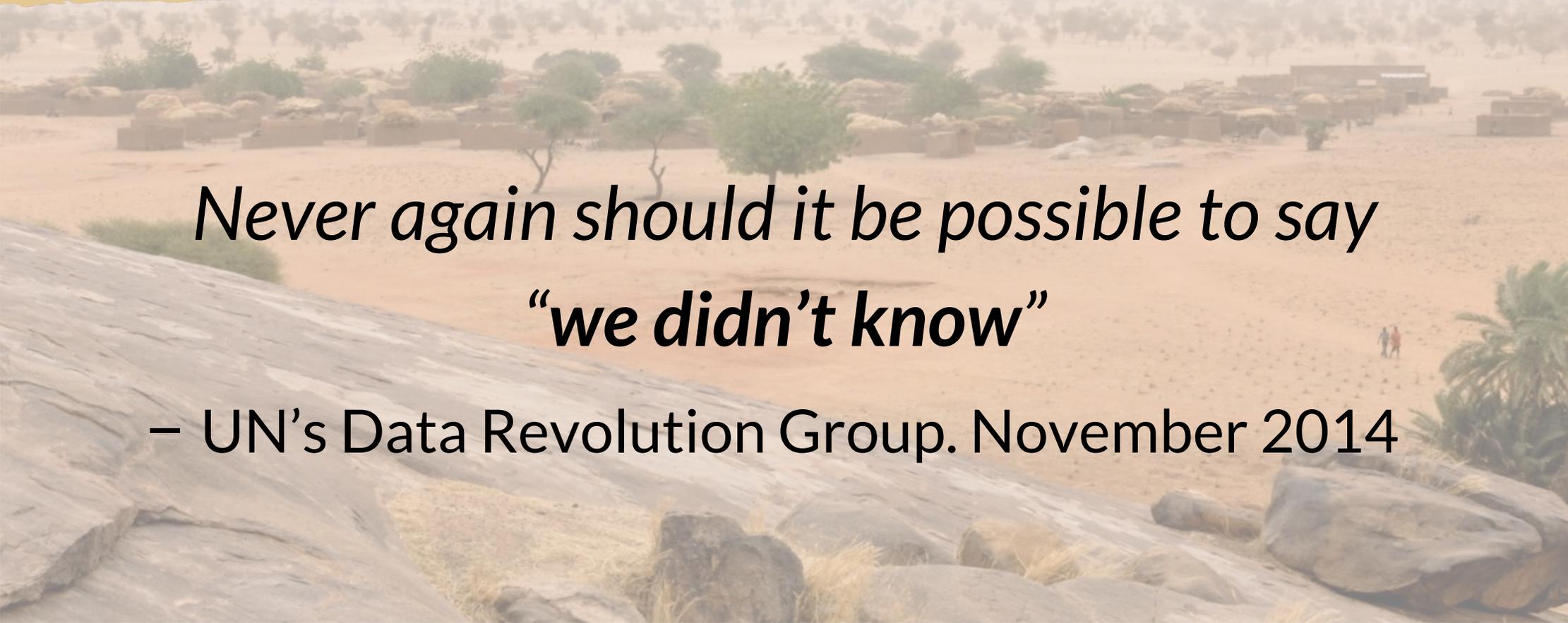


# All systems go Africa

*Beyond Mapping:* The use of data from  
National WASH Management  
Information Systems for national level  
informing decisions and accountability

All systems go Africa  
19-21 October 2022





*Never again should it be possible to say*  
**“we didn’t know”**

– UN’s Data Revolution Group. November 2014

# Why a data revolution?

- **Data** - the lifeblood of decision-making & raw material for accountability.
- Without high-quality data providing the **right info on the right things at the right time**;
- Designing, monitoring and evaluating effective policies becomes **almost impossible**



