

Water Resources Management Authority WATER RESOURCES NEWSLETTER Water Resources Management Authority Quarterly Publication

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ABOUT THE WARMA

The Water Resources Management Authority (WARMA) is a statutory body established under the Water Resources Management (WRM) Act No. 21 of 2011 to regulate and manage the utilization of water resources across the country. At its apex is a Board of Directors who provide oversight, policy and strategic direction to the Authority. The day-today management and operations are presided over by the Director General, who is the Chief Executive Officer of the Authority.

Our Vision

An effective Authority in sustainable water resources management.

Our Mission

To regulate, manage, protect and conserve Zambia's water resources for sustainable development.

The Authority has its Headquarters in Lusaka and operates in four (4) Catchment offices namely; Kafue, Luangwa, Chambeshi and Zambezi Catchments. Currently, Luapula and Tanganyika Catchments are administratively managed by the Chambeshi Catchment office.

The core functions of the Authority as contained in the Water Resources Management Act No. 21 of 2011 include:

- (a) Identify and protect potential sources of freshwater supply;
- (b) Conserve, preserve and protect the environment, in particular, wetlands, quarries, dambos, marshlands and headwaters and take into account climate change and the challenges posed by climate change;
- (c) Plan for and ensure the sustainable and rational utilisation, management and development of water resources based on community and public needs and priorities, within the framework of national economic developmental policies;
- (d) Set standards and guidelines, with relevant appropriate authorities, to be used in undertaking water resources management and developmental activities in a catchment;
- (e) Publish forecasts, projections, and information on water resources;
- (f) Provide access to water resources of acceptable quantity and quality for various purposes.

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WORD FROM DIRECTOR GENERAL



Dear Reader,

It is with great pleasure that I present to you the 2023 first-quarter newsletter of the Water Resources Management Authority (WARMA). In this edition, we bring to your attention some of the activities that we undertook in the first quarter of the year 2023 as we begin to implement our five-year strategic plan.

The 2022 - 2026 Strategic Plan implementation is the backbone for all the activities, milestones, and innovations that we put in place to execute our mandate effectively. Since the launch of the strategic plan, WARMA is focusing on rolling out the underlying five pillars that govern our work. With this in mind, we are optimistic that the achievement of strategic goals will be improved and the public will be informed of our milestones through such avenues as our newsletter.

This edition covers our concerted efforts toward actualizing Integrated Water Resources Management (IWRM) through effective stakeholder engagement. Stakeholder Engagement is one of the guiding pillars through which we intend to enhance effective stakeholder collaboration in water resources management. During the period under review, WARMA undertook various engagements with critical stakeholders with the view of facilitating the mapping of water protection areas. Critical among the stakeholders are traditional leaders. WARMA values the pivotal role traditional leaders play in ensuring catchment protection for a better tomorrow.

Further, we bring to your attention the deliberate policy to respond to emerging issues in our work. During the review period, WARMA attended the Uinited Nations (UN) 2023 Water Conference (22-24 March 2023) which saw the adoption of the Water Action Agenda, representing the voluntary commitments of nations and stakeholders to accomplish the Sustainable Development Goals (SDGs) and their targets connected to water. At this conference, WARMA presented the approaches the institution was taking in water resource management in Zambia.

We hope that this publication will provide you with valuable information in regards to Water Resources Management.

Happy reading! Eng. Kenneth Nyundu,

OUR STRATEGIC PILLARS

WARMA's operations are hinged on five (5) strategic pillars which are key focus areas for the effective realisation of the Authority's vision.

The Strategic Pillars are as follows:



2. Strategic Pillar Two - Public Awareness & Visibility. With the prevalence of negative effects of climate change and mismanagement of water resources, it is imperative that WARMA deploys a robust Communications Strategy to increase awareness of the importance of preservation of water resources. Furthermore, the Authority plans to increase its visibility nationwide through increased marketing campaigns and strategic partnerships.

Strategie Pillar Three - Financial Sustainability. The Authority aims to achieve an 80 percent cost recovery over the next five (5) years through the implementation of cost

reflective tarifs. This will in turn strengthen WARMA's sustainability from a financial standpoint and enable it to effectively carry out its . functions.

Strategic Pillar Four - Operational Excellence. This Pillar is at the core of WARMA's functions in that for it to effectively execute its mandate, all internal systems and processes must function optimally. During the tenure of this Strategic

Plan, WARMA will strengthen the management of water resources countrywide as well as make its internal operations more robust. To achieve this, the Authority will embark on operationalising and strengthening the legal framework and monitoring and evaluation systems.

