry Act (1996) which provides the legal background of the Village Resource Management Committees (VRMCs), mandates merely the police and forestry officers to confiscate illegally obtained forest products. Whereas fisheries offices, parks and wildlife officers, agriculture extension staff, land resource officers, livestock /veterinary assistants, can ably assist - if trained – in such forest management activities.

12. The AWM agenda, needs the full multi-sectoral stakeholder support of all developmental stakeholders in the country and beyond, as in other current multi-sectoral issues such as HIV/AIDS, climate change, environmental impacts assessments, gender equality, disaster risk management, national tree planting season, public sector reforms, financial management, public procurement, amongst others. This, therefore, calls for an effective *packaging of the AWM agenda as a multi-sectoral issue with a wide range of national benefits to the national economy*, and not just an agricultural or water sector issue.
13. Another point raised during the validation workshop was that farmers should become independent of subsidies on seeds and fertilizer. ‘Subsidies should be gradually phased out after some time, but farmers expect these subsidies to increase, that’s not the purpose of subsidies’ according to a representative of the Ministry of Irrigation and Water Development. This so called ‘dependency syndrome’ is a cause for reluctance to invest for farmers.
14. Main issue raised during the validation workshop was the lack of investment in O&M. The government expects the farmers to be responsible for investment in O&M for secondary and tertiary irrigation canals. But farmers claim that they do not have sufficient funds to be responsible for this. A solution could be to install an investment fund where farmers can apply for funding to invest in O&M.

5.1 Final Action Matrix

Based on the information provided in steps 3.1 to 3.3, a synthesized Action Matrix is presented below in Table 6.1:

Table 6.1: Final Action Matrix

Step 5.1 Final Action Matrix	
Responsible Institution	Proposed Action(s)
Parliamentary Committee on Agriculture & Natural Resources	<ol style="list-style-type: none"> 1. Continue with provision of political leadership over policy development and implementation; 2. Ensure evidence-based political support for policy and programmatic interventions.
Office of the President and Cabinet	<ol style="list-style-type: none"> 1. Improved leadership that promotes inter-ministerial coordination of policy and pragmatic issues, including those involving agricultural water & energy issues; 2. Continue with public sector reforms resulting in results based

Step 5.1 Final Action Matrix	
Responsible Institution	Proposed Action(s)
	management approach that would help increase public sector morale and performance.
Ministry of Finance, Economic Planning & Development	<ol style="list-style-type: none"> 1. Ensure funding for sectors or sub-sectors with high potential for contribution to broad based economic development; 2. Capacity building for sectors to develop compelling project proposals for inclusion in the Public Sector Investment Programme (PSIP); 3. Only fund programmes that are included in the PSIP- which are also based on contribution to national growth & development.
Ministry of Agriculture, Irrigation and Water Development	<ol style="list-style-type: none"> 1. Generate sustainable political will for the AWM & energy sectors based on empirical evidence of the importance of irrigation; e.g. analyses showing the national economic growth due to a 1 % increase in agricultural water investments; or poverty reduced due to a 1 % increase in agricultural water or energy sector growth rates; 2. Increased inter-sectoral collaboration with relevant sectoral ministries in the design and implementation of policy and programmatic frameworks (as the case with the ASWAp arrangement model).
Ministry of Natural Resources, Energy and Mining	<ol style="list-style-type: none"> 1. Inter-sectoral collaboration with relevant ministries/ departments on natural resource management; 2. Continue with revision of policies and legal frameworks to improve on natural resource management; 3. Increased resource mobilization for the sector.
Ministry of Lands, Housing and Urban Development	<ol style="list-style-type: none"> 1. Strengthen capacity to deal with land disputes that hinders investment in agriculture; 2. Enhance land allocations for the agricultural water investments.
Ministry of Local Government and Rural Development	<ol style="list-style-type: none"> 1. Continued facilitation of sectoral decentralization to enable citizens' participation in developmental activities including the agricultural water sector; 2. Increase resource mobilization for district/local level development of the rural areas.
Water Resources Board now National Water Resources Authority	<ol style="list-style-type: none"> 1. Lobby for full operationalization of the Authority; 2. Ensure collaboration with other institutions such as MERA in water and energy sector development issues.
Water Boards (Northern, Lilongwe, Central Region, Blantyre, Southern Region)	<ol style="list-style-type: none"> 1. Increase scope of investments to include agricultural water and energy sector needs; 2. Ensure prudent resource management to generate financial resources for expansion of scope of investments to include agricultural water & energy needs as part of the Water Board services.
Water Users Association (WUAs)	<ol style="list-style-type: none"> 1. Human, financial and technical capacity building for the WUAs to enable them effectively engages in water management services.

