"GWML2 implementation in developing countries"-SADC Region

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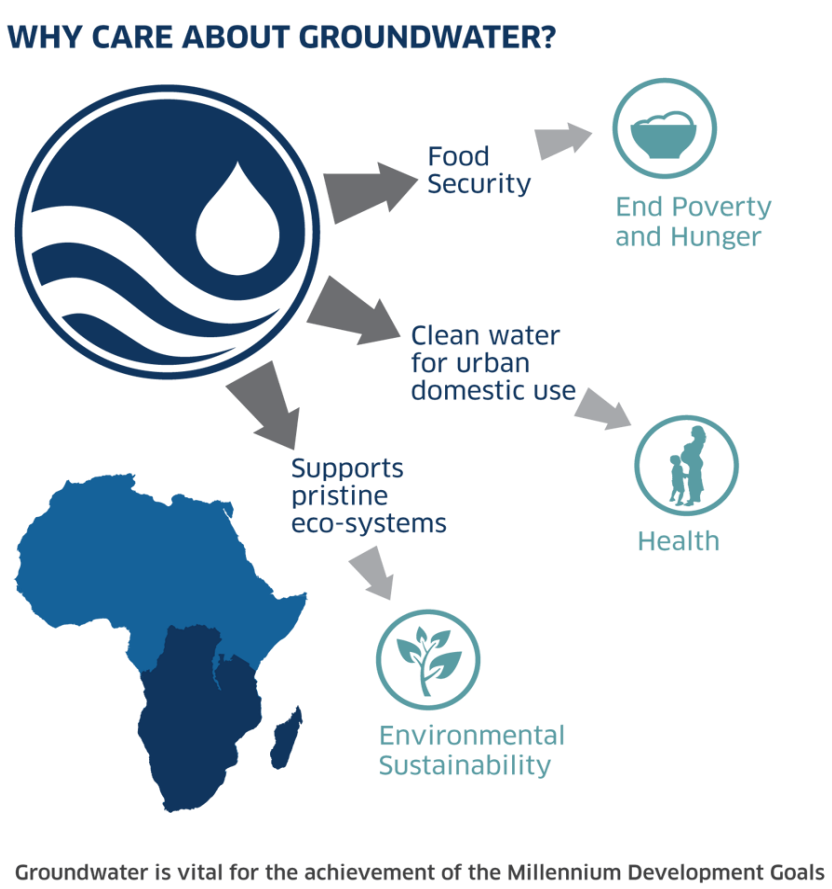
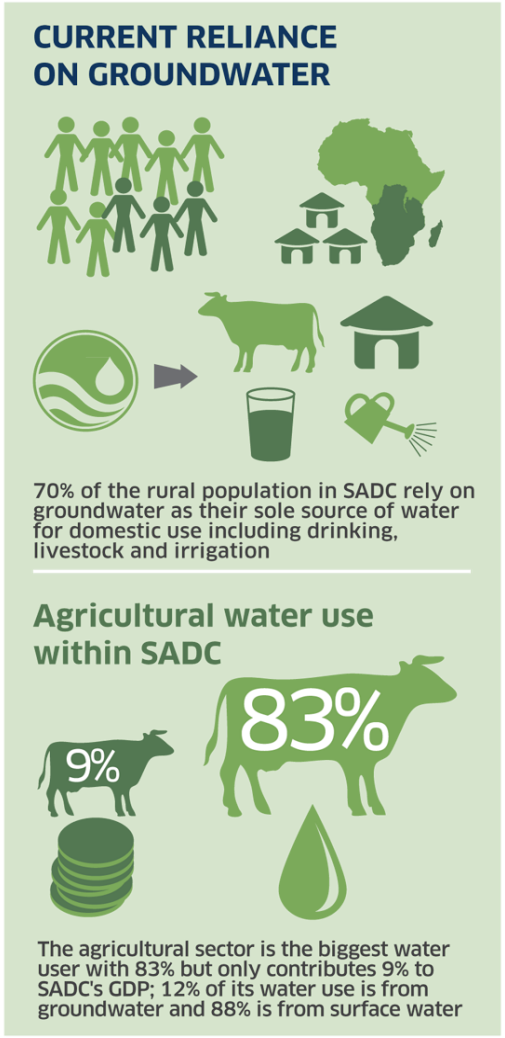
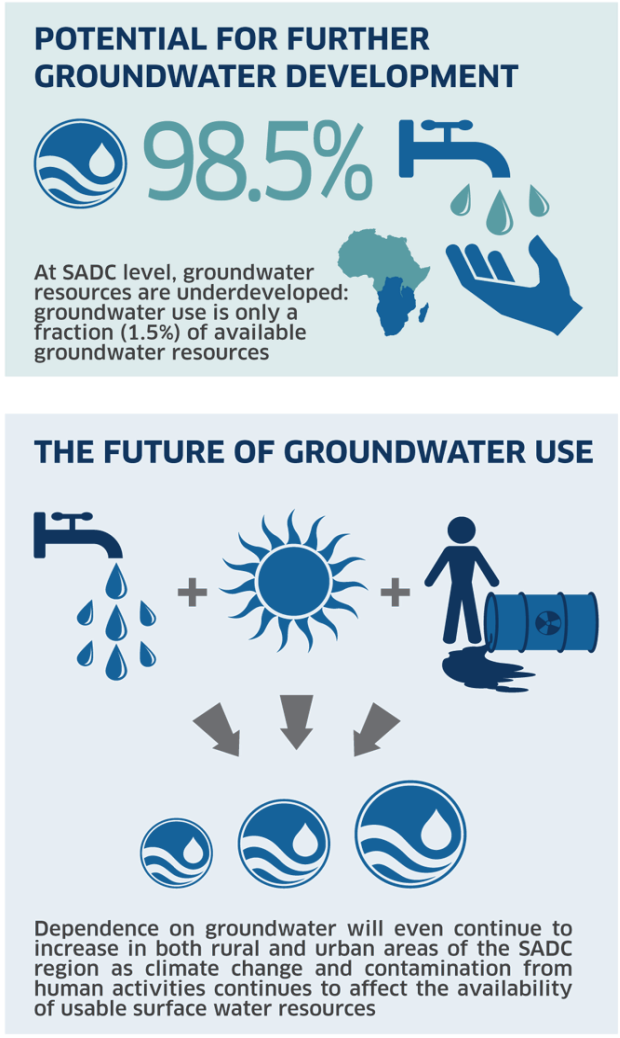
"GWML2 implementation in developing countries“ SADC Region