5. Strategic Pillar Five - Human Capital Management.

One of the critical drivers to achieving success in any organisation is having adequate staff with the right skills and competencies. In light of this, WARMA will endeavour to have 'high performing employees' through improved talent management as one of its strategic results essential for the effective implementation of this Plan .fff

MINISTER OF WATER DEVELOPMENT AND SANITATION HON. MIKE E. MPOSHA MP. ASSURES PROTECTION OF SHAFT 5



Minister of Water Development and Sanitation Hon. Mike Mposha. MP

The Ministry of Water Development and Sanitation have noted concerns made by WARMA Board Chairman Dr. John E. L. Kunda in regards to unwarranted human activities that are disturbing the shaft 5 water source.

This was discussed when the Water Resources Management Authority (WARMA) Board of Directors paid a courtesy call on the Minister of Water Development and Sanitation, Honorable Mike Mposha MP.

In his submission, the WARMA Board Chair Person Dr John E. L. Kunda is concerned over the unwarranted human activities that are disturbing the Shaft Five water source. He said despite putting administrative measures to restrict and control land use around Shaft Five, uncontrolled infrastructure development around the area with the potential to contaminate the water source, is being perpetrated. Dr. Kunda indicated that the shaft five water source is a massive contributor to the Kafue River and its disturbance has the potential to adversely affect the levels of water in our rivers and other streams.

The WARMA Board Chair Person started in the execution of WARMA's mandete the institution is further concerned that more water bodies and sources have been immensely encroached on and disturbed.

He added that WARMA in its pursuit of effective management of water resources will continue to advise and provide the Ministry with relevant data critical for decision-making in the water sector.

And the Minister of Water Development and Sanitation Hon. Mike E. Mposha assured the Board of Directors that government has placed a premium on water resources sustainability and national water security through the unwavering support rendered to WARMA. The Minister indicated that his ministry is currently engaging relevant ministries in a bid to protect sources of water in Zambia including shaft 5 and Forest 27. The Minister said he was delighted that WARMA is equal to the task of actualizing its mandate of ensuring that water bodies are protected.

He said his Ministry has made good progress on the issues surrounding Shaft 5 and Forest 27. The Minister stated that water resources around named areas are immensely affected by uncontrolled encroachment and looming contamination from sprouting infrastructure such as service stations.

The Honorable Minister thanked WARMA for being keen in ensuring that water resources were properly managed and protected from further damaged. He assured the Board that the Government was well aware of the importance to have all water bodies protected for the benefit of all well-meaning Zambians. The Minister encouraged WARMA to continue with its good works that serve the goodwill of the country.





The Minister and Permanent Secretary of Water Development and Sanitation pose for a picture with the WARMA Board of Directors



Figure 1, Delineated ground water protection zones of shaft 5 wellfield



WARMA ENHANCING STAKEHOLDER ENGAGEMENT FOR COLLABORATIVE EFFORTS



Eastern Province Permanent Secretary Mr. Paul Thole

he Water Resources Management Authority (WARMA) has made strides in enhancing its engagements with key stakeholders. The institution has continued to work towards the implementation of integrated water resources management at all levels through cooperation with key sector players.

In Eastern Province, WARMA Director General Engineer Kenneth Nyundu paid a courtesy call on the office of the Permanent Secretary (PS) of Eastern Province and the Mayor of Chipata District.

During the course of the discussions, WARMA Director General said that water resources are highly stressed, a situation that might deplete the resource.

Eng. Nyundu engaged the Permanent Secretary Mr. Paul Thole on various issues including the rampant encroachments on water bodies reported in the province due to a lack of sensitization on its effects.

"We as an institution in charge of managing water resources are concerned that there has been rampant encroachments on water bodies. We have seen people conducting farming activities and building in the buffer zone of water bodies as a result, some of our rivers now are no longer perennial. As soon as the rains finish, they stop flowing," Eng. Nyundu stated.

He requested the office of the Permanent Secretary to consider working with WARMA

through policy formulation and stakeholder engagements in ensuring that water resources are preserved for the future.

The Eastern Province Permanent Secretary assured WARMA of enhanced engagements with relevant authorities in the management of water resources. The PS disclosed that Chipata City is a living testimony of slowly diminishing water resources due to unwarranted human activities conducted on the resource.

The PS stated that the rampant uncoordinated human activities conducted upstream have tremendously affected water resources especially downstream. He implored WARMA not to relent in proving guidance to institutions on how best water resources could be preserved and conserved.

Further as part of his engagement in Eastern Province, the Eng. Kenneth Nyundu met with the Mayor of Chipata District where he highlighted the challenges being faced by WARMA in the management of water resources. While discussing with the Mayor, the Director General submitted that the local council should consider consulting WARMA in all city planning and plot allocation activities to avoid posing a risk to the water resource.

And the Chipata Mayor His Worship Mr. George Mwanza extended an invitation to WARMA to sit on the Chipata Council Committee of Planning to ensure that all the raised issues are addressed.

"I think it will be very important that we have a presentation from you in this very important committee that looks at development at a primary level. Our leadership is open to getting advice and we are trying to do the best that we can to provide leadership in the city and beyond that is centered on sustainable human development," The Mayor said.