References

Government of Malawi, Government Gazette supplement, 23rd September, 2012. *Cotton Act*, 2012.

Government of Malawi, *Water Resources Act*, 2012.

Government of Malawi, Act No. 20 of 2004. *Energy Regulation Act*, 2004.

Government of Malawi, Act No. 16 of 2001, *Irrigation Act*, 2001.

Government of Malawi, Act No. 42 of 1998, *Decentralization Act*, 1998.

Government of Malawi, Act No. 11 of 1997, *Forestry Act*, 1997.

Government of Malawi, *Environment Management Act*, 1996.

Government of Malawi, Act No.17 of 1995. *Waterworks Act*, 1995.

Government of Malawi, *The Malawi Constitution*, 1995.

Ministry of Agriculture, Irrigation and Water Development, 2011. *The Agriculture Sector Wide Approach: Malawi's Prioritized and Harmonized Development Agenda*. Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, 2011. *Malawi Sector Performance Report: Irrigation, Water and Sanitation*, June 2012, Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, 2009. *The Green Belt Initiative*, Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, 2006. *Food Security Policy*. Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, Department of Fisheries, 2005. *National Aquaculture Strategic Plan (NASP)*, Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, 2005. *National Water Policy*, Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, Department of Animal Health and Livestock Development, 2004. *Policy Document on Livestock Development in Malawi*. Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, Department of Fisheries, 2001. *National Fisheries and Aquaculture Policy*, Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, Department of Agricultural Extension Services, 2000. *Agricultural Extension in New Millennium: Towards Pluralistic and Demand Driven Services in Malawi*. Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, Department of Irrigation, *National Irrigation Policy*, 2000. Lilongwe.

Ministry of Agriculture, Irrigation and Water Development, undated. *Crop Production Policy*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2014. *Annual Economic Report, Budget Document No.2*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2014. *Draft 2014/15 Financial Statement, Budget Document No.3*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2012/13. *Draft Estimates of Expenditures on Recurrent and Capital Budget for the Financial Year 2012/13. Output Based. Budget Document No. 5*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2012. *Malawi Growth and Development Strategy 2*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2012. *Annual Economic Report, Budget Document No.2*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2010/11. *Draft Estimates of Expenditures on the Recurrent and Capital Budget for the 2010/11. Output Based. Budget Document No. 5*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2011. National Climate Change Programme. *Training Needs Assessment for Climate Change Management Structures in Malawi*, Lilongwe.

Ministry of Finance, Economic Planning and Development, 2010. *Annual Economic Report, Budget Document No.2*, Lilongwe.

Ministry of Industry and Trade, 2013. *National Export Strategy*, Lilongwe.

Ministry of Natural Resources, Energy and Mining, 2013. *National Climate Change Investment Plan: 2013-18*, Lilongwe.

Ministry of Natural Resources, Energy and Mining, 2010. *State of Environment and Outlook Report: Environment for Sustainable Economic Growth*, Lilongwe.

Ministry of Natural Resources, Energy and Mining, 2006. Department of Environmental Affairs, *National Environmental Action Plan*. Lilongwe.

Ministry of Natural Resources, Energy and Mining, 2003. *National Energy Policy*, Lilongwe.

Ministry of Natural Resources, Energy and Mining, 1997. *The National Environmental Management Policy*, Lilongwe.

Ministry of Natural Resources, Energy and Mining, Department of Forestry, 1996. *National Forestry Policy of Malawi*, Lilongwe.

Ministry of Local Government and Rural Development, 1998. *National Decentralization Policy*, Lilongwe.

Ministry of Lands, Housing and Urban Development, 2002. *National Land Policy*. Lilongwe.

National Economic Council of Malawi, 2000. *Vision 2020: The National Long Term Development Perspective for Malawi*, Lilongwe.

Ng'ong'ola, D.H., 1999. *Policies Influencing Patterns of Use of Water Resources in Malawi*. A study Report submitted to Ministry of Water Development. Unpublished.

Office of the President and Cabinet, 2009. Department of HIV and AIDS and Nutrition. *National Nutrition Policy and Strategy*, Lilongwe.

Annex

List of People Consulted during the Study

Mr Daisi Kachingwe, CAADP National Focal Point, Lilongwe.

Mr Tinkho Mpezeni- Irrigation Engineer, Department of Irrigation, Mzuzu ADD.

Mr Nations Msowoya, Ministry of Finance, Economic Planning & Development.

Mr Frank Kamanga, Office of the President and Cabinet, Organizational Performance Unit.

Members of the National Sub- Committee for Partnership for Agricultural Water Technical Cooperation Project.