Each SADC member state collects and maintains its own Groundwater data/information infrastructure and cooperate through government and institutional framework in carryout project. The ***SADC Protocol on Shared Watercourses (adopted 1995, revised 2000)*** was framed to set the rules for the joint management of regional water resources are helpful in drafting data/information sharing agreements.

SADC Region Groundwater Infrastructure Data Management

For purpose of this workshop some projects done in the SADC region are briefly presented

Motivation:

1. Is a Groundwater Management standard necessary
2. Is the implementation practicable
3. Are there any constraints, and benefits of implementing GWML2 standard

SADC Region Groundwater Infrastructure Data Management

SADC-HYCOS (Southern Africa)

The objective of the SADC-HYCOS project was to improve regional cooperation, in the fields of water resources information, flood and drought management, land management, watershed protection and management of international waters in the inland SADC Member states (Angola, Botswana, DRC, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe). The project aimed at developing and/or strengthening the national and regional capacity in the fields of water resources monitoring, assessment and management. This called for the provision of water resources data and information in the form needed for decision making on all aspects of integrated water resources development and management.

https://hydrohub.wmo.int/en/projects/SADC-HYCOS

The major stride in this project is that the members states agreed in adopting a single data collection platform called Hydstra system. Hydstra/TS is a time-series data management system that provides tools to build and maintain time-series data archive. It is an Off-The-Shelf software solutions offered by KISTERS company. http://kisters.com.au/products.html

SADC Region Groundwater Infrastructure Data Management

Zambezi Water Resources Information Systems (ZAMWIS)

The ZAMWIS is an interactive, web-based data and information system based on contemporary and historical spatial data, hydrological time series, earth observation information; knowledge products and other related information. The data/information deposited comes from 8 riparian States to the Zambezi River Basin comprising: Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania , Zambia and Zimbabwe.

ZAMWIS is Powered by MIKE INFO 7.3 and MIKE Workbench 2017 7.3.0.0 a Off-The-Shelf software solutions offered by DHI.
http://zamwis.zambezicommission.org/INFO

SADC Region Groundwater Infrastructure Data Management

Botswana Integrated Groundwater Resources Data Management System

Botswana Integrated Groundwater Resources Data Management System project was completed in 2018. The project was funded by the World Bank as a grant and the grant being administered by Southern African Development Community Groundwater Management Institute (SADC-GMI)

The Government of Botswana through its Department of Water and Sanitation engaged the services of Aridus Botswana,Waterloo Hydrogeologic and Geosyntec Consultants International to build a GIS web-based water resources information system.(http://168.61.191.87/)