In his response, WARMA Director General confirmed that the institution is keen to begin implementing the progressive submission being discussed with various stakeholders in water resource management.



Chipata Mayor His Worship Mr. George Mwanza



WARMA ESTABLISHES ANTI- CORRUPTION INTEGRITY COMMITTEE



WARMA and the Anti-Corruption Commission team during the training

n the first quarter of 2023, the Water Resources Management Authority (WARMA) undertook an induction training workshop for the newly established integrity Committee. This is in line with the government's anti-corruption policy that demonstrates the government's commitment to promoting transparency and accountability in all sectors of society.

The aim of the Integrity Committee is to help prevent corruption by implementing policies and procedures that promote ethical behavior, identifying and addressing potential conflicts of interest, and investigating and punishing instances of corruption. In so doing, the Committee is expected to help create a culture of integrity within WARMA and promote public trust in its operations.

It is envisaged that the Integrity Committee will institute unmatched levels of transparency and accountability systems that work and respond to attributes of integrity in WARMA operations. The committee is designed to create a cadre of staff that respects and upholds the values of good governance as espoused in the WARMA mandate.

The ultimate goal of the integrity committee is to implement measures that eliminate all opportunities for corruption in WARMA. It is expected to play a pivotal role in fostering accountability and promoting high standards of ethical conduct thereby making WARMA more responsive to stakeholders and the Public.

The training was attended by nominated members of the committee from WARMA

and conducted by selected officers from the Anti-Corruption Commission (ACC).

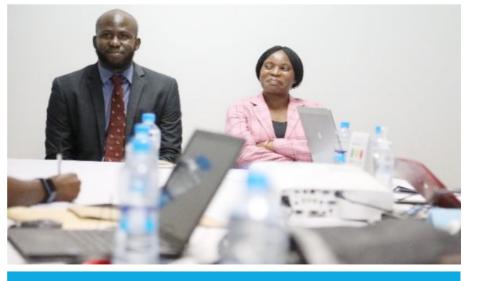
During the interaction, WARMA (then) Acting Director General Eng. Chewe Chishala encouraged the committee members to be ambassadors that mainstream corruption prevention at work. He said the committee must work hard to ensure that corruption does not become a norm at the public institution.

In her remarks, the ACC Director of Corruption Prevention Mrs. Glenda Mungalaba, who delivered a speech on behalf of the ACC Director General Mr. Tom Shamakamba indicated that corruption is a universal problem whose effects touch on every individual regardless of their social status.

The ACC Director General noted that it was then cardinal to involve every stakeholder in addressing corruption for this need cannot be over-emphasized. ACC expressed pleasure that more institutions such as WARMA were coming on board to contribute to the fight against corruption in public institutions.

ACC further noted that the absence of the Integrity Committee in the management of water resources may have dire consequences ranging from the drying of rivers, contamination of groundwater resources, and diminishing public confidence in water resources management.

WARMA through Eng. Chewe Chishala indicated that it is optimistic that integrity efforts through the integrity committee at WARMA will facilitate the provision of equitable access to water resources of acceptable quantity and quality through sustainable conservation, preservation, and protection of the resource.



Eng. Chewe Chishala attending the training



THE 2023 WORLD WATER DAY.



The Minister of Water Development & Sanitation Hon. Mike Mposha visiting the WARMA pavilion

ater resources are essential human for survival. agriculture. and the environment. Without access to this resource, humans would not meet basic needs, and ecosystems get exposed to risks of degradation. Proper management of water resources is therefore essential to ensure that there is enough water available for all needs, both now and in the future.

However, freshwater resources have been declining in all regions of the world in the past 30 years and global water availability and quality are deteriorating at an alarming rate, according to the United Nations. Water challenges such as droughts and floods are increasing due to climate change and are putting the planet's water resources under increasing stress. Mismanagement of water resources combined with pollution has intensified water stress and degraded water-related ecosystems, leading to negative impacts on human health, economic activities, food, energy supplies, and declining aquatic biodiversity.

It is therefore the Water Resources Management Authority's mandate to oversee the sustainable management of water resources in Zambia.

In 2023 The Water Resources Management Authority (WARMA) joined the rest of the world in participating in the World Water Dav was commemorated under the theme "Accelerating Change in the Zambian Water Sector through Partnerships and Cooperation". Through the theme, water sector players undertook various activities that demonstrated commitment to collaborative efforts of managing water resources in the country. Stakeholders conveved the message of integrated water resources management as a way of achieving untold milestones in this endeavor. Water users were encouraged to be the desired change, and accelerate partnerships and cooperation in order for the water sub-sector to see the meaningful change that is sought.

