

High-tech drought monitoring system key to agro sector

By JEFF KAPEMBWA

ZAMBIA'S climate change predicament adduced from the prolonged drought affliction will soon be a case study of how the southern African state found a durable solution to deter recurrences of the calamity that deprived farmers and people of a stable livelihood.

After years of enduring droughts—significantly one of the worst between 1991 and 1992—afflicting over four million people and causing widespread food shortages, Zambia has cause to smile and so do farmers who are the worst victims of the crisis.

In or around 2015 and 2016, Zambia experienced the El Nino weather pattern that caused severe drought and affected over two million people across the country, leading to food shortages.

The El Nino and La Nina weather patterns, that swept Zambia in 2019 enveloped over three million people after massive crop failure and further induced water shortages, also evoke memories and the need for a durable countervailing measure.

Reputed for massive losses on crops and livestock, heightening poverty levels and leaving children malnourished, drought could be overcome with the new innovation and mitigate the effects.

Arguably, drought is dreaded for its lengthy dry weather which affects crops, causing famine, drying up water reservoirs in many parts of the country during its annual January to April period.

February 20, 2023 marked Zambia's u-turn from the after-effects of the drought to a bright future with sustained gross domestic product (GDP) after it launched the Zambia Drought Management System

(ZADMS) under the Ministry of Agriculture with help from donors.

The high-tech satellite drought monitoring system, envisaged to equip Zambia with pre-drought data to help mitigate severe impact is a CGIAR Initiative on Climate Resilience (ClimBeR).

It can help to identify short dry spells that have occurred in recent years at the start of the rainy season.

It can monitor weather and give forecast for farmers' sake and help make decisions on crop planting.

Further specifications show that in the case of a moderate drought being forecast, it might subsidize simple climate-smart technologies for farmers. Plus, it could provide information to finance and insurance suppliers, so they might develop new climate-adaptation finance products.

The new system, if well applied would help overcome unpredictability on droughts which has severed the economy and affected economic growth unlike in the past for want of a framework, a move which has helped authorities to decide what actions to take to avert drought and other calamities.

The ministry, farmers and interest groups will collaborate and work jointly with other ministries, research centres, extension workers, farmers and private-sector through shared data.

People at district or other homestead will share data so long they are linked to any service provider using



•ACTING Agriculture Permanent Secretary Peggy Mlewa (centre) officially launched the Zambia Drought Management System platform and technical brief.

the same facility to share data on drought related occurrences as the ZADMS will provide an end-to-end drought management system.

The ministry of agriculture, IWMI International Water Management Institute (IWMI), Accelerating the Impact of CGIAR Climate Research for Africa (AICCRA) joined hands and launched 'the first-ever' Zambia Drought Management System (ZADMS), a CGIAR Initiative on Climate Resilience (known as ClimBeR) to counter related effects.

IWMI managing director Giriraj Amarnath is optimistic that the new system will inevitably provide first-hand information on where, severity and how drought can be managed while saving on food import costs.

"While ZADMS can't change the weather it can help the Zambian

government to make informed decisions and help them deliver the information that farmers need to cope" said Mark Smith, IWMI's Director General.

The early warning is expected to assist cost save food imports for affected families as it improves the Government's awareness on impending drought, a calamity which is unpredictable.

"Life in Zambia is becoming increasingly precarious because climate change is unleashing more floods, droughts, and unpredictable rainfall," said Mark Smith, IWMI's Director General.

He notes: "While ZADMS can't change the weather it can help the Zambian government to make informed decisions and help them deliver the information that farmers need to cope".

The system, he says ensures that data is primarily presented as

easy-to interpret on-screen maps but can be output as user-friendly drought bulletins if required, according to developers.

Zambia now becomes one of the beneficiaries of the globally accepted software and widely used in East Asia including India, Bangladesh and other countries-prone to drought and other climate effects according to experts associated with the system popular chiefly in East Asia.

"Zambia's new system uses the same technology as our tried-and-tested South Asia Drought Monitoring System (SADMS), which we began developing in 2014," says Giriraj Amarnath, ClimBeR Country Lead Zambia and Research Group Leader for Water, Risks to Development and Resilience at IWMI.

"SADMS is now regularly used by the Indian Council of Agricultural Research,

Sri Lanka's Disaster Management Centre, UN World Food Programme, partners of the World Bank and others to mitigate drought risk."

In the past he adds, difficulties in locating, accessing and having the computing power to analyze weather and agricultural data were difficult and it made drought monitoring a slow and costly process.

The ZADMS comes handy as it will overcome this challenge by presenting all the data required for monitoring and managing drought through a single portal, which is freely accessible to anyone with a desktop computer and internet access.

"ZADMS' usability facilitates collaborative working at all levels between institutions and across sectors, which is vital when seeking to mitigate the multiple and complex impacts of climate change," says

Ana Maria Loboguerrero, the ClimBeR Lead and scientist at the Alliance of Bioversity International and CIAT.

Participants working in meteorology, water resources, agriculture and disaster management explored the ZADMS' capabilities in drought monitoring and early warning; assessed ways to institutionalize the ZADMS at national and sub-national levels on existing knowledge products.

This helped to promote multi-institutional collaboration to mitigate drought risks; and discussed the development of contingency plans as part of Zambia's future drought management strategy.

