



Strategic Plan 2017 - 2021

Zambia's Waters, Our Future!



**Water Resources
Management
Authority**

August 2018

Strategic Plan 2017 - 2021

Published by

Water Resources Management Authority
Plot No. 4186, Addis Ababa Drive
P.O. Box 51059, Lusaka, Zambia
Tel: +260 211 251 934
Email: info@warma.org.zm
Website: www.warma.org.zm

© Text and Pictures 2018 WARMA
Any reproduction in full or in part
must mention the title and credit
the above-mentioned publisher
as the copyright owner.



**Water Resources
Management
Authority**



Foreword

Zambia is a country with a high water per capita with the renewable water resources per capita being estimated at about 8,700m³ per capita per year. Over the years, the government of Zambia has made significant progress in increasing access to safe drinking water and water allocation to all sectors of the economy, however despite this effort, the country still experiences low water utilisation for economic growth and wealth creation.

This plan identifies strategies to significantly improve water resources management, development and utilisation, and to accelerate the attainment of the National Vision 2030 aspirations and the Sustainable Development Goals. While the plan recognizes that all interventions to improve water resources availability and access are important and should continue to receive support; it also recognizes that interventions must be prioritised due to the constraints on available resources and capabilities.

The plan therefore focuses on integrated water resources management (IWRM) as the main vehicle of service delivery; addressing water resources assessment; resolving the human resource requirements; and ensuring that priority activities and services receive the necessary support. This Water Resources Management Authority (WARMA) Strategic Plan (WARMASP) envisions a prosperous country where water resources are sustainably managed, developed and utilised, and all Zambians have access to safe potable water. The Government of Zambia is committed to sustaining the gains made in the past seven years, and to fully operationalising WARMA in all the six catchments and improving the quality of services provided to our people. This plan identifies strategies which will ensure that people of Zambia have access to water of acceptable quality and quantity for various uses and are able to contribute to economic development. The Seventh National Development Plan (2017 to 2021) and the National Vision 2030 prioritise water resources as a key economic investment that will drive our socio-economic development agenda.

The WARMA Strategic Plan 2017-2021 has a transformative agenda which focuses on fully operationalising and ensuring that WARMA delivers on its mandate which is: *"to promote and adopt a dynamic, gender-sensitive, integrated, interactive, participatory and multi-sectorial approach to water resources management and development that includes human, land, environmental and socio-economic considerations, especially poverty reduction and the elimination of water borne diseases, including malaria"*.

The plan focuses on five strategic directions, namely, institutional and human resources development; legal and regulatory framework; service delivery; financial sustainability of WARMA; and the national water resources strategy and plan. The attainment of fully integrated and sustainable water resource management as envisaged in Vision 2030 requires that the above stated strategic paths are undertaken while consistently building on the principles of integrated water resources management.

By implementing this strategic plan, the country will have in place an effective, motivated and self-sustaining WARMA that delivers on its mandate and significantly contributes to a

diversified and resilient economy for sustained growth and socio- economic transformation driven by, among others, agriculture, hydropower, tourism and mining. It is my considered view that, with appropriate levels of commitment and support from the Government, Cooperating Partners, WARMA staff and other key stakeholders, this plan will significantly improve the management and development of water resources in Zambia and significantly contribute to national development. I, therefore, urge all the people involved in the implementation of this plan to fully dedicate themselves to this important national assignment. My Ministry of Water Development, Sanitation and Environmental Protection is equally committed to ensuring its successful implementation.

Abbreviations and Acronyms

ADB	:	African Development Bank
AIDS	:	Acquired Immuno-Deficiency Syndrome
CICOS	:	International Commission of Congo-Oubangui-Sangha
CU	:	Commercial Utility
DWA	:	Department of Water Affairs
FNDP	:	Fifth National Development Plan
EAT	:	External Assessment Tool
GDP	:	Gross Domestic Product
GIS	:	Geographic Information System
GIZ	:	Deutsche Gesellschaft für Internationale Zusammenarbeit, GmbH
GNI	:	Gross National Income
GmbH	:	Type of legal entity very common in Germany
GRZ	:	Government of the Republic of Zambia
HIV	:	Human Immuno-deficiency Virus
ICT	:	Information Communication Technology
IWRM	:	Integrated Water Resources Management
IWRMIS	:	Integrated Water Resources Management Information System
IWRM-WE	:	Integrated Water Resources Management Water Efficiency
ISAT	:	Institutional Self-Assessment Tool
JWSR	:	Joint Annual Water Sector Review
KfW	:	Kreditanstalt für Wiederaufbau (German Government-owned Development Bank, based in Frankfurt)
KPI	:	Key Performance Indicators
M&E	:	Monitoring and Evaluation
MDG	:	Millennium Development Goal
MWDSEP	:	Ministry of Water Development, Sanitation & Environmental Protection
MLGH	:	Ministry of Local Government and Housing
M&E	:	Monitoring and Evaluation
MMEWD	:	Ministry of Mines, Energy and Water Development
NGO	:	Non-Governmental Organisation
NWASCO	:	National Water Supply and Sanitation Council
NWRSP	:	National Water Resources Strategy and Plan
NLTV	:	National Long-Term Vision 2030

PCM	:	Project Cycle Management
RBO	:	River Basin Organization
R-SNDP	:	Revised Sixth National Development Plan
SDG	:	Sustainable Development Goal
SADC	:	Southern African Development Community
SI	:	Statutory Instrument
SNDP	:	Sixth National Development Plan
TNC	:	The Nature Conservancy
7NDP	:	Seventh National Development Plan
UNCSD	:	United Nations Conference on Sustainable Development
WARMA	:	Water Resources Management Authority
WRAP	:	Water Resources Action Programme
WRID	:	Water Resources Infrastructure Development
WRM	:	Water Resources Management
WRSP	:	Water Resources Strategic Plan
WSS	:	Water Supply and Sanitation
WUA	:	Water Users Association
WWF	:	Worldwide Fund for Nature
UNAIDS	:	United Nations Programme on HIV/AIDS
ZAMCOM	:	Zambezi Watercourse Commission
ZRA	:	Zambezi River Authority
ZNFU	:	Zambia National Farmers Union

Table of Content

ABBREVIATIONS AND ACRONYMS	iii
EXECUTIVE SUMMARY	vi
1.0 INTRODUCTION	1
2.0 METHODOLOGY	2
3.0 GLOBAL CONTEXT	3
3.1 SUSTAINABLE DEVELOPMENT GOALS	5
3.2 WATER LEGISLATION AND INTERNATIONAL TREATIES	5
4.0 DOMESTIC CONTEXT	7
4.1 ZAMBIA WATER SECTOR REFORMS	7
4.2 LINKAGES AND ALIGNMENT WITH NATIONAL EFFORTS	10
4.3 REVISED NATIONAL WATER POLICY (2010)	10
4.4 NATIONAL LONG-TERM VISION 2030 (VISION 2030)	10
4.5 SEVENTH NATIONAL DEVELOPMENT PLAN, 2017-2021	10
4.6 IWRM AND WATER EFFICIENCY PLAN	11
4.7 SOCIO-ECONOMIC ISSUES	11
4.8 WARMA'S MANDATE AND ORGANISATIONAL STRUCTURE	12
4.9 COORDINATION AND OPERATIONAL LINKAGES	14
4.10 WARMA STRATEGIC PLAN CONTEXT	14
4.11 STAKEHOLDER ANALYSIS	16
4.12 INTERNAL FACTORS ANALYSIS	17
4.13 STAKEHOLDER ANALYSIS	18
5.0 MISSION, VISION, DEVELOPMENTAL GOAL AND VALUE STATEMENTS	21
5.1 MISSION STATEMENT	23
5.2 VISION STATEMENT	23
5.3 DEVELOPMENT GOAL STATEMENT	23
5.4 VALUE STATEMENT	23
6.0 RESULTS FRAMEWORK: STRATEGIC DIRECTIONS	25
6.1 INSTITUTIONAL AND HUMAN RESOURCES DEVELOPMENT	25
6.2 LEGAL AND REGULATORY FRAMEWORK	25
6.3 SERVICE DELIVERY	26
6.4 FINANCIAL SUSTAINABILITY FOR WARMA	26
6.5 NATIONAL WATER RESOURCES STRATEGY AND PLAN (NWRSP)	27
7.0 IMPLEMENTATION ARRANGEMENTS	29
7.1 INSTITUTIONAL FRAMEWORK	29
7.2 LEGAL FRAMEWORK	29
7.3 RESOURCE MOBILISATION	30
7.4 MONITORING AND EVALUATION	30
7.5 RISK ANALYSIS	30
ANNEXES	31
ANNEX 1:STAKEHOLDER ANALYSIS	I
ANNEX 2:RISK ANALYSIS MATRIX	II
ANNEX 3:IMPLEMENTATION, MONITORING AND EVALUATION MATRIX (IMEM)	III

Executive Summary

This Strategic Plan defines the strategic direction of the Water Resources Management Authority (WARMA) for the period 2017-2021. The Plan starts with a presentation of the methodology that was used in its formulation. The procedure included an internal and external evaluation of the implementation of the Inaugural Strategic Plan. The internal evaluation by WARMA staff applied an Institutional Self-Assessment Tool (ISAT), whilst the external appraisal by selected stakeholders used an External Assessment Tool (IEAT). Further to the internal and external assessments, two envisioning workshops were held during which the Mission, Vision, Development Goal and Value statements were formulated. Five strategic directions, associated strategic objectives, intermediate results and indicators were accordingly developed.

The Water Resources Management Authority (WARMA) was established through the Water Resources Management Act No. 21 of 2011. An inaugural Strategic Plan, covering the period 2015 to 2016, was thereafter formulated to operationalise the Authority. Due to the lack of a fully-fledged staff complement, WARMA was initially managed by the Board of Directors, hence, most of the planned activities could not optimally be executed. This current Strategic Plan (2017-2021) builds on the Inaugural Strategic Plan (2015-2016).