During the commemoration held in Mumbwa District of Central Province, the Minister of Water Development and Sanitation Hon. Mike Mposha MP encouraged all water users including institutions in the water sector, to change the approach to managing water resources because it is a finite resource. The Hon. Minister said the sustainable management of water must begin with conserving the resource and managing it at household level.

The Minister said building partnerships and enhancing cooperation across all dimensions of sustainable development are essential to accelerate progress toward water goals and targets, and human rights to water and sanitation. He added that partnerships and cooperation take place in almost any water-related endeavour. He disclosed that the year 2023, is one that will embrace the sustainable management of water resources to ensure its sustainability and access to clean drinking water and sanitation for all.

"WATER IS THE MOST CRITICAL RESOURCE ISSUE OF OUR LIFETIME AND OUR CHILDREN'S LIFETIME. THE HEALTH OF OUR WATERS IS THE PRINCIPAL MEASURE OF HOW WE LIVE ON THE LAND" ~LUNA LEOPOLD

Hon. Mposha implored the community to work hard towards making a difference by changing the way water is used, consumed, and managed at household level.

Further, the Hon Minister encouraged WARMA to decentralize its operations country-wide in order to effectively manage water resources and deliver the desired public services. He urged the water resources regulator not to lose sight of the fact that water resources are tremendously stressed in many parts of the country, hence the need for a paradigm shift in its management. Hon. Mposha said WARMA's noble works toward the sustainable management of water resources are recognized and must be decentralized to meet the community's needs.



WARMA senior management pose for a picture with the District Commissioner and the Mayor

WARMA FLAGS OFF WATER RESOURCE PROTECTION AREAS INITIATIVE IN NORTH-WESTERN PROVINCE

The Water Resources Management Authority (WARMA) flagged off the curbing of encroachments in ecosensitive areas in North-Western Province. The progressive initiative was in a bid to sustainably conserve Zambia's water resources as prescribed by the Water Resource Management Act No. 21 of 2011.

The initiative further responds to the country's Eighth National Development Plan (8 NDP) which places water as a key component in the attainment of a diversified developed economy. The initiative rides on a programme called Water Resources Protection Area (WRPA). The WRPA programme will allow for WARMA through its role of managing, protecting, regulating, and preserving water resources, to identify and designate certain eco-sensitive sites as protected areas. In order to effectively achieve this programme, WARMA began by engaging different key stakeholders on the protection of the Kabompo River in the Upper Zambezi Catchment.

In the initial stages of the programme, WARMA visited the Provincial and traditional leadership of Solwezi and Kalumbila Districts of North-western Province. This was done in a bid to highlight the importance of protecting the Kabompo River. WARMA engaged with the Offices of the District Commissioner and the Mayor of Solwezi District. During the meeting, WARMA Director General Engineer Kenneth Nyundu pointed out that the Kabompo River contributes enormously to the flows of the Zambezi River system hence the need to protect the river system from any undesirable human-related activities.

Eng. Nyundu added that if freshwater sources dry up due to encroachments on water bodies, economic development, and people's livelihoods would not be sustained. And the Solwezi local authorities pledged their commitment to the initiative of protecting river systems. The local authority through the District Commissioner told WARMA that they were immensely concerned about the Solwezi River which was decreasing in size due to encroachment.



His Royal Senior Chief Mumena at his palace

Further, the WARMA team undertook meetings with traditional leaders in the district. Speaking when he met Dr. Chief Mumena and Senior Chief Mukumbi of the Kaonde-speaking people, the WARMA Director General said traditional leaders play a critical role in helping achieve WARMA's mandate because of their ability to engage with communities directly.

Eng. Nyundu said the aim of such engagements was to promote integrated planning in the Upper Zambezi and entrench principles of Integrated Water Resources Management (IWRM) which require a participatory approach to the management of water resources.

And the traditional leadership through Chief Mumena expressed pleasure to learn that WARMA was on board in coming up with policies and initiatives that will secure the future of water resources in Zambia. The chief assured WARMA of his full support in ensuring that the WRPA programme was actualised for the benefit of all. Dr. Mumena indicated that most of the water bodies and headwaters in his Chiefdoms have been immensely affected due to the rampant uncoordinated mining and farming activities conducted in his Chiefdoms. He stated that most areas in Kalumbila District are not habitable due to the rampant mining exploration activities in the area.

Chief Mumena also touched on the common habit practiced by residents of washing cars in rivers. He said this activity has contributed to the pollution of the water in Kalumbila District.



A local stream in Kalumbila District that motorists patronise to wash their cars

He disclosed that many water bodies in the district are being encroached upon by the local people who are washing cars right in the water bodies. Dr. Chief Mumena indicated that WARMA had much work to be done in ensuring that all water bodies across the country are sustainably protected for Zamia to have secure water.

Further the WARMA team held a meeting with Senior Chief Mukumbi, of the Kaonde speaking people of Kalumbila District. At the meeting, Senior Chief Mukumbi indicated that the community in his chiefdom needed adequate sensitisation on the importance of preserving and sustainably managing water resources.