The project integrated the department's existing databases into HydrogeoAnalyst system, by implementing the National Integrated Geoscience System(NIGIS) model NIGIS-DATA-MODEL-66.08-1 Version 1.0 combining it with Hydro GeoAnalyst Environmental Data Model.
The NIGIS model was developed for the Government of Botswana by Singapore Technologies Electronics(SES) company under the project titled **National Integrated Geoscience Information System.**

Lessons from the project

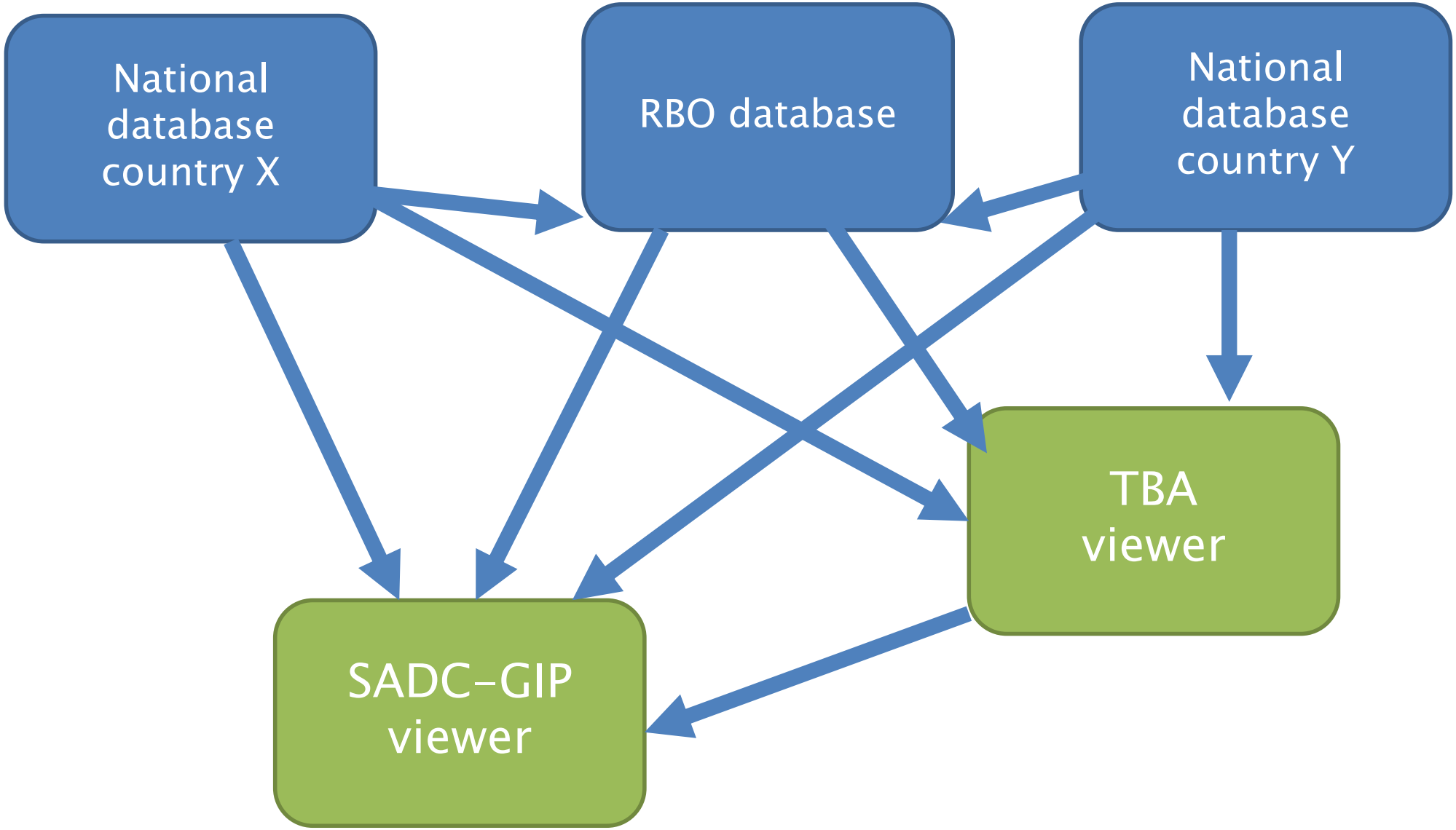
- share common goal towards improvement of livelihoods by collecting, evaluating and disseminating all data and information
- Systems have own data models
- Common challenges of lack of groundwater data/information, accessibility, quality, Metadata, Interoperability/incompatibility

Wayfoward

- Adopt common vision
- Implement a standard Groundwater data model - **GWML2**
- Overcome constraints by building capacity

Is it not what SADC vision smart data sharing is about? Refer to next slide…

Smart sharing of data- A vision for the SADC



Thank you!

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