In this document, the Methodology is followed by an overview of the global water management initiatives to which Zambia is party, such as the United Nations Conference on Sustainable Development (UNCSD, Rio+20), held in Rio de Janeiro in June, 2012. The UNCED committed State parties to develop a set of Sustainable Development Goals (SDGs) that would build upon the Millennium Development Goals (MDGs) outcomes and thereon converge with the post-2015 Development Agenda Summit of September, 2015. In preparation for the development of Sustainable Development Goals (SDGs), a 30-member Open Working Group (OWG) of the UN General Assembly was established to develop development goals for the post-MDGs. Goal 6 is particularly relevant to this Strategic Plan as it addresses common challenges in the management of national and global water resources. Its targets are as outlined below:

- By 2030, achieve universal and equitable access to safe and affordable drinking water for all;
- By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity;
- By 2030 implement integrated water resources management at all levels, including through trans-boundary cooperation as appropriate; and
- By 2020 protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes;

In addition, Zambia has signed and ratified several international instruments that are directly related to water resources management and use such as:

- The Zambezi River Authority (ZRA), formerly the Federal Power Board up to 1963 and then the Central African Power Corporation (1963 to 1987);
- Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC, 2000);
- Convention on Wetlands, called the Ramsar;
- Convention on the Law of Non-Navigational Uses of International Watercourses, commonly referred to as the UN Watercourses Convention;
- Convention on the Sustainable Management of Lake Tanganyika; and the
- Zambezi Watercourse Commission (ZAMCOM) Agreement of 2004.

A snap-shot analysis of the domestic context shows that Zambia, with a land mass of 752,614 square kilometres, has enormous water and other natural resources. However, water resources are unevenly distributed and calls for their prudent management. There are two main river systems, i.e., the Zambezi and the Congo. The Zambezi River system covers three quarters of the country. It has three sub-river systems, i.e., the Zambezi main, the Kafue and the Luangwa. The Congo River system includes rivers in the northern region, mainly the Chambeshi and Luapula rivers, whilst Lake Tanganyika is a shared water course with Tanzania, DR Congo and Burundi. These catchments await formal delineation, through requisite Statutory Instruments (SIs). Water resources should judiciously be managed in light of emerging challenges such as growing industrial and livelihood demands, increasing demand for energy which requires increased hydro-power generation and the rising demand for agricultural land and food, including cross-border pressures on internationally shared watercourses. To address this challenge, Zambia has initiated implementation, among others, of the Integrated Water Resources Management (IWRM) which is aimed at promoting rational, optimal, sustainable management, protection, conservation and control of water resources. This Strategic Plan is intended to contribute to the attainment of these goals.

Water sector reforms in Zambia, preceded the establishment of WARMA. Key processes included the development of the National Water Policy in 1994, the reorganisation of the sector into two sub-sectors, i.e. the water supply and sanitation sub-sector and the water resources development and management sub-sector. To give legal effect to the reforms, the Water Supply and Sanitation Act of 1997 was enacted which provided for the establishment of the National Water Supply and Sanitation Council (NWASCO) to regulate the provision of water supply and sanitation services through Commercial Water Utility companies (CUs). In order to underscore the vital role that water resources play in poverty eradication and economic development and in acknowledgement of the heightened global awareness of the importance of effective water resource management, Zambia revised the National Water Policy in 2010. The amendment was done with a view to strengthening water resources management through improved institutional coordination and clear institutional and stakeholder roles. Zambia has been party to international agreements such as the 2002 World Summit on Sustainable Development which requires that nations prepare national integrated water resources management and water efficiency plans. Subsequent to the Summit, Zambia developed the IWRM and the Water Efficiency (WE) plans in line with the Fifth National Development Plan (FNDP) and the Vision 2030.

In order to rationalise the management of water resources, the Government has been emphasising the need for strong linkages, convergences and synergies between and among sector policies, laws and regulations. The National Long-term Vision 2030 (Vision 2030) provides for the transformation of Zambia into a developed middle-income country by 2030. In pursuance of this target, Zambia revised the Sixth National Development Plan and later formulated the Seventh National Development Plan, 2017-2021. The Seventh National Development Plan has the advantage of considering regional comparative and competitive advantages in resource allocation.

The overview of the domestic context is followed by the statement of WARMA's mandate as provided for in Article 8 (1) of the WRM Act No. 21 of 2011. According to the Act, WARMA's mandate is to "...to promote and adopt a dynamic, gender-sensitive, integrated, interactive, participatory and multi-sectorial approach to water resources management and development that includes human, land, environmental and socio-economic considerations, especially poverty reduction and the elimination of water borne diseases, including malaria." WARMA organisational structure comprises four directorates, i.e., Directorate of Water Resources Management, Directorate of Legal and Corporate Affairs, Directorate of Finance and Directorate of Human Resources and Administration. Coordination and operational linkages are outlined in the next section. WARMA collaborates and works with a wide network of governmental and non-governmental institutions and organisations.

The WARMA Strategic Plan development context also involved an analysis of external and internal development enablers and disablers using the PESTEL analysis tool. At internal level, enabling political factors included good and stable political-will, Government commitment to the Decentralization Policy and adequate policy and legislative framework. Disabling factors included generally inadequate government allocations to the water sector and misconception/misinterpretation of the WARMA mandate and operations. Economic enablers included the positive economic growth outlook, strong domestic and international investor confidence, stable and predictable macro-economic policies and mass transport and telecommunications infrastructure developments. Conversely, fluctuations of the Zambian Kwacha against major currencies, changes in bilateral and/or multilateral resource flows and the absence of an Operational Trust Fund Mechanism might compromise operations of WARMA.

Socio-cultural disablers, mostly include rapid urbanization and unplanned settlements and the high rate of HIV infections. With respect to technological factors, WARMA notes the immense dividends from the acquisition of modern Information, Communication and Technology (ICT) soft and hardware. The Authority, however, bemoans the high cost of acquiring modern Information, Communication and Technology (ICT) soft and hardware. With respect to environmental factors, WARMA is worried about the adverse impacts of climate change and variability on the water resources of the country and the pollution of water sources. Current and past sporadic sinking of boreholes is another area of concern to WARMA. In regard to the legal and regulatory factors, WARMA notes with satisfaction the well-defined legal and policy environment around the water sector. It is also pleased with the operationalisation of the WRM Act of 2011 and the ratification of several international instruments that directly relate with water such as the ZRA Act 187 and the ZAMCOM Agreement of 2004. WARMA is, nonetheless, worried about double legislation or duplication, which might slow down the pace of implementation of international treaties and fulfilment obligations thereto and the lack of a policy to limit the number of water-related regulators might compromise its

operational effectiveness.

The evaluation of external and internal development enablers and disenablers that WARMA faces was subjected to a SWOT analysis with a view to ascertaining its strengths and weaknesses and how they relate to opportunities and threats in the external environment. Strengths of WARMA includes, among others

- available clientele base;
- sound hydrometric monitoring;
- information system and groundwater database; and
- strategic partnerships and the legal mandate to regulate and manage all water resources in Zambia.

Others are:

- use of IWRM/WE Plan for guidance;
- well-qualified staff; and
- team spirit and revenue retention.

Weaknesses include:

- inadequate financial and human resources;
- lack/inadequate office space;
- lack of a donor coordination mechanism;
- inadequate public awareness on WARMA functions; and
- lack of a water user coordination mechanism and lack of an effective mechanism for sectoral coordination.

Others are:

- poor coordination with line ministries;
- prevalence of unregulated and illegal water abstractions;
- lack of an effective internal and external communication mechanism; and
- deficient WRM hardware and software and weak inter-departmental Collaboration.

Regarding the external environment, WARMA enjoys good and stable political climate, opportunities for improved collaboration with stakeholders, adequate policy and legal framework, bright economic prospects and improved engagement with water-user groups. Other opportunities are the prospect of new regulations for addressing legislation gaps and improved water-user tariff regime and cross-learning from regional experiences.

Despite its numerous strengths and opportunities, WARMA faces threats such as:

- the slow pace of its establishment;
- prospect of donor support withdrawal, climate change impacts;
- HIV and AIDS;
- negative effects of industrialisation and deforestation; and
- perceived mandate conflicts with water-related line ministries.

Others are:

- lack of water allocation plans;
- poor public awareness on WARMA functions; and
- lack of sufficient historical water resources monitoring data.

The situation analysis is followed by the results framework which outlines the five strategic directions with their accompanying strategic objectives, intermediate results and indicators. The five strategic directions include following:

- Institutional and Human Resources Development;
- Legal and Regulatory Framework;
- Service Delivery;
- Financial Sustainability for WARMA; and
- National Water Resources Strategy and Plan.

WARMA's institutional framework is governed by the Water Resources Management Act No. 21 which established it as a semi-autonomous agency. The Act also established catchment councils and water User associations as sub-structures of WARMA. In partnership with stakeholders within catchment boundaries, WARMA manages all water resources in the country. Implementation arrangements as they relate to the legal and regulatory framework will rely on the WRM Act, No. 21 of 2011, related Statutory Instruments and any other water-related legislation. The following subsidiary legislation will play a key role in the operationalisation of this Plan:

- Water Resources Management General Regulations (General Regulations);
- Fees and Charges Regulations;
- Catchment Designation Order;
- Sub-Catchment Designation Order;
- Dispute Resolution Regulations;
- Groundwater and Boreholes Regulations;
- Licensing of Drillers and Constructors Regulations; and
- Water User Association Constitution.

An analysis of major risks associated with the implementation of the strategic plan was conducted which included:

- identification of risk events;
- likelihood of occurrence and their impact and mitigation measures.