University of Zambia lecturer in the school of agriculture Elijah Phiri is happy with the 'anti-drought device and that the ZADMS was a vital tool for research by students in that field of

study. The system was vital in redressing the recurring droughts in the country as it will help provide early warning data and help prepare through research.

The collaboration it is envisaged will help players to synchronise initiatives and devise new technologies and approaches to addressing the social, environmental and economic consequences of climate change.

The United Nations estimates show loss estimates to swell between 290 billion and 580 billion USD annually by 2030. Heli Uusikyla, Deputy Director of OCHA's Operations and Advocacy Division calls for urgent funding to overcome climate related calamities.

"They (Africa) urgently need climate financing to be unlocked to enable them to adapt to the changing climate and build their resilience for the difficult road ahead."

African Development Bank (AfDB) chief executive Akinwumi Adesina, supports Africa's quest for resilience and adaptation against climate change effects.

Africa today loses between \$7 billion and \$15 billion a year to climate change and is projected to raise the losses to a galloping \$50 billion a year by 2030, the Pan African bank notes.

"Africa doesn't have access to the financing it needs to adapt to climate change and meet nationally determined contributions. By 2030 Africa will need between \$1.3 to \$1.6 trillion. You're talking about a lot of money," said Dr Adesina.

The battle for a better world, devoid of drought and climate change effects still rages, but Zambia's initiative to adapt ZADMS could be expatriated in other countries within and beyond the region and save the cost on humanity.



Mulonga

Water Supply and Sanitation Co. Ltd

IFB NO: ONB/MWSC/CHEM/ALUM/02/2023/24

TENDER FOR THE SUPPLY AND DELIVERY OF ALUMINIUM SULPHATE

ISSUE Date: 14th February, 2023

- Mulonga Water Supply and Sanitation Company Ltd has reserved funds from its internally generated resources and intends to apply part of the funds to cover eligible payments under the Contract for the Supply and Delivery of Aluminum Sulphate.
- Mulonga Water Supply and Sanitation Company Ltd now invites sealed bids from all interested Bidders.
- Bidding will be conducted through the Open National Bidding (ONB) procedures specified by the Public Procurement Authority (PPA) Act No. 8 of 2020 and PPA Regulations SI No.30 of 2022.
- Interested eligible bidders may inspect the bidding documents at the office of the Procurement and Supply Manager, Mulonga Water Supply and Sanitation Company Limited, Head Office, Musonko House, Kabundi Road, P.O Box 11712, Chingola, Zambia from 08:00 to 16:00 hours. Telephone number is (260)-212-312199, and Email address: michael.mbolela@mwsc.com.zm.
HOWEVER TELEFAX/ELECTRONIC OFFERS SHALL NOT BE ACCEPTED.
For clarification purposes, interested eligible Bidders wishing to obtain further information may contact the Procurement and Supply Manager at the address stated above provided that such query is received in writing and no later than 28th February, 2023.
- A complete set of solicitation documents may be purchased by interested bidders upon payment of a non-refundable fee of K1000.00 or its equivalent in any freely convertible currency at the prevailing exchange rate in cash or bank certified cheque.
- The bids, in sealed envelopes and accompanied by a Bid-Security duly signed and sealed must be deposited in the tender box at the Reception Area, Mulonga Water Supply and Sanitation Company Limited Headquarters, Musonko House, Kabundi Road, P.O Box 11712, Chingola on or before Tuesday 14th March, 2023 at 14:30 hours.
- The Bids should be sealed and clearly marked "IFB No: ONB/MWSC/CHEM/ALUM/02/2023/24. Supply and Delivery of Aluminum Sulphate
- The closing date for the receipt of bids is Friday 17th March, 2023 at 14:30 hours local time. The Bids shall be opened immediately thereafter in the Boardroom at Mulonga Water Supply and Sanitation Company Limited Headquarters, Musonko House, in the presence of bidders or their representatives who choose to attend. LATE BIDS SHALL NOT BE ACCEPTED.

Note that the initial closing date of Friday 14th March 2023, has been moved to Friday 17th Marth 2023.

Michael Mbolela
Manager-Procurement & Supply
For /Managing Director

MULONGA WATER SUPPLY AND SANITATION COMPANY LIMITED

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Mulonga

Water Supply and Sanitation Co. Ltd

IFB NO: ONB/MWSC/SS/02/23/24

TENDER FOR PROVISION OF SECURITY SERVICES 2023/2024

ISSUE Date: 14th February, 2023

- Mulonga Water Supply and Sanitation Company Ltd has reserved funds from its internally generated sources and intends to apply part of the funds to cover eligible payments under the Contract for the Provision of Security Services.
- Mulonga Water Supply and Sanitation Company Ltd now invites sealed bids from all interested Bidders.
- Bidding will be conducted through the Open National Bidding (ONB) procedures specified by the Public Procurement Authority (PPA) Act No. 8 of 2020 and PPA Regulations SI No.30 of 2022.
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- The Bids should be sealed and clearly marked "IFB No: ONB/MWSC/SS/02/23/24 Provision of Security Services.
- The closing date for the receipt of bids is Friday 17th March, 2023 at 10:30 hours local time. The Bids shall be opened immediately thereafter in the Boardroom at Mulonga Water Supply and Sanitation Company Limited Headquarters, Musonko House, in the presence of bidders or their representatives who choose to attend. LATE BIDS SHALL NOT BE ACCEPTED.

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