



# Conceptualization of Basin Water Information System (BWIS)

Venue: Polytechnic of Namibia

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## Introduction

- The Basin Water Information System (BWIS) was conceived during the development of *an Integrated Water Resources Management Plan for Namibia, Theme Report 4: The Formation of Information and Knowledge Systems, August 2010.*

## Overall Objective of BWIS

- To provide relevant basin water data and information for informed decision making in the water sector at operational, tactical and strategic levels.



## **Focus of BWIS**

- Consolidating and processing all basin water related data and information
- Enhancing existing data and Information systems in the water sector
- Design adherence to existing water sector databases for ease of information flow and exchange
- Empowerment of decision makers at the basin level with relevant information



## BWIS Expected Output and Indicators

### ➤ Output

- ✓ Processing of basin water data and information consolidated

### • Indicator

- Accessible up to date basin water data and information in place

### ➤ Output

- ✓ Existing data and Information systems in the water sector enhanced with basin water data

### • Indicator

- Up to date basin water data rich information systems in the water sector



## **BWIS Expected Output and Indicators**

### ➤ **Output**

- ✓ System and data standards in the water sector databases developed and promoted

### • **Indicator**

- Operational data and information flow and exchange standards in place



## What has been done so far

- ▶ **Inception Report**
- ▶ **A situation analysis has been carried out**
  - To establish existing Information Systems that will compliment the BWIS initiative.

They include;

- **RUWIS** (Rural Water Information System):– water supply points.
- **HYDSTRA** :– water levels from all hydrological stations



- **WAQIS** (Water Quality Information System):– water quality data .
- **FIDSYS** :– Wood and Non–Wood Forestry Resource and Programmes.
- **GIS and RS IS (AMESD)**:– forest fires and geographic mapping
- **AMIS** (Agricultural Management Information System):– Decision Support System, Central Repository of MAWF structured and unstructured data
- **GROWAS** (Ground Water System):– Ground water Information to manage ground water resources



- **CIMS:**– Co–operation data
- **AGRISTATS:**– Marketing and production data, Agriculture commodity Prices, State owned irrigation farms
- **NAMLITS:**– Livestock identification and traceability
- **Systems Requirements Specifications Document (draft in place)**
- **Drafting of the BWIS Conceptualization Report (ongoing)**





## Existing Challenges

1. Limited information sharing within the MAWF and other stakeholders in the water sector
2. No harmonised standards and guidelines for data collection, storage, and reporting by the different information systems in the water sector
3. Poor data quality (not updated, incomplete etc.)
4. Inadequate data processing and analysis skills among staff
5. Existing ICT systems not standardized
6. Lack of a monitoring and evaluation system for monitoring ICT initiatives within MAWF
7. Inadequate awareness about the BWIS Project (roles and responsibility within MAWF and key stakeholders)



## Mitigation to the challenges

➤ Develop and implement of a basin water data/ information flow and exchange within MAWF and key stakeholders

*as per today's workshop expected outputs i.e.*

- ✓ *Current Data Flow Diagram (Water sector)*
  - ✓ *BWIS Outputs and Dimensions (facts)*
  - ✓ *Conceptual Models per subject – Hydrology, Geo-hydrology, Water Environment, Water Planning, Law Administration, Water Supply & Sanitation*
- Implement systems linkages between the BWIS and other existing information systems in the water sector
- Develop a MAWF unified and standardized Information Technology (IT) infrastructure platform



## Mitigation to the challenges (Continued)

- Develop a strategy to standardize data collection, storage, analysis, and reporting in the water sector
- Introduce measures to promote ownership (set up BWIS Technical Implementation Team – Subject Matter & System Specialists)
- Strengthen MAWF computer network and data security measures
- Develop and operationalise institutional level ICT Policy and Strategy



## Pre-implementation of the BWIS Action Activities

MAWF need to put in place an enabling environment for the BWIS implementation;

- Set up a BWIS Technical Implementation Team – Subject Matter & System Specialists
- Sensitization and advocacy for the BWIS among key stakeholders to create awareness and promote ownership of the system.
- Strengthening of the IWRM institutional through the BWIS Technical Implementation Team member linkages through periodic meetings on BWIS data standardization, generation and sharing



## **Pre-implementation of the BWIS Action Activities (continued)**

Development of a MAWF unified and standardized Information Technology (IT) infrastructure platform linking and harmonizing the Ministry computer networks, software and hardware

- Development of Information Management procedures and standards, and Information interoperability and sharing framework.



# Development of a current Data Flow Diagram

Next.....

## Thank you for listening!