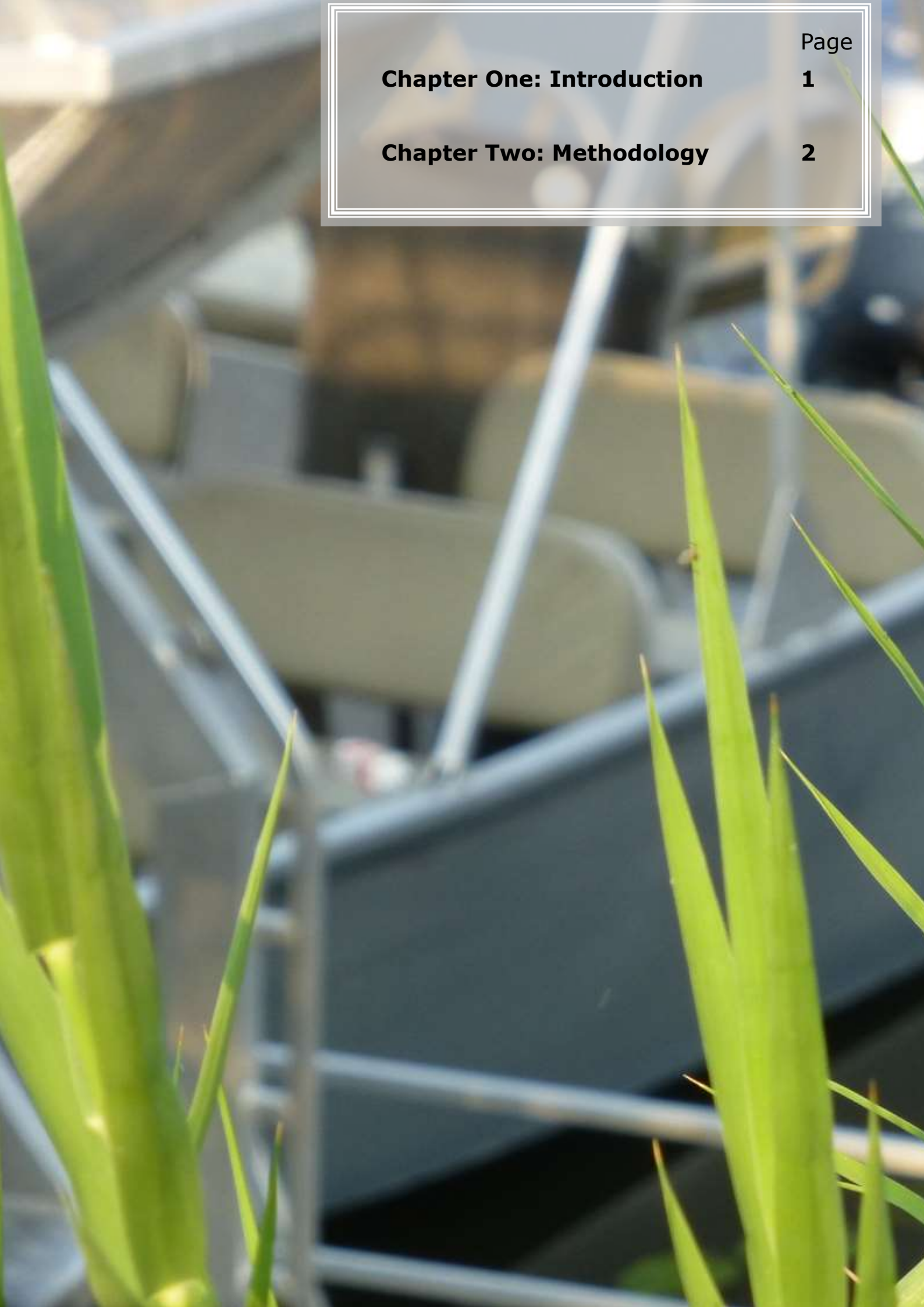
In terms of resource mobilisation, WARMA will design innovative strategies for attracting resources from both domestic and external partners. WARMA further plans to rationalise and intensify resource mobilisation through water user and permit applications fees, while retaining receipt of governmental budget support. Monitoring and evaluation will be conducted continuously during the entire period of implementation. Quarterly reports by each department which will feed into semi-annual and annual reports. A mid-term review of the status of implementation of the Strategic Plan will be conducted before the end-period evaluation.

Chapter One: Introduction

1

Chapter Two: Methodology

2





1.0 Introduction

The Water Resources Management Authority (WARMA) was established through the promulgation of the Water Resources Management Act No. 21 of 2011. Prior to the recruitment of the Director-General, the operationalisation of WARMA was managed by the Board of Directors appointed by the Minister responsible for Water in March 2013. Consequently, in order to operationalize WARMA and to ensure sustainable and rational utilization, management and development of water resources, an inaugural strategic plan was developed and implemented for the period 2015 to 2016.

Driven by the need to achieve clearly-defined strategic objectives over the next five-year period, this Strategic Plan is also meant to contribute to the long-term delivery of WARMA's mandate. The Plan highlights key issues related to water resources management and use under five strategic directions, i.e. institutional and human resources development, legal and regulatory framework, service delivery, financial sustainability of WARMA and national water resources strategy and plan. Each strategic direction has a defined strategic objective, intermediate results and requisite indicators as described in Chapter 6 (Results Framework: Strategic Directions). These are arranged in an Implementation, Monitoring and Evaluation Matrix (IMEM) and presented in Annex 5. The implementation of this Strategic Plan will, essentially, be determined by activities that will be determined by WARMA in its annual operational plans based on the five strategic directions along with their related strategic objectives, intermediate results and indicators.

The Government fully appreciates the fact that water resources are finite and, therefore, their sustainable availability should not be taken for granted. Several militating factors threaten sustainable availability of water resources for present and future use. These include, inter alia, the ever-growing demand for water for industrial, commercial, agricultural and domestic use, as well as for hydropower generation. Effects of climate change pose another set of serious challenges for all water management initiatives. Climate change continues to largely be fueled by, inter alia, global warming and deforestation. Water resources management initiatives, such as those proposed in the Strategic Plan, are important for adapting to the debilitating effects of climate change. It is also significant to recognise the fact that sustainable water availability for present and future use should be contextualised within internationally-shared water courses. This is important because, in the absence of mutually-negotiated water use arrangements, there is a risk of cross-border conflicts over access to shared water courses. Lastly, given the fact that availability and demand for water are unevenly distributed in time and space, judicious management of water resources through targeted policies and strategies can hardly be over-emphasised.

In recognition of the vital role that water, as a resource, plays in poverty eradication and economic development, and considering the challenges in the water sector, Zambia has embarked on the implementation of Integrated Water Resources Management (IWRM). The IWRM approach involves, amongst other aspects, involving stakeholders in making decisions and taking actions on how water resources should sustainably be managed for present and future uses. Key decisions and actions should relate to river basin planning,

development of water harnessing infrastructure, controlling of reservoir releases, regulating flood plains and developing new laws and regulations related to water allocation and use. Furthermore, IWRM is expected to promote rational and optimal utilisation, protection, conservation and control of the water resources in order to secure improved, sustainable and equitable access by users.

2.0 Methodology

Under the technical guidance of a Strategic Planning Consultant, the WARMA 2017-2021 strategic planning process was informed by iterative activities. These included, inter alia, the internal and external evaluation of the performance of the Inaugural Strategic Plan and a series of workshops. The internal assessment of the performance of the Inaugural Strategic Plan was undertaken through the Institutional Self-Assessment Tool (ISAT), while the external assessment was done using the External Assessment Tool (EAT). Both instruments were initially developed by the Consultant and later agreed with the WARMA Management.

The actual administration of the ISAT was spearheaded by a WARMA technical team which later documented results of its evaluation of the Inaugural Strategic Plan in an evaluation matrix. The evaluation results were discussed in a one-day validation workshop during which the Consultant provided contextual information on strategic directions, activities and indicators.

In the case of the external assessment, WARMA equipped the Consultant with official introductory letters for twelve selected key stakeholders/clients. The Consultant, independently, approached the twelve stakeholders/clients with a view to administering the EAT. Unfortunately, out of the twelve, only three responded with their assessment of the Inaugural Strategic Plan.

Further to the internal and external strategic plan assessments, a visioning workshop was held in October 2017 and a results matrix formulation workshop was held in November 2017 with involvement of the WARMA Management and the support of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), GmbH, the cooperating partner. During the workshops, WARMA's Mission, Vision, Developmental Goal and Value statements, which were carried from the Inaugural Strategic Plan, were reviewed and refined and the results framework matrix was formulated. Ultimately, the Strategic Plan was presented to the newly-appointed WARMA Board of Directors for consideration and approval.





3.0 Global Context

3.1 Sustainable Development Goals

One of the main outcomes of the United Nations Conference on Sustainable Development (UNCSD, Rio+20), held in Rio de Janeiro in June 2012, was the agreement by Member States to launch a process to develop a set of Sustainable Development Goals (SDGs) that will build upon the MDGs and converge with the post-2015 development agenda summit in September 2015.

A 30-member Open Working Group (OWG) of the General Assembly was established on 22nd of January, 2013 and tasked with preparing a proposal on the SDGs to be addressed at the summit. This Strategic Plan recognizes the OWG-proposed SDGs, particularly Goal 6 along with its relevant targets listed below. Goal 6 seeks to ensure availability and sustainable management of water and sanitation for all, through the attainment of the following targets:

- By 2030, achieve universal and equitable access to safe and affordable drinking water for all;
- By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity;
- By 2030 implement integrated water resources management at all levels, including through trans-boundary cooperation as appropriate; and
- By 2020 protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

3.2 Water Legislation and International Treaties

The principal Act presently governing the administration of water is the Water Resources Management Act No. 21 of 2011. This Legislation is the main statute dealing with ownership, allocation and regulation of the nation's water resources. There are other water related laws governed by various Acts of Parliament, as follows:

- Zambezi River Authority Act Cap 467 No.12 of 2001;
- Water Supply and Sanitation Act No. 28 of 1997;
- Zambia Environmental Management Act No. 12 of 2011;
- Zambia Wildlife Act No. 12 of 1998;
- National Heritage Conservation Act Chapter 173 No. 13 of 1994;
- Forestry Act No. 7 of 1999;
- Public Health Act Cap 295 No. 22 of 1995;
- Local Government Act Cap 281 No. 30 of 1995;

- › Town and Country Planning Act Cap 283 No. 21 1997;
- › Mines and Minerals Act Cap 213 No. 5 of 2003;
- › Inland Water Shipping Act Cap 466 No. 29 of 1962; and
- › Land Act Cap 184 No. 20 of 1996.

In addition, Zambia has signed and ratified several international instruments that are directly or indirectly related to water resources management and use such as:

- The Zambezi River Authority (ZRA), formerly the Federal Power Board up to 1963 and then the Central African Power Corporation (1963 to 1987) is such that Kariba Dam should remain jointly owned and managed between Zambia and Zimbabwe. It was recently foreseen (September 2017) that Zambia would avail a loan to ZRA and the loan repayment would be by the extra water used by ZESCO and ZESA.
- The revised Protocol on Shared Watercourses in the Southern African Development Community (SADC, 2000) is to foster closer cooperation for judicious, sustainable and coordinated management, protection and utilisation of shared watercourses and advance the Southern African Development Community agenda of regional integration and poverty alleviation;
- The Convention on Wetlands, called the Ramsar Convention, is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources. The Convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975;
- The Convention on the Law of Non-Navigational Uses of International Watercourses, commonly referred to as the UN Watercourses Convention, is an international treaty, adopted by the United Nations on 21 May 1997, pertaining to the uses and conservation of all waters that cross international boundaries, including both surface and groundwater;
- The Convention on the Sustainable Management of Lake Tanganyika was adopted in Dar-es-Salaam, Tanzania on 12 June 2003 to ensure the protection and conservation of the biological diversity and the sustainable use of the natural resources of Lake Tanganyika and its Basin by the Contracting States on the basis of integrated and co-operative management.
- The Zambezi Watercourse Commission (ZAMCOM) Agreement of 2004 to “promote the equitable and reasonable utilisation of the water resources of the Zambezi watercourse as well as the efficient management and sustainable development thereof”, and in accordance with the revised SADC Protocol on Shared Watercourses of 2000.
- As an upstream country of the Congo River, Zambia is aware of the development issues in the Congo basin, whereby four riparian countries (Cameroon, Central African Republic, Republic of the Congo and Democratic Republic of Congo) signed in 1999 an agreement to establish a uniform river regime and creating the International Commission of the Congo-Ubangi-Sangha basin (CICOS). CICOS is mandated with the promotion of inland navigation and water resources development in the basin. The Government of the Federal Republic of Germany is supporting CICOS since 2006 with the implementation of the project on transboundary water management in the Congo basin.