Senior Chief Mukumbi of Northwestern Province

THE UN WATER CONFERENCE ADOPTS THE WATER ACTION AGENDA, - FOR THE SDGs AND TARGETS CONNECTED TO WATER



WARMA Director General Eng. Kenneth Nyundu receiving the prestigious VIP Global Water Change Maker from Zambia's Permanent Representative to the UN Dr. Chola Milambo

The Uinited Nations (UN) 2023 Water Conference saw the adoption of the Water Action Agenda, representing the voluntary commitments of nations and stakeholders to accomplish the Sustainable Development Goals (SDGs) and their targets connected to water. At this conference, The Water Resources Management Authority (WARMA) presented the approaches the institution was taking in water resource management in Zambia. Among the messages conveyed to the conference through various presentations and sideline interactions, WARMA indicated its long-lasting resolve and commitment towards the bottom-up approaches in water resilience initiatives, adaptive capacity, and financing. WARMA with the Nature Conservancy of Kenya co-hosted a dialogue forum to discuss investments in nature-based solutions and locally-led catchment initiatives at national and subnational levels. The WARMA Director General Eng. Kenneth Nyundu was among the panelists who delivered key messages on investments in nature-based solutions in society as a whole. WARMA delivered a key message on how science needs to embrace indigenous knowledge to acquire community-led solutions which result in sustainable win-win outcomes.

At the event, WARMA highlighted some ways in which the institution is making strides in ensuring that water governance is inclusive and participatory in nature. Zambia through its Eighth National Development Plan has resolved to build water infrastructure that is resilient to climate change and water risks aimed to promote agricultural production. Further, the country's water legal framework promotes stakeholder-driven solutions that include water use efficiency and water harvesting to ensure water security for present and future generations.

The government of Zambia through WARMA recognises the need for water security as key to supporting socioeconomic development. Therefore, WARMA has developed deliberate water resources management strategies that are adaptive to the effects of climate change and ensure that there is water security and resilience.

At the conference, WARMA highlighted that the institution is working to remove hydrological data and information barriers by optimizing digital solutions for water resources management. This will enhance the country's preparedness to manage the ever-changing future water risks associated with climate change.

WARMA delivered that, the institution can not work in isolation in the execution of its mandate, but that it is partnering with cooperating partners such as International Water Managment Institute(IWMI), World Wide Fund for Nature, and GIZ, among others in order to sustainably manage, protect, preserve and conserve water resources in the country.



TRADITIONAL LEADERSHIP CRITICAL IN ENSURING EFFECTIVE WATER RESOURCES GOVERNANCE



n the first quarter of the year 2023, WARMA took part in the N'cwala Traditional Ceremony themed ''40 – 40, Love, Peace, and Unity''. As part of its Corporate Social Responsibility and Investment (CSRI) programme, the Water Resources Management Authority partnered with the Ngoni traditional leadership during the Ncwala ceremony to harness the value local leaders play in water resources management. WARMA believes that traditional leaders are critical in effectively managing water resources and other eco-sensitive areas, for the greater good. Traditional leaders are instrumental in achieving equity in managing water resources because they are responsible for allocating traditional land to settlers. WARMA therefore sees that having traditional leaders on board will help drive the agenda of adherence to the Water Resources Management Act No. 21 of 2011 when presiding over all land and water-related matters around water sources. Further, WARMA undertook stakeholder engagements in Eastern Province with a view to improve and strengthen water governance and management.

The 2023 Newala traditional ceremony

Proceedings at the 2023 N'cwala Traditional Ceremony

brought together not only the Ngoni-speaking people of Malawi, Zambia, and Mozambique but all other tribes from all walks of life across the African continent and the world over. This year's ceremony was particularly important and special because it commemorated 40 years of the revival of the Nc'wala ceremony after a prolonged ban by the BSA during the British Anglo war which took place in 1899 and 1890. The event further signified Senior Chief Mpezeni's 40 years of being on the throne as the Inkhosi yama Nkhosi of the Ngoni people. His Majesty Paramount Chief Mpezeni IV hosted various stakeholders, government leaders, and general members of the public drawn from all over the country and beyond.

The 2023 N'cwala Traditional Ceremony was graced by the Local Government Minister Hon. Garry Nkombo MP who was representing the Republican President His Excellency Mr. Hakainde Hichilema. During his speech, the Minister indicated that this year's theme resonates well with the -government's agenda as it champions togetherness. The Hon.



Local Government And Rural Development Hon. Garry Nkombo MP

Minister said Zambians should always remember to strive for unity, love, and forgiveness as common goals for success. He added that it is important to live according to the principles of God and to remain united if people are to develop individually and as a community. The Minister indicated that the Cabinet will put into consideration the proposal to rename Great East Road to Umozi Road. He further stated that the Government supports the fight to stop early marriages in Eastern Province as this is top on the agenda of the Republican President.

