



Second Maputo City Dialogue



Avenida Hotel, Maputo

27th September 2018

Compiled by
Genito Maure and Hecralito Mucávele

With contributions from Izidine Pinto and Raul Chilaule



ACRONYMS

AdeM	Water of the Region of Maputo
ARA Sul	Regional Administration of Waters in the South
CMM	Maputo Municipal Council
CRA	Council for the Regulation of Water Supply
EPA	the United States Environmental Protection Agency
EPANET	Operational Management Model of Water Supply Systems.
FIPAG	Water Supply Investment and Asset Fund
FRACTAL	Future Resilience for African CiTies And Lands
INAM	National Institute of Meteorology

WELCOME MESSAGES

Maputo PI, Genito Maure

The session began the city dialogue and opened with a welcome from Genito Maure to the participants, thanking them for being available to participate in the event. He briefly explained about the FRACTAL project in nine cities since most of the participants were part of the previous events. He said that the project is based in nine cities in Southern Africa and that in Mozambique it is based in the city of Maputo. Activities began in 2015 and one of the objectives of the project is to strengthen a platform for dialogue, related to climate issues. He emphasized that in the nine cities each identified the burning problems they have, through the first learning laboratory, where they identified problems related to water scarcity, problems in the health sector, among others. For this event, the water issue was similar to the first dialogue, where it was sought to understand the management and challenges in the different water sectors in the Greater Maputo region and in the decision-making process.

THE MUNICIPAL PLAN FOR ADAPTATION TO CLIMATE CHANGE AS A TOOL FOR DECISION-MAKING IN THE WATER SECTOR

Raul Chilaule

[Presentation here](#)

In this presentation Raul sought to raise some of the problems related to the water sector in the face of climate change and the importance of the Municipal Plan for Adaptation to Climate Change as one of the alternatives for decision making in the water sector. He emphasized the following topics:

- The plan was designed to respond to climate change issues, and the basis for its elaboration was through surveys in all Municipal Districts and in different sectors including the water sector.
- Basin Construction: The plan provides as one of the alternatives that the municipality adopted in the face of water shortages or floods in informal settlements, was the construction of watersheds. The purpose of these waters and the irrigation and uses in construction, not for consumption.
- Regarding water supply in the city of Maputo, the Municipality has been working with the water company of the Region of Maputo through the indication of priority areas for future interventions.
- The peri-urban areas that include KaTymbe KaNyaka districts, the water supply is provided by the private providers in which the Municipality is developing the licensing activity thereof in coordination with the National Directorate of Water Supply.
- It should be noted that by December of this year, the CMM together with FIPAG will introduce the rate of sanitation and drainage.

Presentation session and questions were as follows.

WATER REGIONAL ADMINISTRATION-ARA SUL

João Costa Neto

[Presentation here](#)

In this session the first presentation was made by ARA Sul with the title 'WEAP - Use in the management and planning of the bowl of Umbelúzi'. The presenter started the presentation saying that this is an ad hoc tool, and WEAP was chosen because it is simpler. He spoke of the following potentialities of this tool.

WEAP compares favorably to other similar tools and is available for free to developing countries, whichever you choose.



Genito sought to know how and how they control the amount of water that is taken directly from the reservoir. João Costa of ARA Sul replied that they control through the type of use, and area.

One of the gaps, and the lack of measuring instruments, even so farmers resist the measures, the measurements are made by calculating the area of irrigation and crops - direct measurement.

Gongolo of INAM asked if it has some type of water measurements according to the type of crop. ARA Sul replied that no, but they were based on the types of licenses and the activity they develop. No licenses are granted to those who make domestic consumption, the licenses are only for commercial purposes.

All users and consumers of water in the basin are registered.

As for the quantification of water use, a process for quantification based on the use of satellite imagery is in the beginning and this should ideally also cover Swazi.

WEAP is also used when it is intended to provide new licenses to water users in the Basin, and since 2014 there has been no change to the model. The model will only change when new users appear. Historical data is needed to run WEAP.

The adoption of a strategic model would be more ideal because it would be necessary to have information from the whole Basin, for this purpose it would be necessary to have information from Swazi that has not been easy to have.

In some recent years the flow has been lower than anticipated and has had to be restricted, such as cut the hydroelectric in 2015, cut to farmers in 2016,

Genito questioned about the increase in 3 degrees of the global average - what would be the alternative? João Neto said that there is a possibility of transferring water from Incomati to city. Genito proposed to do a study of the climatology of the place if not the alternative is not applicable. João Neto answered that the Incomati basin has 5 times more capacity than that of the Umbeluzi, but because it is in the coastal region there is the problem of the salt intrusion and it would be necessary to build an infrastructure to prevent the entrance of sea water.