4.0 Domestic Context

4.1 Zambia Water Sector Reforms

Zambia, which is approximately 752,614 square kilometres in size, has abundant natural resources, including extensive mineral and water resources. This water is however unevenly distributed both in time and space, making it imperative for Zambia to ensure sustainable development and management of water resources to facilitate socio-economic development and sustenance of the environment. The implementation of appropriate development policies therefore has the potential to lead the country to reap the full benefits of its water resource endowment, if the water is utilised prudently.

The landmass of Zambia has two main river systems, namely, the Zambezi and the Congo (Annex 1). The Zambezi River system occupies three quarters of the country and comprises three sub-river systems, i.e. the Zambezi main, the Kafue and the Luangwa. The Congo River system includes the rivers in the northern region, mainly the Chambeshi and Luapula rivers, whilst Lake Tanganyika, is a shared water course with Tanzania, DR Congo and Burundi. Within these river systems fall the six (06) catchments of Zambia namely; the Zambezi, Kafue, Luangwa (in the Zambezi River Basin), Luapula, Chambeshi and Tanganyika (in the Congo River basin). The map in Fig. 1 below illustrates the six River Catchments. These catchments have been formally delineated through a requisite Statutory Instrument (SI) **No. XXX of 2018**.

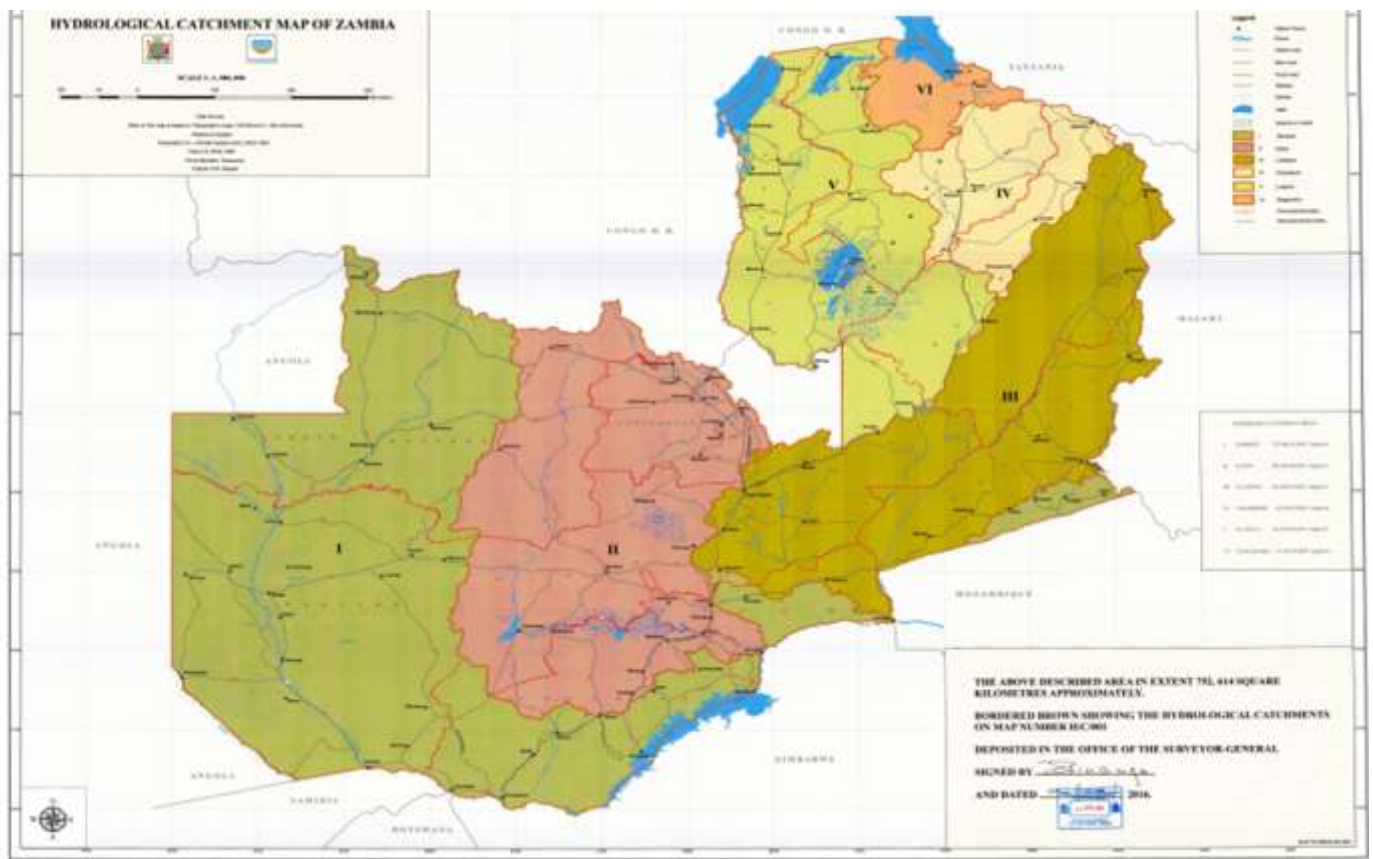


Figure 1: The Six Hydrological Catchments of Zambia.

WARMA is a statutory body established by the WRM Act No. 21 of 2011 and is responsible for promotion of Water Resources Management and Development in Zambia. Comprehensive water sector reforms in Zambia preceded the establishment of WARMA. The first and second phases of reforms in Zambia commenced in late 1980s and early 1990s, respectively. This led to the development of the National Water Policy of 1994, which provided guidelines for reorganising the sector into two sub-sectors, i.e. the Water Supply and Sanitation sub-sector and the Water Resources Development and Management sub-sector.

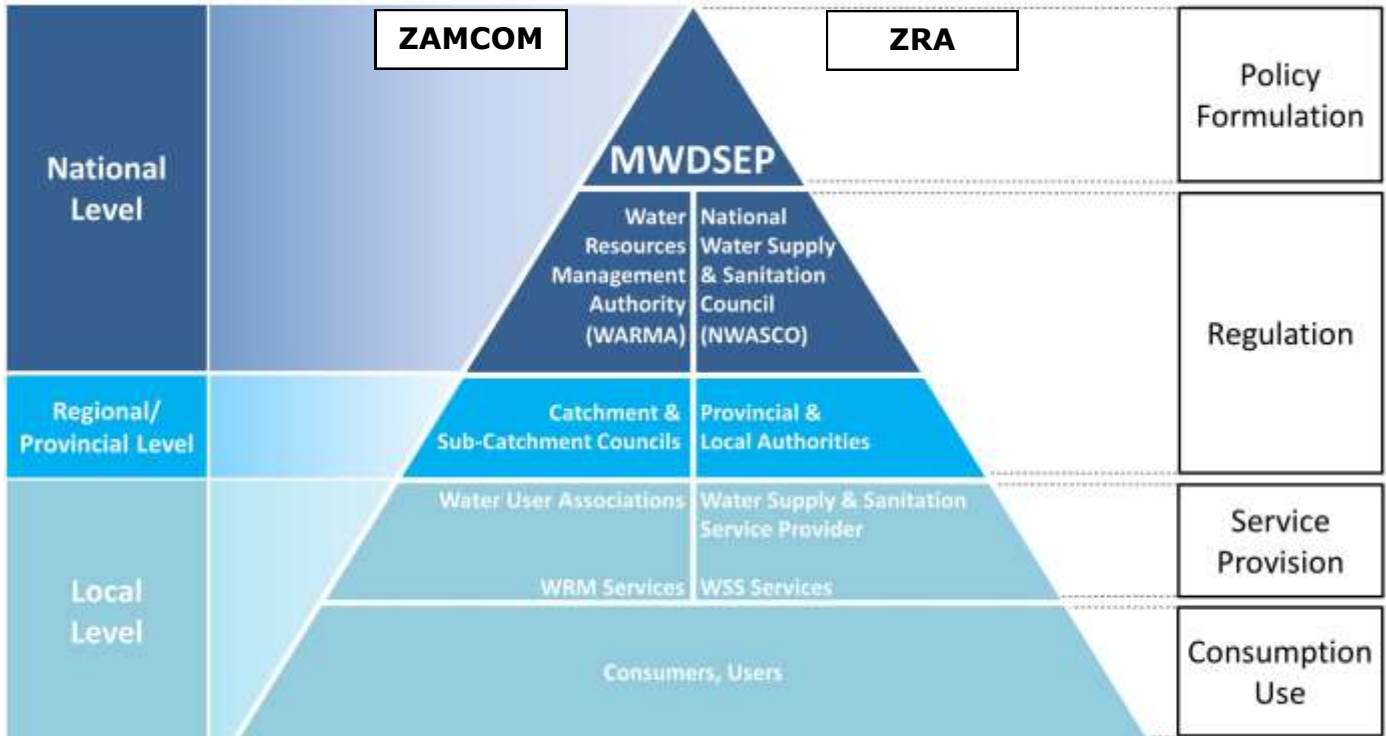


Figure 2: Governance levels and structures in WRM in Zambia.

Reforms in the water sector witnessed the separation of the water supply and sanitation functions from those of the water resources development and management sub-sector as outlined in the policy document of 1994 referred to above. Subsequently, the water supply and sanitation functions were allocated to the Ministry of Local Government and Housing (MLGH) while the Ministry of Mines, Energy and Water Development (MMEWD) remained with the functions of water resources development and management. The subsequent enactment of the Water Supply and Sanitation Act of 1997 provided for the establishment of the National Water Supply and Sanitation Council (NWASCO) to regulate the provision of water supply and sanitation services through Commercial Water Utility companies (CUs). Similarly, amendment to the legal framework was necessitated to regulate the other sub-sector of Water Resources Development and Management. A re-structuring of Government in 2016 brought the two sub-sectors under a newly-established Ministry of Water Development, Sanitation and Environmental Protection (MWDSEP) as illustrated in Fig 2.