The event gave way to extensive media engagement. WARMA through its Board Chairperson Dr. John Kunda and Vice Board Chairperson Dr. Elenestina Mweelwa, delivered messages on the importance of concerted efforts in managing the country's water resources. It was stressed that despite being central to all developmental efforts, water is currently facing growing pressures across the country, from urbanization to over-consumption, and the demands of agriculture, energy, and food production. Therefore there is need to strengthen the framework for water resources management through an integrated water resources management approach. The Board Chairperson and the Vice Board Chairperson further called on the public and general water users to work with WARMA in order to safeguard our water and water–related environments for generations to come. It was further stressed through these media engagements that the critical role that WARMA plays in the equation of socioeconomic development is unmatched and must



WARMA Board Chairman Dr. John E. Kunda during an interview with ZNBC

be supported by all stakeholders. The media interviews were carried out by the Zambia National Broadcasting Corporation (ZNBC TV), Breeze FM, 3 FM, and Muvi TV.

The WARMA team further engaged the Minister of Water Development and Sanitation Honorable Mike Mposha. The team discussed among others the importance of engaging traditional leaders in the interplay of managing the country's water resources. The meeting touched on policy, institutional and legal frameworks towards supporting economic growth and improving livelihoods through sustainable water resources management.

While at the ceremony the WARMA delegation engaged various stakeholders with keen interest in water resources management. WARMA officials held bilateral talks with Eastern Water



WARMA Vice Board Chaiperson Dr. Elenestina Mwelwa during an interview with Breeze FM

and Sanitation Company (EWSC) Limited. The EWSC officials in attendance were the Managing Director Eng. Aaron Mulinda, the Technical Manager Eng. December Banda, the Finance Manager Mr. Richard Nonde, and the Public Relations Officer Mr. Moses Nsunge.

The EWSC Managing Director brought two major things to the attention of WARMA. Firstly, the issue at the Lundazi bridge construction site on the Lundazi reservoir, and secondly the contamination of the Lutembwe River caused by an existing dump site established by the Chipata City Council.

The Managing Director indicated that the Lundazi reservoir continues to be contaminated for consecutive three (3) years because of the continued breaching of the cofferdam into the dam reservoir. He expressed worry that even after the breaching, the contractor had not removed the remaining earth on the cofferdam section to prevent siltation and turbidity into the dam reservoir. He said the dam depth has been reduced so much that the pumping of water had to be relocated from its original position to a more appropriate station.

Additionally, the EWSC Managing Director expressed worry that the dumping site established by the Chipata City Council has continued to contaminate the river that supplies water to the city. He indicated that WARMA should take an interest and look into the issue with the urgency it deserves.

In response, WARMA Director General Engineer Kenneth Nyundu assured that WARMA will facilitate a meeting with the Road Development Agency (RDA) in Lusaka to discuss the issues boarding on the Lundazi Bridge construction.

The WARMA team visited the Lundazi bridge construction site to appreciate and ascertain the breaching of the cofferdam into the dam reservoir that Eastern Water and Sanitation Company used to supply water to the Lundazi district.

During the site visitation, it was found that the two cofferdams had encroached into the Lundazi dam reservoir. Further, the team found that the Lundazi bridge deck had been completed. The bridge approaches have been raised to meet the bridge abutments; therefore, the people of Lundazi have commenced using the bridge in its current form. The high turbidity levels caused by the breached cofferdam in the reservoir could visibly be seen.

Water resources play a very significant role in enhancing socio-economic development of the country. Water is seen to be at the center of development under the equity principle of water allocation and distribution. The concept of Integrated Water Resources Management (IWRM) requires the integrated management of water resources by all players. IWRM further provides for enhanced coordination in the development and management of water resources to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.





Breached Coffer Dam in Lundazi District

WARMA therefore endeavors to lead a process of adequate consultation and coordination in managing Zambia's water resources. All key sector players and other stakeholders with a vested interest in the resources ought to be brought on board so that no one is left behind. Such proactive efforts by WARMA under its Corporate Social Responsibility and Investment (CSRI), and Stakeholder Engagement Programme aim to harness the combined efforts, knowledge, and expertise of various stakeholders as well as understating their water resources' competing needs. WARMA shall continue to engage stakeholders as well as traditional leaders and other water users for a greater common goal of achieving sustainable water resources management.



Any season, is the reason to conserve water

BREAKING BARRIERS A WOMAN IN A MALE-DOMINATED BUSINESS



Being a woman in a maledominated world can come with a number of challenges. Gift Musonda who is the only Zambian female borehole driller has described her experience in working in a male-dominated industry as one that is challenging but motivates her to do better.