Congolo of INAM said that adaptation requires, financial responsibilities, knowledge, and technologies since climate change is a reality.

Genito questioned how AdeM is the main recipient of water in the basin, when there is prediction of water scarcity as the information is made. João Neto replied that ARA Sul has regular meetings twice a year of river basin committees prior to the rainy season and then that AdeM is part and receives the above information. These committees were adopted because of floods and not dry, but it is already part of this meeting to discuss droughts or possible droughts and users are informed what will happen.

MAPUTO WATER REGION-ADEM

Odaisa Maira

[Presentation here](#)

In this session the presentation was made by AdeM with the EPANET - Operational Management Model of Water Supply Systems. The presenter started the presentation saying that this model makes the water management from the center distributors with the following characteristics:

- Application developed by the United States Environmental Protection Agency (EPA);
- Designed for hydraulic and water quality modeling in pressurized drinking water distribution systems consisting of conduits, junction knots, pumps, valves, reservoirs;
- Static (momentary) and dynamic modeling (extended period);

- It allows monitoring of the flow rate in each pipeline, pressure at each node, the water level in the tanks, chemical concentration, water age, and power source monitoring during simulation.
- It allows interoperability with the following software: ArcGIS, AutoCAD and QGIS.



It has the following applicabilities:

- Design of new water supply system;
- Modernization / rehabilitation of existing systems;
- Operational optimization of tanks and pumps;
- Reduction of energy consumption;
- Investigation of poor water quality / contamination problems;
- Preparation of emergency plans;
- Vulnerability studies

One of the major concerns is the loss of waters that are characterized in physical and commercial - the physical through leaks in the plumbing and commercial through water

theft, so there is in the AdeM a department of loss and repair management that detect the losses based on GPS.

ARA Sul sought to know whether AdeM has an automated loss management system. According to AdeM is underway the use of the telemetry system the same system used in ARASul and a pilot project of prepaid controller to control water consumption.

Board of water supply adjustment-CRA

The presentation was then presented by the representative of CRA, who briefly outlined some of the responsibilities of this sector: Regulators of water providers, suppliers and consumers, monitoring operators, seeking a balance between consumers and operators, approving tariffs, mediation of water price conflicts between consumers and suppliers, approval of water tariffs.

STAKEHOLDER DISCUSSION ON HOW THE WORK IN MAPUTO CAN BE DONE BETTER THROUGH A CO-EXPLORATION/CO-PLANNING APPROACH



More debates between both parties to build understanding of how they can work more collaboratively were encouraged, in the sense that the institutions in the water sector must

approach INAM expressing interest include climate information in their daily activities. Similarly the INAM has to get closer to the water sector and show the importance of the use of climate information in their activities.

REFLECTION, COLLECTIVE WAY FORWARD

For the closure of the activities of the day participants were asked to make a reflection about the event.

- Like the presentations made by colleagues;
- I didn't know of the existence of tools that are being implemented in the management of water;
- It was a meeting of a technical nature, and there is a need for the involvement of decision makers in the design of tools;
- Like the event and noted that urge the need for sharing of data and information between sectors in the development process of water management tools;
- Need to conduct more meetings of the same nature but involving decision makers;
- Positive, simple and constructive event;
- Like becoming aware of the existence of water management software;
- Need to take into account the climate information to develop water management tools.

Agenda

Future Resilience for African Cities and Lands Project

September, 27 2018

City Dialogue

Hotel Avenida

City Dialogue		
Time	Session	Facilitator
8.00-8.30	Registration & Tea/Coffee	
8.30-8.45	Official Welcome by Mr. Raul Chilaule, Maputo Council, City of Maputo	
8.45-9.45	Plenary session <ul style="list-style-type: none"> • Introduction of participants • Objectives of the City dialogue approach • Reporting back of Last Maputo City Dialogue • The municipal adaptation plan as a tool in the decision making on the water sector (Genito Maure Raul Chilaule Maputo City Official
9.45-10.15	Tea (and group photo)	
10.15-11.15	Responses to the questions of interveners in the decision making process	Representatives of Water sectors, INAM and INGC
12.00-13.00	Lunch	
13.30-14.30	Stakeholder discussion on how the work in Maputo can be done better through a co-exploration/co-planning approach	Izidine Pinto
14.30-15.00	Reflection, collective way forward	
15.00-15.30	Closing remarks	

ATTENDANCE LIST

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27 DE SETEMBRO DE 2018

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Participant photo