In cognisance of the vital role that water resources play in poverty eradication, economic development, including the need to address water-related challenges and the heightened global awareness of the importance of effective water resource management, the Zambian Government revised the National Water Policy in 2010. The objective of this revision

was to improve water resources management by setting out institutional coordination and defining roles as well as responsibilities of various ministries. In addition, Zambia has been party to a number of international agreements, one of which is the 2002 World Summit on Sustainable Development, which required that nations prepare national integrated water resources management and water efficiency plans by 2005. In response to the agreement by Heads of State at the Summit, and with the support of Global Water Partnership (GWP), Zambia developed an implementation plan for IWRM and Water Efficiency (IWRM-WE) plan in line with the country's Fifth National Development Plan (FNDP) and Vision 2030.

The second phase of water sector reforms involved the repealing of the Water Act of 1949 and replacing it with the Water Resources Management Act of 2011. The process began with the implementation of the Water Resources Action Programme (WRAP), which was launched in 2001. The overall objective of WRAP was to establish a comprehensive legal and institutional framework to promote the efficient development and management as well as equitable and sustainable use of water resources in Zambia to enhance sustainable economic development.

The WRM Act 2011 provides for the establishment of new institutions and defines or redefines roles of various actors.

The revised National Water Policy of 2010 broadly describes the current water resources as not being managed effectively due to a number of factors that include:

- Poor institutional and legal framework for the management of water;
- Inadequate water resources data and information systems;
- Poor coordination of various ministries, departments and institutions dealing with water;
- Centralised management of water resources; and
- Lack of monitoring and evaluation of programmes and projects relating to water.

Meanwhile, the transition to the IWRM approach outlined in the policy and the WRM Act No. 21 of 2011 has not been completed, which has resulted in operational inefficiencies. As observed by the Joint Annual Water Sector Review (JWSR) Report of 2014, the envisaged efficiencies to be gained from the IWRM approach which are well-articulated in various documents such as the Zambia IWRM-WE Plan, will be delayed.

Furthermore, the JWSR 2014 reports that while Key Performance Indicators (KPI) for Water Supply and Sanitation (WSS) are clearly outlined in the Revised Sixth National Development Plan (R-SNDP), the KPIs for WRM and Water Resources Infrastructure Development (WRID) are not reflected.

4.2 Linkages and alignment with National Efforts

The major objectives for the water resources management sub-sector are enshrined in the revised National Water Policy of 2010 and the Water Resources Management Act No. 21 of 2011. In addition to these, other key national approaches and documents that articulate objectives of the subsector that have been considered in the formulation of this Strategic Plan are outlined below. In addition, there are other key national approaches and documents that articulate objectives of the subsector which are outlined.

4.3 Revised National Water Policy (2010)

Policy Statement: A comprehensive framework for management of water resources shall be developed taking into account catchment management of water resources, stakeholder consultation and involvement, assessment, monitoring, water conservation and preservation of its acceptable quality and quantity, efficient and equitable water allocation to all users and disaster risk reduction and disaster preparedness.

Measure: Establish a comprehensive legal, institutional and regulatory framework for effective management of the country's water resources in an equitable and sustainable manner with strong stakeholder participation by undertaking an IWRM system approach.

4.4 National Long-Term Vision 2030 (Vision 2030)

The current Strategic Plan has national implications that will, through an integrated approach, enhance the planning and management of water resources with a view to contributing to the fulfillment of the overall National Long-Term Vision 2030 (NLTV) and the specific developmental objective cited below.

Vision Statement: "A Prosperous Middle-income Nation by 2030".

Socio-economic development objective: Fully integrated and sustainable water resource management.

4.5 Seventh National Development Plan, 2017-2021

In June, 2017, the Seventh National Development Plan was officially launched. The Plan departs from sectoral-based planning to an integrated (multi-sectoral) development approach under the theme "**Accelerating development efforts towards the Vision 2030 without leaving anyone behind**". The integrated approach recognizes the multi-faceted and interlinked nature of sustainable development which calls for interventions to be tackled simultaneously through a coordinated approach to implementing development programmes. Through the use of the integrated (multi-sectoral) development approach,

the 7NDP has the advantage of considering the comparative and competitive advantage in allocation of resources towards implementation of the multi-sectoral strategies and setting in motion a series of mutually supporting activities in different sectors with the general objective of delivering the national agenda.

The goal of the 7NDP is to create a diversified and resilient economy for sustained growth and socio-economic transformation driven by, among others, agriculture. Furthermore, this Plan responds to the Smart Zambia transformation agenda 2064 and embeds in it the economic recovery necessary for the actualisation the same. Realization of this goal will be achieved through some of the actions in the 7NDP that seek to achieve outcomes that are similar to the aspirations of the UN 2030 Agenda for Sustainable Development and the African Union Agenda 2063. The 7NDP further provides a significant instrument for Zambia to attain the status of a developed middle-income nation. Mindful of this, WARMA has aligned this Strategic Plan to the 7NDP as effective and robust water resources management is indispensable to all sectors of the national economy.

4.6 IWRM and Water Efficiency Plan

Objective: The IWRM-WE Implementation Plan 2007-2030 is an inter-sectoral plan with proposed interventions to support the four main priority drivers of Zambia's economic development identified in FNDP 2007-2010, i.e. agriculture, tourism, mining and industry/manufacturing. Through an integrated approach, the plan lays a foundation for the enhanced planning, development and management of water resources and for their sustainable utilisation.

Goal: Supporting economic growth and improving livelihoods through sustainable water resources development and management with equitable provision of water in adequate quantity and quality for all competing groups of users, at reasonable cost, with security of supply under varying conditions.

4.7 Socio-Economic Issues

In accordance with the Economic Growth Outlook 2014 for Zambia, the country's economy has been growing at an impressive rate over the past decade. According to the brief, growth of the economy is expected to increase to 4.1% in 2017 and further to 4.5% in 2018 and 4.7% in 2019, from 3.4% in 2016. Infrastructure investment, especially in mining, power generation and roads, such as the Link Zambia 8000 project, will ensure that growth remains robust.

Despite the remarkably high levels of economic growth over the past decade, equitable distribution of growth has not been adequate. The recently adopted 7NDP aims to create a diversified and resilient economy for sustained growth and socio-economic transformation. Above all, availability of good quality and quantity of water resources will foster the efforts of reducing poverty and enhancing further socio-economic growth.

4.8 WARMA's Mandate and Organisational Structure

The Authority draws its mandate from Article 8 (1) of the WRM Act No. 21 of 2011 which states:

"...to promote and adopt a dynamic, gender-sensitive, integrated, interactive, participatory and multi-sectorial approach to water resources management and development that includes human, land, environmental and socio-economic considerations, especially poverty reduction and the elimination of water borne diseases, including malaria."

As provided in this Act, WARMA was established to serve as the regulatory body for the management and development of water resources in the whole country based on the principles of Integrated Water Resources Management (IWRM), which also takes into account gender and climate change dimensions in order to perform the following key organisational functions:

- Ensure the sustainable and rational utilisation, management and development of water resources;
- Establish and maintain an integrated water resources management information system that is easily accessible by all users;
- Provide access to water resources of acceptable quality and quantity for various uses.
- Set standards and guidelines for undertaking water resources management and development; and
- Provide comprehensive advice to the Minister responsible for water on policies for utilisation, management and development of water resources.

The start-up structure for WARMA comprised key positions required to staff the National level office. Catchment and Sub-Catchment staff structures have since been developed and some have been staffed. A stepwise staffing process has been engaged, starting with two catchments; the Kafue and the Luangwa Catchments. The Chambeshi Catchment office has also been partially staffed, and a Catchment Manager has been engaged for the Zambezi Catchment. Overall, WARMA is a body corporate comprising four Directorates namely:

- Directorate of Water Resources Management and Information;
- Directorate of Legal and Corporate Affairs;
- Directorate of Finance; and
- Directorate of Human Resources and Administration (WARMA to confirm if these four above are still Directorates).

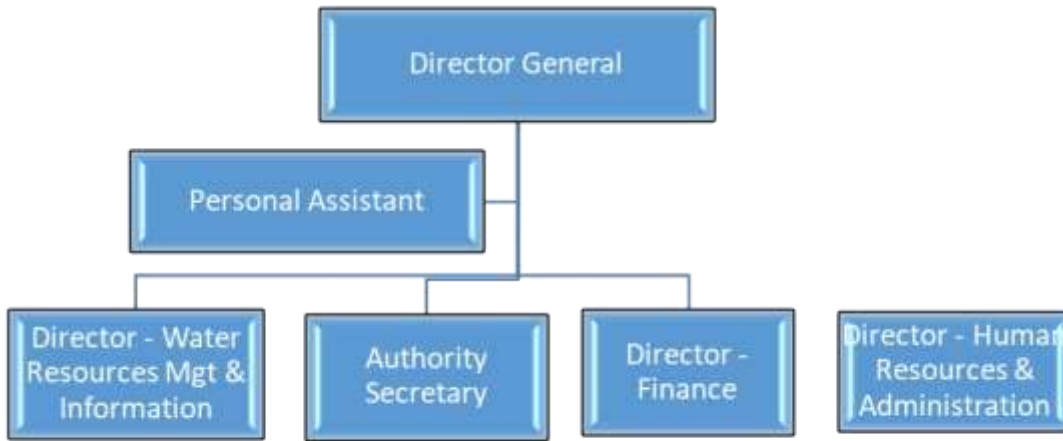


Figure 3: Senior Management Team of WARMA.

Under each of these Directorates, separate departments have been established to serve specific functions. In addition to providing for the establishment WARMA, defining the functions and powers of the Authority, the new legislation also provides for the constitution, functions and composition of Catchment Councils, Sub-catchment Councils and Water Users Associations (WUAs).

Directorate of Water Resources Management and Information:

- Water Resources Operations Section:
 - ◊ Hydrology (Surface Water) Unit
 - ◊ Hydrogeology (Groundwater Water) Unit
- Water Resources Data Management and Information Section:
 - ◊ Hydro-Informatics Unit (Data Analyses & Forecasts, Remote Sensing & GIS Sub-Units)
 - ◊ Research & Planning Unit
- Water Resources Inspectorate Section:

Directorate of Legal Services & Corporate Affairs:

- Company Secretariat and Legal Affairs Unit;
- Corporate Affairs Unit;
- Gender Mainstreaming and Social Services Unit.

Directorate of Finance:

- Finance Unit.
 - ◊ Revenue Collection Sub-Unit
 - ◊ Expenditure Management Sub-Unit

◇ Risk & Auditing Sub-Unit

Directorate of Human Resources and Administration:

- Human Resources and Administration Section;
- Procurement & Stores Section;
- Information Technology Section. (WARMA to advise which of these exist and which ones they still intend to establish.)