Gift Musonda is currently the only woman with a borehole drilling rig registered with the Water Resources Management Authority (WARMA). Gift narrated that it has always been her dream to run a business but never imagined herself in a business run mostly by men. What started as a mentorship programme from her previous supervisor who owned a drilling company now saw Gift become the only female with a borehole drilling rig in the industry. She recounts that in 2018, her major role as an employee of a named company was to process permits with WARMA, conduct site visitations as well as the installation of pumps. She said her work exposed her to various aspects of the business hence amassing the know-how and experience that she currently is using to run and manage her business. She said her dream to engage in business materialised in 2022 after she acquired her own drilling rig. Gift then registered her drilling rig with WARMA and set sail in her business

In this business as a driller, Gift managed to succeed due to the positive and forwardlooking work culture that drives her business. She stated that she believes in being honest in all her businesses and being professional by following all the required guidelines from WARMA. She added that as a person who owns a drilling company, she has made sure that she has invested in good surveyors that are registered and recognised by WARMA and would always communicate to her customers the meters it would take to drill and pump water before engaging in the process.

"client satisfaction and good communication is key to ensuring that you have more customers. This is the problem that most of my fellow drillers seem to have. They do not recognise the need to effectively communicate with their customers" she noted.

Working as a female borehole driller for Gift might have been challenging but it has been a great opportunity for her to learn dynamic issues across industries. She implored fellow Zambian women not to be skeptical about joining the male-dominated industry, but to join the 'bandwagon' as well as keep providing professional services to their clients.



THE DEPENDENCE SYNDROME OF HUMANS ON THE ENVIRONMENT



HUMAN ACTIVITIES ON WATER BODY- MPULUNGU HABOUR

umans are greatly dependent on the ecosystems or the environment for daily survival and to meet their needs. The environment provides us with food, water, and air.

The environment also regulates diseases, pathogens, and climate change, support us with soil fertility, nutrient cycling, and more. Since the beginning of time, communities have depended entirely on healthy ecosystems to do many things including purifying of the air we breathe, sequester carbon for climate regulation, cycle nutrients for clean drinking water, and pollination of our crops. Humans interact with the environment to obtain food, water, fuel, medicines, building materials and many other things.

However, advances in science and technology have helped us to exploit the environment for our benefit, but we have also introduced pollution and caused environmental damage. Unless humanity upholds restoration of the environment and understands that it is the force that drives life, the ecological collapse of society is inevitable. It should be emphasized here that the environment with which we interact is directly linked to the well-being of our natural water resources. It is important to note that advances in human activity on the environment has its own specific impact, usually directly or indirectly on water resources. Our understanding is that the magnitude of the impacts on water resources will vary from place to place and will depend on degradation posed on factors that have a direct bearing on the quantity and quality of water. These human activities include cutting down of trees, over grazing of lands, replacing of grasslands, urbanization, wetlands encroachment or reduction, and mining in quarries or large-scale open pits.

Water pollution is one effect that comes as a result of uncontrolled human activities. Pollution and contamination of water bodies such as rivers, lakes and streams is largely caused by a variety of natural and human induced activities. Despite the amount of efforts and education around this important topic, pollution and water contamination keeps appearing on global agendas partly because of selfish human motives. A vivid and close examples of causal activities include run off from agricultural lands that is has chemicals such as fertilizer, discharge from factories and wastewater treatment plants, seepage from landfills and plastic waste from fishing nets in rivers. Water pollution is a topic that we cannot completely exhaust in one article but our call for reduction in the human activities that fuel

such vices is loud and must be echoed by all.

In addition, it is important that communities are educated and much documentation is produced on the importance of sustainably managing our water resources through comprehensive data on the long term impacts of such vices on human life and the economy. Further, it is the duty of decision makers to ensure that policies that protect our natural resource are put in place with severe punitive measures for individuals found wanting.

Government through various wings is however alive to these effects posed on our water resources and stands positive to reducing or eliminating these negative human vices. The Ministry of Water Development and Sanitation through the Water Resources Management Authority (WARMA), is calling for concerted efforts aimed at protecting our water resources. WARMA through its mandate of properly managing water resource across the country, is enforcing measures that safeguards the future of Zambia's waters through the sustainable use of the resource. Further, WARMA is ensuring that there is compliance to the rules and regulations in the abstraction and use of the water resource.

Be sure to join us join us in our next article as we discuss more on the negative human activities on the water resources.

UNDERSTANDING THE WATER PERMITTING SYSTEM



ambia's water resources are vital for the growth of the country's economy hence the use and management of these water resources determines the future and well-being of our population today.

What then is the importance of conserving the water resource?

With human activities at the centre of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases. Regulating the abstraction of Zambia's water resource is prudent to ensure citizens have access to good quality water allocated in the right quantities now and for future generations.