4.9 Coordination and Operational Linkages

In executing its mandate, WARMA collaborates with a wide range of government Ministries/Institutions as well as other stakeholders outside the government structure to ensure sustainable, rational utilisation, management and development of water resources. Furthermore, this collaboration stimulates synergies in the management of water resources. Effective collaborative linkages have also been established with Worldwide Fund for Nature (WWF), The Nature Conservancy (TNC), River Basin Organisations (RBOs) and NGOs, among them the Green Enviro-Watch. It is expected that WARMA will broaden its linkages with several national, regional and international institutions involved in water resources management and development.

4.10 WARMA Strategic Plan Context

The WARMA Strategic Plan 2017-2021 draws its context from the Zambia water sector set-up as well as its linkages, key socio-economic development efforts, water legislation and international treaties outlined below;

4.10.1 External Factors Assessment

4.10.1.1 Political factors

- Good and stable political will for smooth operations
- Government's resource allocation for the water sector is generally inadequate, but is constantly an issue of discussion;
- Government is committed to realisation of the Decentralization Policy, although the devolving of responsibility from central to local government institutions has been rather slow. WARMA's mandate will be delivered under a decentralized approach through Catchment Councils, Sub Catchment Councils and WUAs; and
- Adequate policy and legislative framework

4.10.1.2 Economic factors

- The Economic outlook for the country remains bright with Government being commit-

ted to maintaining macroeconomic stability characterized by low inflation and stable exchange rate, among other indicators. According to the brief, growth of the economy is expected to increase to 4.1% in 2017 and further to 4.5% in 2018 and 4.7% in 2019, from 3.4% in 2016;

- The projected increase in real GDP growth may stimulate willingness to pay by water users;
- Strong interest of domestic and international investors in agriculture, hydropower and industrial activities require an efficient, effective and sustainable WRM strategy, but also provide potential for cost recovery and financial sustainability;
- However, fluctuation of the Zambian Kwacha against major currencies affects the sector in diverse ways – including variations in finances disbursed compared to budgets and fluctuation in the prices of materials;
- Changes in bilateral and/or multilateral agreements may affect the level of external support committed to the water sector in general and WARMA in particular;
- The government's low budget allocations are inadequate and hamper operations of WARMA;
- Absence of an operational Water Development Trust Fund mechanism.

4.10.1.3 Socio-cultural Factors

- With an increase in urbanisation, there is an upsurge of unplanned settlements posing the challenge of effectively protecting the water recharge and reserve zones. As such, various land use practices have a bearing on the safety (quality) and availability (quantity) of water resources resulting into catchment degradation due to and human encroachments;
- The prevalence of HIV among adults (15-49) is 14.3 % and is characterised by the following : Females (16.1%) are more likely to be HIV+ than males (12.3%); Urban areas are typified by higher HIV prevalence (20%) than rural areas (10%) affect WARMA's welfare in one way or the other with regard to its human capital. The National Water Policy 2010 states that HIV/AIDS pandemic has impacted negatively on the water sector and has contributed to the low human resource capacity and productivity in the sector, hence the importance of maintaining and strengthening existing programmes to minimize the negative impact of HIV /AIDS. Gender mainstreaming is key to ensuring equitable allocation of water resources and will be a great factor to consider in activity implementation.

4.10.1.4 Technological Factors

- In the recent past, there have been rapid global technological advancement in Information and Communication Technology (ICT). The developments present opportunities for promoting efficiency in water resources planning and management for WARMA. WARMA is expected to institutionalise an effectively Integrated Water Resources Management Information System (IWRMIS) to effectively manage water resources;
- Capacity building in the use of ICT as a management and decision support tool needs to be intensified as WARMA embraces modern technologies
- Cost of acquiring contemporary technology may be prohibitive and hence dedicated re-

source mobilisation will be essential in the strategy period and beyond.

4.10.1.5 Environmental Factors

- The adverse impacts of climate change and variability on the water resources of the country are yet to be fully assessed in relation to water resources planning and management;
- Pollution of water sources is still rampant particularly in urban areas where there are varied industrial activities taking place; and
- Prevailing and past sporadic sinking of boreholes poses a challenge of depleting the groundwater resource availability and quality to sustain the ecosystem.

4.10.1.5 Legal and Policy Factors

- The legal and policy environment around the water sector is well defined with institutional roles clearly stipulated;
- Operationalisation of the WRM Act 2011 entails the development and implementation of supportive regulations to be issued under the Act. The present capacity and rate at which this exercise is being executed in liaison with other key stakeholders is rather limited. The complete set of WRM regulations will be fully realised in the strategy period;
- The implementation of the National Water Policy 2010 is expected to harmonise with those of other related policies, such as the Decentralisation Policy, whose goal is to empower local communities by transferring decision-making authority, functions and resources from the central government to the local level. However, the water devolution component of the Decentralisation Policy will start a year after the commencement of this strategic plan implementation;
- Zambia has signed and ratified several international instruments that directly relate with water such as the Zambezi River Authority Act 187 and ZAMCOM Agreement 2004 that present a window of opportunity to collaborate on internationally shared water resources;

4.11 Opportunities and Threats

4.11.1 Opportunities:

- Good and stable political climate for smooth operations;
- Possibility of collaborating in approved Decentralisation Plan implementation;
- Adequate policy and legal framework;
- Projected increase in real GDP growth to stimulate wide base for revenue collection and willingness to pay by water users;
- Usage of ICT to promote efficiency in water resources planning and management;
- Cooperating Partners' commitment;
- Engaging existing water user groups;

- Develop the new regulations that will elaborate the WRM Act of 2011;
- Appropriate tariff regime to be considered following assessment of similar regimes in the Southern African region;
- Cross-learning from other regional experiences.
- Existence of strategic institutional partnerships

4.11.2 Threats:

- Slow pace of establishment the catchment offices and councils may cause loss of public confidence
- In the event of withdrawal of cooperating partners' support
- Reliance on financial support from other sources
- HIV/ AIDS pandemic
- Industrialisation and deforestation
- Lack of adequate stakeholder awareness on WRM issues
- Perceived mandate conflict with the line Ministry
- Lack of water allocation plans
- Lack of public awareness on WARMA functions
- Lack of sufficient historical Water Resources monitoring data

4.12 Internal Factors Analysis

The internal dynamics in relation to WARMA's strengths and weaknesses were analysed. These are presented below and complement opportunities and threats generated from the external environment assessment.

4.12.1 Strengths and Weaknesses

4.12.1.1 Strengths

- Presence of provisional financial and technical support
- Existence of client base and water allocation system
- Available sound Hydrometric Monitoring Information system & groundwater database
- Have legal mandate to regulate and manage all water resources in Zambia
- Adoption of IWRM/WE Plan for guidance
- Well qualified staff
- Team Spirit
- Revenue Retention

4.12.1.2 Weaknesses

- Inadequate financial and human resources;
- Lack/inadequate office space;
- Lack of donor coordination mechanism;
- Delay in drafting and promulgation of regulations to effectively implement the new WRM Act 2011;
- Inadequate public awareness on WARMA functions;
- Poor coordination with line ministry responsible for water
- Inadequate monitoring infrastructure for water resources data collection and storage (hard- & software)
- Prevalence of unregulated and Illegal water abstractions
- Lack of effective internal and external communication mechanism
- Deficient WRM Hardware and Software
- Logistical challenges
- Misalignment of Individual versus Organisational Outputs
- Weak inter-departmental collaboration

4.13 Stakeholder Analysis

Stakeholder analysis was critical in the process of developing the strategic plan. This helps to identify the key stakeholders that have an interest in the organisation and whose activities can influence organisation's achievement of its goals and targets. Major stakeholders were identified and grouped in six main categories, presented in Annex 3.



4.14 SWOT Analysis

The Table below presents a summary of the SWOT analysis's key results obtained.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Well qualified staff • Retains revenue • Good surface monitoring network • Availability of WRM monitoring systems • Existence of institutional strategic partnerships • Existence of client base 	<ul style="list-style-type: none"> • Implementation capacities • Not fully decentralised • Insufficient internal and external communication • Transport challenges • Misalignment between individual and organizational outputs • Inadequate resource mobilisation • Inadequate GW monitoring infrastructure • Weak collaboration with the Departments • Lack of donor coordination mechanisms

Opportunities	Threats
<ul style="list-style-type: none"> • Political will • Revenue generation • Community mobilization • Use of ICT Equipment • Water harvesting • Collaboration for interbasin transfer • WRM Act N.21- 2011 • Joint collaborative enforcement 	<p>Political:</p> <ul style="list-style-type: none"> • Misunderstanding of the role of WARMA • Political interference • Change of government <p>Economical:</p> <ul style="list-style-type: none"> • Trust Fund not operational • Currency fluctuations • Inadequate funding <p>Social:</p> <ul style="list-style-type: none"> • Illegal settlements (headwaters) • Negative cultural beliefs <p>Technological:</p> <ul style="list-style-type: none"> • Use of inefficient technology • Disruptive technology • High cost of ICT equipment <p>Environmental:</p> <ul style="list-style-type: none"> • Unsustainable practices (deforestation, pollution) • Increase in water demand • Illegal abstractions • Climate change variability <p>Legal:</p> <ul style="list-style-type: none"> • Double regulation • International treaties obligations • Lack of policy to limit number of regulations

	Page
Chapter Five: Mission, Vision, Developmental Goal and Value Statements	23
Chapter Six: Results Framework: Strategic Directions	25
Chapter Seven: Implementation Arrangements	29





5.0 Mission, Vision, Developmental Goal and Value Statements

5.1 Mission Statement

The Water Resources Management Authority regulates, manages, develops, protects and conserves Zambia's water resources for sustainable development.

5.2 Vision Statement

A prosperous nation optimally using its water resources.

5.3 Development Goal Statement

The Water Resources Management Authority is fully operational and effectively delivering on its mandate by 2021.

5.4 Value Statement

Water Resources Management Authority commits to managing Zambia's water resources in a transparent, equitable and sustainable manner through competent and accountable staff along with strong stakeholder participation, while holding the highest integrity and autonomy.

5.4.1 Core Values (WATER)

- **W**atchfulness: being alert and aware, paying careful attention and ready to deal with problems;
- **A**ccountability: taking responsibility for decisions and actions affecting its stakeholders;
- **T**ransparency: in all operations relating the permitting process;
- **E**quity: in service delivery to assure access to water through equitable allocation of water resources;
- **R**eliability: confidence gained from all water users in undertaking its responsibilities in a timely and a professional manner.

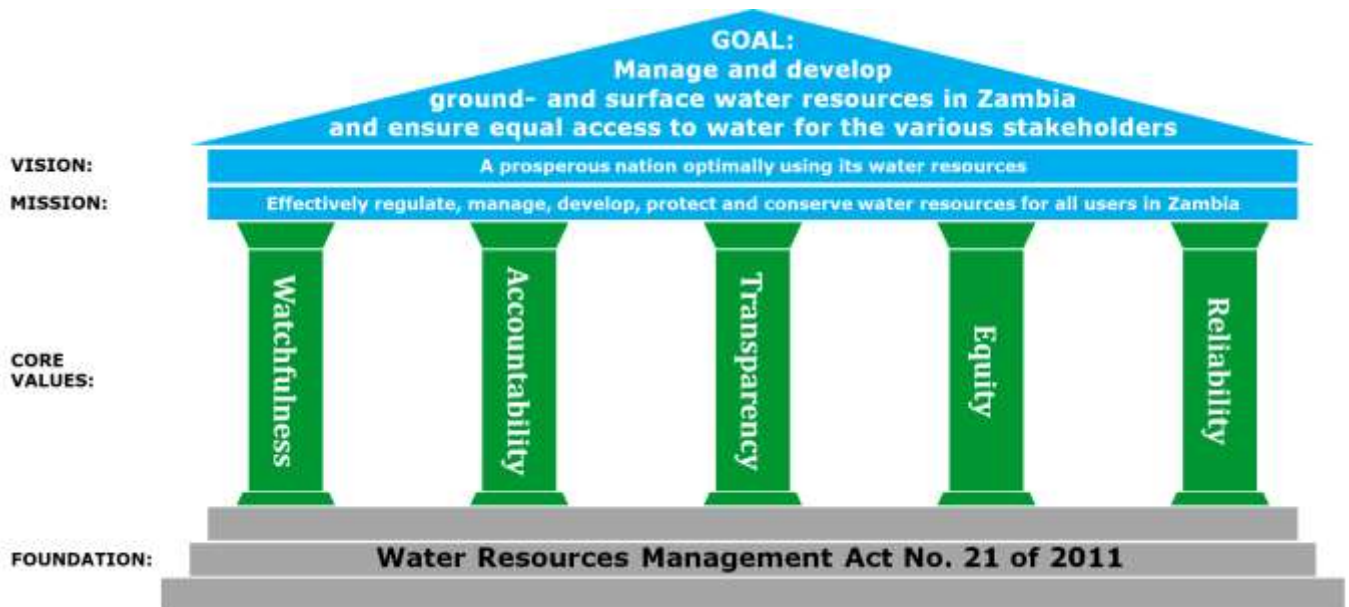


Figure 4: The WARMA house.

5.4.2 Supplementary Values (RESOURCES)

- **R**esponsiveness: timely reacting to suggestions, appeals, or efforts of the stakeholders;
- **E**xcellence: being a frontrunner in terms of services provided that are Reliable and acceptable by the water users;
- **S**ervice: strong management capabilities that ensure performance:
- **O**ptimistic: believing in favourable view of events and conditions and the expectation of a positive outcome;
- **U**nity: in service delivery to assure access to water and equity through equitable allocation of water resources;
- **R**esponsibility: continued commitment by WARMA to operate ethically and contribute to sustainable development of the nation;
- **C**ollaborative: working together with other entities toward common goals
- **E**fficiency: ability to accomplish a task with the least waste of time and effort;
- **S**ustainability: in service delivery, ensure consistent beneficial change in access to the services that leads to corresponding long-lasting outcomes and impacts in people's lives.

6.0 Results Framework: Strategic Directions

This chapter presents the results framework that outlines the objectives and intermediate results to be achieved in the strategy period, all culminating into the overall goal of WARMA being fully operational and effectively delivering on its mandate by 2021.

6.1 Institutional and Human Resources Development

Strategic Objective 1: To strengthen the institutional and human resources capacity of WARMA

- Intermediate Result 1.1.: Increased effectiveness of Water Permitting System by 2018
 - ◊ Indicator 1.1.1: Percentage of permit applications processed within the statutory period
- Intermediate Result 1.2.: Revise and start implementation of the WARMA communication strategy by 2018
 - ◊ Indicator 1.2.1: WARMA Communication Strategy revised and implementation initiated by 2018
- Intermediate Result 1.3.: Strengthen groundwater network monitoring system by end of 2019
 - Indicator 1.3.1: Groundwater network monitoring system strengthened
- Intermediate Result 1.4.: Fully populate the Establishment & Operationalize all six Catchments Offices by end of 2019
 - ◊ Indicator 1.4.1: Number of catchment fully established
 - ◊ Indicator 1.4.2: Number of catchment offices staffed and operationalized
- Intermediate Result 1.5.: Minimum operational leadership led by four Catchment Councils by end of 2020
 - ◊ Indicator 1.5.1: Number of catchment councils operational
- Intermediate Result 1.6.: Optimize surface water monitoring system by end of 2020
 - ◊ Indicator 1.6.1: Surface Water monitoring system optimized

6.2 Legal and Regulatory Framework

Strategic Objective 2: To strengthen and enhance enforcement of regulations

- Intermediate Result 2.1.: At least the remaining key two Statutory Instruments (SIs) for WRM regulations drafted by 2018
 - ◊ Indicator 2.1.1: Two Statutory Instruments (SIs) for WRM regulations drafted
- Intermediate Result 2.2.: Six Statutory Instrument (SIs) for WRM regulations issued and enforced by 2018

- ◇ Indicator 2.2.1: Number of Statutory Instrument (SIs) for WRM regulations issued and enforced
- Intermediate Result 2.3: Strengthen inspectorate and increased presence in Catchments by mid 2019
 - ◇ Indicator 2.3.1: Number of inspectors employed and satellite offices established

6.3 Service Delivery

Strategic Objective 3: To enhance performance in water resources management service delivery

- Intermediate Result 3.3: WARMA publishes annual report
 - ◇ Indicator 3.3.1: Annual Report published
- Intermediate Result 3.4: Former DWA assets transferred to WARMA by end of 2018)
 - ◇ Indicator 3.4.1: At least 50% of fixed assets and all water resources monitoring equipment transferred to WARMA by 2018
- Intermediate Result 3.5: Timely and reliable conflict resolution mechanism in water resources management developed and implemented by end of 2018
 - ◇ Indicator: 3.5.1: Conflict resolution mechanism established by 2018
 - ◇ Indicator 3.5.2: Proportion of conflicts successfully resolved by WARMA
- Intermediate Result 3.6: Increased water users' satisfaction by end of 2019
 - ◇ Indicator 3.2.1: 70 % water users' satisfaction assured by end of 2019
- Intermediate Result 3.7: All commercial water users issued with permits by 2019
 - Indicator 3.7.1: Proportion of commercial water users issued with permits
- Intermediate Result 3.8: Permitting system fully operationalised and decentralised by end of 2020
 - ◇ Indicator 3.8.1: Number of catchment offices implementing the permitting system
- Intermediate Result 3.9: Six fully functional catchment offices by end of 2021
 - ◇ Indicator 3.9.1: Number of catchments where water resources management activities have commenced

6.4 Financial Sustainability for WARMA

Strategic Objective 4: To Ensure Financial Sustainability of WARMA

- Intermediate Result 4.1: Revised water tariffs structure adopted and implemented by end of 2018
 - ◇ Indicator 4.1.1: Number of users paying new tariffs

- **Intermediate Result 4.2:** WARMA becomes increasingly self-sufficient by end of 2018
 - ◊ Indicator 4.2.1: 80% cost recovery from water user fees and charges by end of 2019
- **Intermediate Result 4.3:** Transparent and accountable water allocation and fee collection regime instituted end of 2018
 - ◊ Indicators 4.3.1: Number of water allocation plans developed at each of the catchment level
 - ◊ Indicator 4.3.2: Percentage of collected revenue against projected
- **Intermediate Result 4.5:** Coordination with sector stakeholders and cooperating partners enhanced by early 2018
 - ◊ Indicator 4.5.1: Number of quarterly IWRM forums held
- **Intermediate Result 4.6:** Periodic publishing of financial report by end of 2018
 - ◊ Indicator 4.6.1: Financial reports published annually

6.5 National Water Resources Strategy and Plan (NWRSP)

Strategic Objective 5: To establish a framework within which water resources will be managed throughout the country

- **Intermediate Result 5.1:** WARMA's role on Transboundary Waters enhanced by 2017)
 - ◊ Indicator 5.4.1: Policy directive on WARMA's role in transboundary water management clarified with the Ministry responsible for water
 - ◊ Indicator 5.1.2: Routine collection and quarterly submission of data to the regional information systems
- **Intermediate Result 5.2:** National Water Resources Strategy and Plan developed and adopted by end of 2019)
 - ◊ Indicator 5.2.1: NWRSP developed and submitted to the Ministry for approval by mid 2019
- **Intermediate Result 5.3:** At least four catchment Management plans developed and adopted by Catchment Councils by end of 2021
 - ◊ Indicators 5.3.1: Four catchment councils established
 - ◊ Indicator 5.3.2: Four catchment management plans adopted
- **Intermediate Result 5.4:** User participation in water resources management enhanced by end of 2021
 - ◊ Indicator 5.4.1: At least twelve Water User Associations formed



7.0 Implementation Arrangements

As provided in detail below, the implementation arrangements for strategic plan relates to, but not necessarily limited, to the following, aspects:

- Institutional Framework;
- Legal Framework;
- Resource Mobilization;
- Monitoring and Evaluation; and
- Risk Analysis.

7.1 Institutional Framework

As described above, from an institutional perspective, the Water Resources Management Act No. 21 of 2011 established the Water Resource Management Authority (WARMA), a semi-autonomous Statutory Body. The Act also established Catchment Councils and Water User Associations as semi-autonomous substructures within the WRM set-up. Under the Act, WARMA and stakeholders within the catchment boundaries will manage water resources. Consequently, as of 01 January 2015, the water resource monitoring function has become WARMA's responsibility. This is the framework within which the strategic plan will effectively be implemented.

7.2 Legal Framework

In order to implement the WRM Act No. 21 of 2011 effectively, essentially through this strategic plan, a range of subsidiary legislation or statutory instruments (SI) have been developed, pending government approval. A process was engaged to identify all of the subsidiary legislation required under the Act, and a limited set were identified as being of priority importance. These include but are not limited to the following SIs:

- 1) Water Resources Management General Regulations (General Regulations);
- 2) Fees and Charges Regulations;
- 3) Catchment Delineation Order;
- 4) Sub-Catchment Designation Order;
- 5) Dispute Resolution Regulations;
- 6) Groundwater and Boreholes Regulations;
- 7) Licensing of Drillers and Constructors Regulations; and
- 8) Water User Association Constitution

7.3 Resource Mobilisation

The successful implementation of this Strategic Plan will largely depend on the extent to which WARMA will design and carry out innovative resource mobilisation from both domestic and external resources. In this regard, WARMA plans to rationalise and intensify its internal resource mobilisation efforts through, among others, water user and permit applications fees. WARMA will, on the other hand, continue to closely liaise and work with cooperating partners in agreeing and implementing innovative funding partnerships. Lastly, the Government will continue to be the major source for WARMA's budget support.