Currently, the world is grappling with climate change that keeps affecting individual countries, economies and people in different aspects. Many times, the world has witnessed calamities such as flood that has left dark trails in our communities; to extents of claiming lives and destroying property. Our country Zambia has witnessed the effects of climate change in various forms ranging from droughts to excessive flooding. These effects have in the long run resulted in dried up rivers and streams, posing a serious threat to human, plant and animal life that depend on water.

Therefore, to ensure the available water resource serve the immediate needs of Zambians and the environment, while ensuring that the future generations are taken care of, there is need to manage the water resources prudently.

How then do we ensure that water is

conserved and preserved for the better good?

Government of the Republic of Zambia formulated a regulatory body to manage all water resources and water related environments for the benefit of its citizens. This regulatory body is called the Water Resources Management Authority (WARMA). WARMA, a statutory body established under the Water Resources Management (WRM) Act No.21 of 2011, has the mandate to regulate, manage, develop, protect and conserve water resources in the country. One of the ways that WARMA regulates the abstraction of water is through the issuance of Permits (Permitting System).

It is important to underscore here that the benefits of a functional water permitting system is the preservation and protection of Zambia's water resources which in turn help regulate the abstraction, allocation, use, development and management of water resources in a sustainable manner. The water permitting system is cardinal to Zambia or any other country as it allows the regulator to reduce potential hazards of unsafe abstractions of water resources, and reduce the risk of having less water flowing in rivers or streams.

By definition, a Permitting System is a structure that allows the Authority to issue licenses to water users for purposes as specified by the Water Resources management Act. WARMA as a regulator implementing this permitting system has a modified Online Permitting System. This is a computer-based system tool which has been developed to automate the task of managing the water permits. This therefore means that an individual who intends to abstract water for commercial or domestic use through methods such as drilling of boreholes, weirs, or dams, is required to notify WARMA of the proposed activity in writing. Here, WARMA has the right to authorise or deny the permit application.

Further, WARMA has a water permit database used for the compilation of all related water permit applications. The water permit database system is critical in the operations of WARMA as the approach is governed by a core principle laid down in the Water Resource Management Act, and states that "Water shall be used efficiently, sustainably and beneficially in the public interest for the present and future generations."

The Authority has various water permits and each water permit has a different procedure to be followed before it is issued to the applicant. Among the water permits issued by WARMA are, the Ground Water Permits which includes permits issued for purposes such as the drilling of boreholes. With regards to borehole Water Permit, the Water Resource Management Act states that "a person who intends to drill a borehole and the occupier of the land shall before any construction begins notify the Authority of the proposed construction." WARMA also issues Surface Water Permits which are usually used for agricultural and municipal purposes. In addition, WARMA issues permits for construction of hydraulic structures and also permits for **Dewatering**. The Water Resources Management Act defines Dewatering as the process of removing surface or ground water from a particular location to another for the purposes of construction. Further, the Act states that "a person who intends to move water for purposes of construction must seek a permit from the Authority."



PROCESS OF ACQUIRING DEWATERING PERMIT

STEP



Accompanying documentation mining licence or proof of ownership of land site plan geotechnical report on the dewatering system used. STEP 2

WARMA conducts an engineer's investigation on the site (physical verification)

STEP

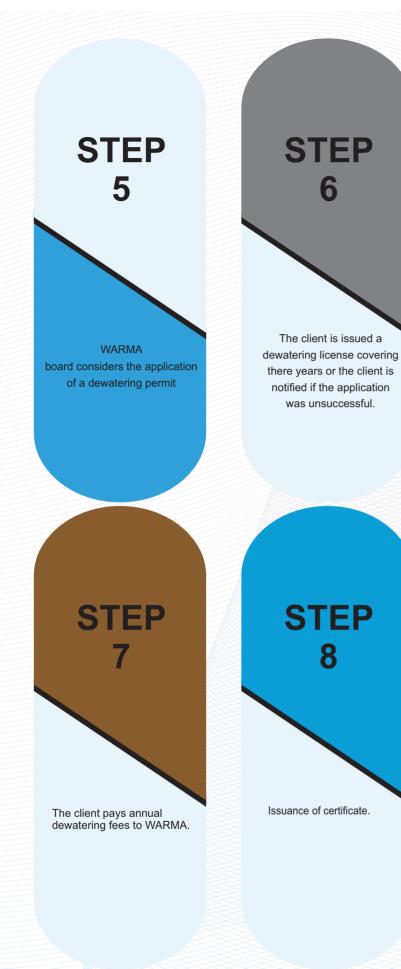
Client is issued with an invoice for dewatering application fees which are the substantive fees for the particular year. STEP

Client fulfils the payment of fees.

WARMA advertises the dewatering application in the print media.

DID YOU KNOW THAT PROSESSING OF WATER PERMITS NOW TAKES TWO AND HALF MONTHS?









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WARMA

WATER RESOURCES NEWSLETTER



Water Resources Management Authority

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