The German Development Cooperation has been supporting the establishment of WARMA in general and is specifically providing financial support via KfW and technical cooperation via GIZ for the rehabilitation of Zambia's hydrological and groundwater monitoring networks, amongst other interventions.

In addition to the German Development Cooperation support, the is also supporting water sector reform with current measures directed to the development of catchment plans, and a national water resource strategy, whilst the World Bank is supporting water infrastructure development.

7.4 Monitoring and Evaluation

As per principles of Project Cycle Management (PCM), monitoring will be conducted continuously during the entire period of implementation. Each Department will be required to submit quarterly reports on activities that they will be required to implement. This will include reports from Catchment Councils. All projects implemented will feed into WARMA Monitoring and Evaluation (M&E) system. Monitoring water use and regulating compliance will be a critical function of WARMA. The focus of monitoring will be to assess the efficiency with which activities, projects and programmes will be implemented and the extent to which they will have realized intended outputs. WARMA will take stock and account for use resources in every activity implemented. An implementation, monitoring and evaluation matrix is presented in Annex 5.

7.5 Risk Analysis

An analysis of major risks associated with the implementation of the strategic plan was conducted. This analysis included the identification of risks, likelihood of occurrence and potential impact, as well as mitigation measures. The risk analysis is presented in Annex 4.

ANNEX





Category	Institution
1. Policy Makers	Ministry of Water Development, Sanitation and Environmental Protection
	Ministry of Finance
	Ministry of Local Government and Housing
	Ministry of Agriculture and Livestock
	Ministry of Commerce and Industry
	Ministry of Lands and Natural Resources
	Ministry of Tourism and Arts
	Cabinet Office: Policy Analysis and Coordination Division
	Ministry of Justice
	Ministry of Health
	Decentralization Secretariat
2. Industrial/ commercial users	Water Utility Companies
	Mining Companies and related extractive industries
	Hydroelectric Power Companies
	Industries and Manufacturers
	Borehole drilling companies
	Zambia National Farmers Union
3. Regulators	Zambia Environmental Management Agency
	Energy Regulation Board
	National Water and Sanitation Authority
	Zambia Wildlife Authority
4. Cooperating Partners	German International Cooperation
	World Bank
5. Transboundary and regional bodies	Zambezi River Authority
	Lake Tanganyika Authority
	Southern African Development Community
	Zambezi Watercourse Commission
	International Commission of Congo -Oubangui-Sangha
6. Representative Bodies	NGO WASH Forum
	Traditional Authorities
	Zambia Water Partnership
	Local Authorities

Risk Occasion	Risk outcome	Possibility	Impact	Mitigation Measures	Responsibility
Limited staffing levels and inadequate skills	Compromised delivery of services	Low	High	Recruit and train	Management-WARMA Board-WARMA
Insufficient funding	Delayed commencement and completion of activities/projects or cancellations	Low	High	Explore alternative funding mechanisms	WARMA
Inadequate political support	Delayed commencement and completion of activities/projects or cancellations	Medium	High	Lobby for political support	WARMA Board Catchment Councils, WUAs
Low compliance	Low revenue generation and deterioration in water resource quality and quantity	High	High	Create inspection and prosecution unit and implement stakeholder and community awareness programmes	WARMA, Catchment Councils, WUAs
Inefficient water use	Loss of water resources/water shortages and rise in water conflicts	Medium	High	Conduct water efficiency awareness campaigns to adopt and apply appropriate water use techniques	WARMA, Catchment Councils, Water Users Association (WUAs)
Persistent water related disasters	Loss of lives, property, Livelihood and land degradation	High	High	Conserve and protect water catchment areas. Liaise with Disaster Management and Mitigation Unit (DMMU) and develop proactive disaster mechanisms for floods and droughts	WARMA, Catchment Councils, Water Users Association (WUAs)

Strategic Direction	Strategic Objective	Intermediate Results	Indicator(s)	Responsibility
1. Institutional and Human Resources Development	To strengthen the institutional and human resources capacity of WARMA.	Increased effectiveness of Water Permitting System by end of 2018.	<ul style="list-style-type: none"> Percentage of permit applications processed within the statutory period 	Director – Water Resources Management and Information (DWRMI)
		Revision and implementation of the WARMA communication strategy started by 2018.	<ul style="list-style-type: none"> WARMA Communication Strategy revised and implementation initiated by 2018. 	Authority Secretary (AS)
		Strengthened groundwater network monitoring system by end of 2019.	<ul style="list-style-type: none"> Groundwater network monitoring system strengthened. 	Senior Hydrogeologist (SHydrogeo)
		Fully populate the Establishment & Operationalize all six Catchments Offices by December 2019.	<ul style="list-style-type: none"> Number of catchments established Number of catchment offices staffed and operationalized. 	DWRMI
		Minimum operational leadership led by four Catchment Councils by end of 2020.	<ul style="list-style-type: none"> Number of operational catchment councils. 	Catchment Managers (Zambezi, Kafue, Luangwa, Chambeshi)
		Optimize surface water monitoring system by end of 2020.	<ul style="list-style-type: none"> Surface Water monitoring system optimized. 	Water Resources Operations Manager (WROM); Senior Hydrologist (SHydro)
2. Legal and Regulatory Framework	To strengthen and enhance enforcement of regulations.	At least the remaining two key Statutory Instruments (SIs) for WRM regulations drafted by 2018.	<ul style="list-style-type: none"> Two Statutory Instruments (SIs) for WRM regulations drafted. 	Authority Secretary (AS)
		Six Statutory Instrument (SIs) for WRM regulations issued and enforced by 2018.	<ul style="list-style-type: none"> Number of Statutory Instrument (SIs) for WRM regulations issued and enforced by 2018. 	AS; Regulation and Compliance Manager (RCM)

		enforced by 2018.	forced.	
		Strengthened inspectorate and increased presence in Catchments by mid-2019.	<ul style="list-style-type: none"> • Number of inspectors employed and satellite offices established. 	RCM
3. Effective Service Delivery.	To enhance performance in water resources management service delivery.	WARMA publishes annual reports.	<ul style="list-style-type: none"> • Copies of Annual Reports. 	DWRMI
		Former DWA assets transferred to WARMA by 2018.	<ul style="list-style-type: none"> • At least 50% of fixed assets and all water resources monitoring equipment transferred to WARMA by 2018. 	Human Resources Manager (HRM)
		Timely and reliable conflict resolution mechanism in water resources management developed and implemented by the end 2018.	<ul style="list-style-type: none"> • Conflict resolution mechanism established by 2018. • Proportion of conflicts successfully resolved by WARMA. 	AS; RCM
		Increased water users' satisfaction by 2019.	<ul style="list-style-type: none"> • 70 % water users' satisfaction assured by 2019. 	Director General (DG)
		All commercial water users issued with permits by 2019.	<ul style="list-style-type: none"> • Proportion of commercial water users issued with permits. 	DWRMI
		Permitting system fully operationalized and decentralized by the end of 2020.	<ul style="list-style-type: none"> • Number of catchment offices implementing the permitting system. 	CMs (Zambezi, Kafue, Luangwa, Chambeshi)
		Six fully functional catchment offices by 2021.	<ul style="list-style-type: none"> • Number of catchments where water resources management activities have commenced. 	DWRMI

Strategic Direction	Strategic Objective	Intermediate Results	Indicator(s)	Responsibility
4. Financial Sustainability for WARMA.	To Ensure Financial Sustainability of WARMA.	Revised water tariffs structure adopted and implemented by 2018.	<ul style="list-style-type: none"> Number of users paying new tariffs. 	Finance Manager (FM)
		WARMA becomes increasingly self-sufficient by 2018.	<ul style="list-style-type: none"> 80% cost recovery from water user fees and charges by 2019. 	FM
		Transparent and accountable water allocation and fee collection regime instituted by 2018.	<ul style="list-style-type: none"> Number of water allocation plans developed at each of the catchment level. Percentage of collected revenue against projected. 	CMs (Zambezi, Kafue, Luangwa, Chambeshi); FM
		Coordination with sector stakeholders and cooperating partners enhanced by early 2018.	<ul style="list-style-type: none"> Number of quarterly IWRM forums held. 	DG
		Periodic publishing of financial report by 2018.	<ul style="list-style-type: none"> Copies of annual financial reports. 	FM

Strategic Direction	Strategic Objective	Intermediate Results	Indicator(s)	Responsibility
5. National Water Resources Strategy and Plan (NWRSP).	To establish a framework within which water resources will be managed throughout the country.	WARMA's role on Transboundary Waters enhanced by 2017.	<ul style="list-style-type: none"> • Policy directive on WARMA's role in transboundary water management clarified with the Ministry responsible for Water. • Routine collection and quarterly submission of data to the regional information systems. 	DG
		National Water Resources Strategy and Plan developed and adopted by the end of 2019.	<ul style="list-style-type: none"> • NWRSP developed and submitted to the Ministry for approval by mid-2019. 	DWRMI
		At least four catchment Management plans developed and adopted by Catchment Councils by 2021.	<ul style="list-style-type: none"> • Four catchment councils established. • Four catchment management plans adopted. 	CMs (Zambezi, Kafue, Luangwa, Chambeshi); FM
		User participation in water resources management enhanced by 2021.	<ul style="list-style-type: none"> • At least twelve Water User Associations formed. 	AS

Published by:

Water Resources Management Authority
Plot No. 4186, Addis Ababa Drive
P.O. Box 51059, Lusaka, Zambia
Tel: +260 211 251 934
Email: info@warma.org.zm
Website: www.warma.org.zm
Facebook: facebook.com/warmazambia

Published November 2018 by Water Resources Management Authority.

Any reproduction in full or in part must mention the title and credit the above-mentioned publisher as the copyright owner.

© Text and Pictures 2018 WARMA

This publication was realised with the kind assistance of:

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Water Sector Support Programme
on behalf of the
Federal Ministry of Economic Cooperation and Development in Germany







**Water Resources
Management
Authority**

ZAMBIA'S WATERS, OUR FUTURE!

Water Resources Management Authority
Plot No. 4186, Addis Ababa Drive
P.O. Box 51059, Lusaka, Zambia
Tel: +260 211 251 934
Email: info@warma.org.zm
Website: www.warma.org.zm
Facebook: facebook.com/warmazambia