# Monitoring/Use of Data in WASH Building Blocks



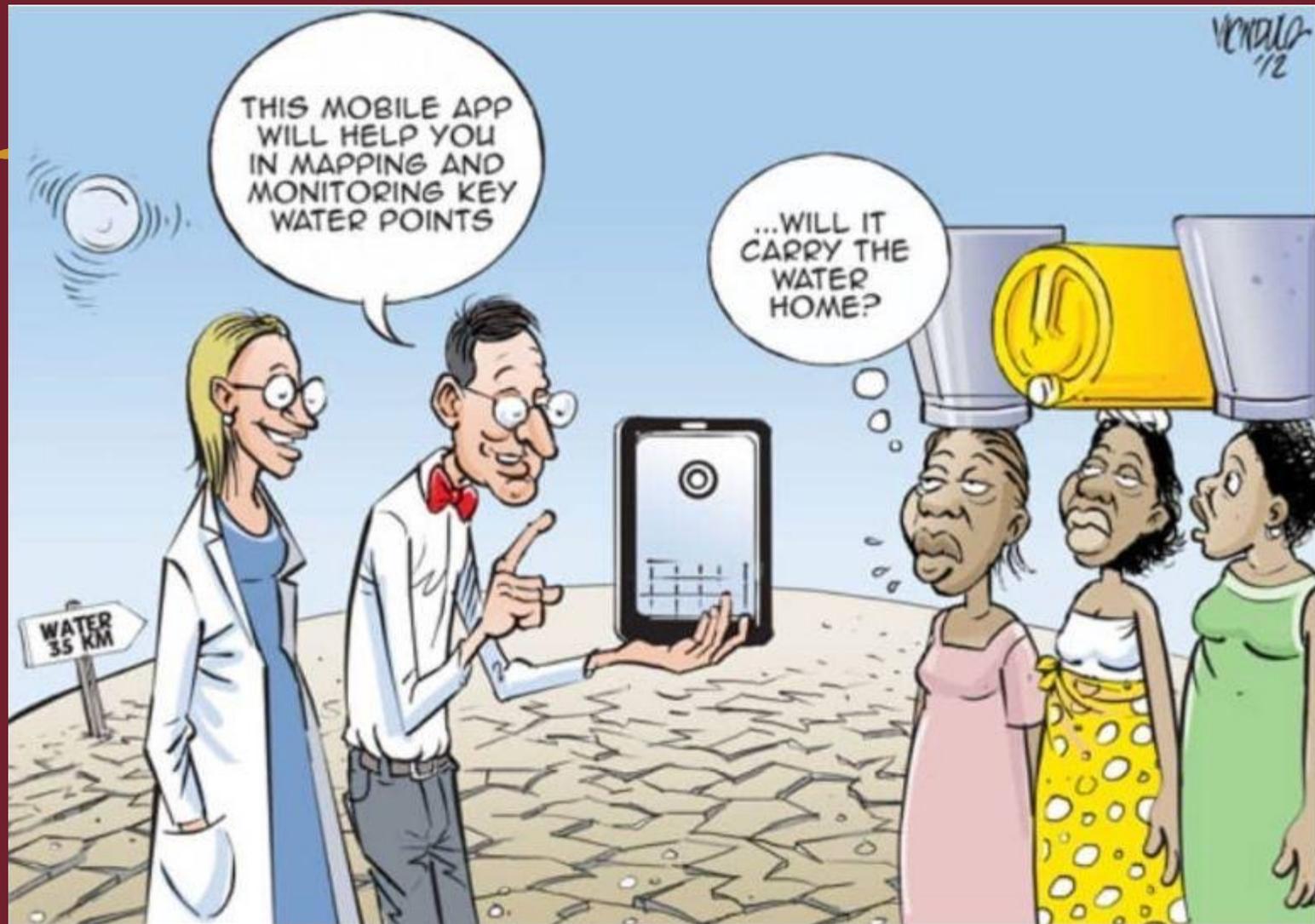
- Covers the capture, management & dissemination of the information required to manage WASH services
- Considered one of the key building blocks
- Underpins other building blocks i.e. Regulation and Accountability, Planning, Infrastructure, Finance & Learning and Adaptability



**MAJI**  
**h2o**



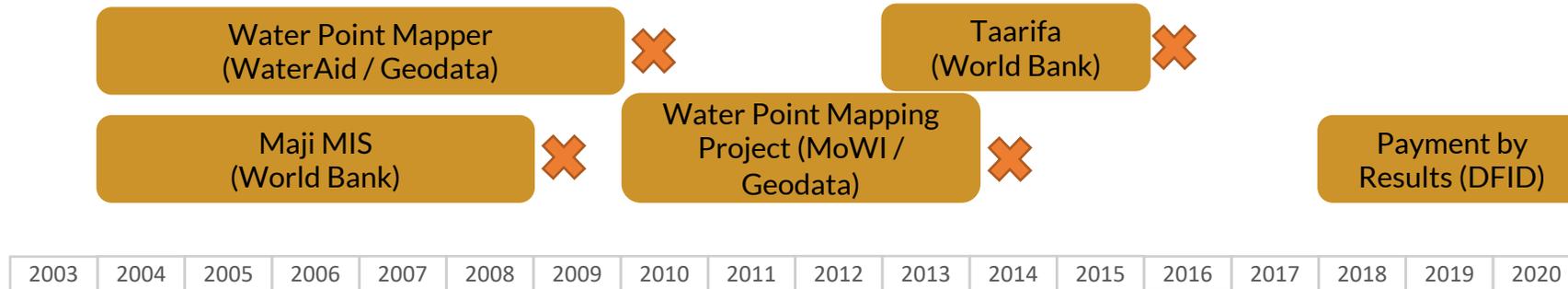
akvo**flow**



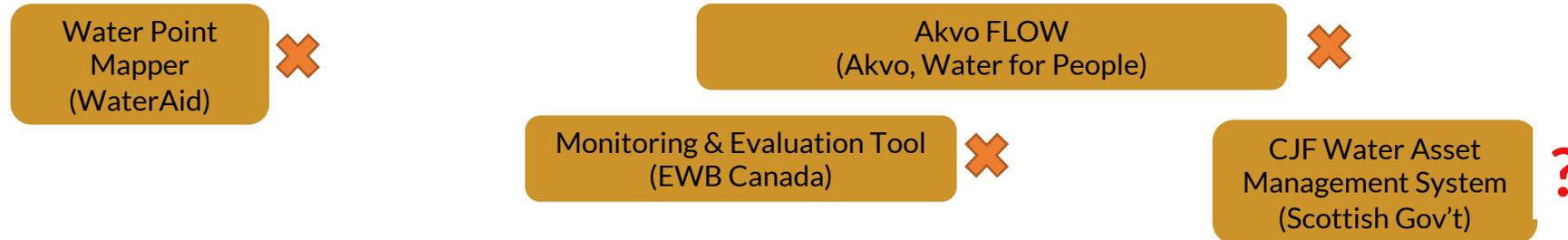
# It's easier to find failed initiatives... Why?

Two examples from East Africa:

Tanzania<sup>1,2</sup>



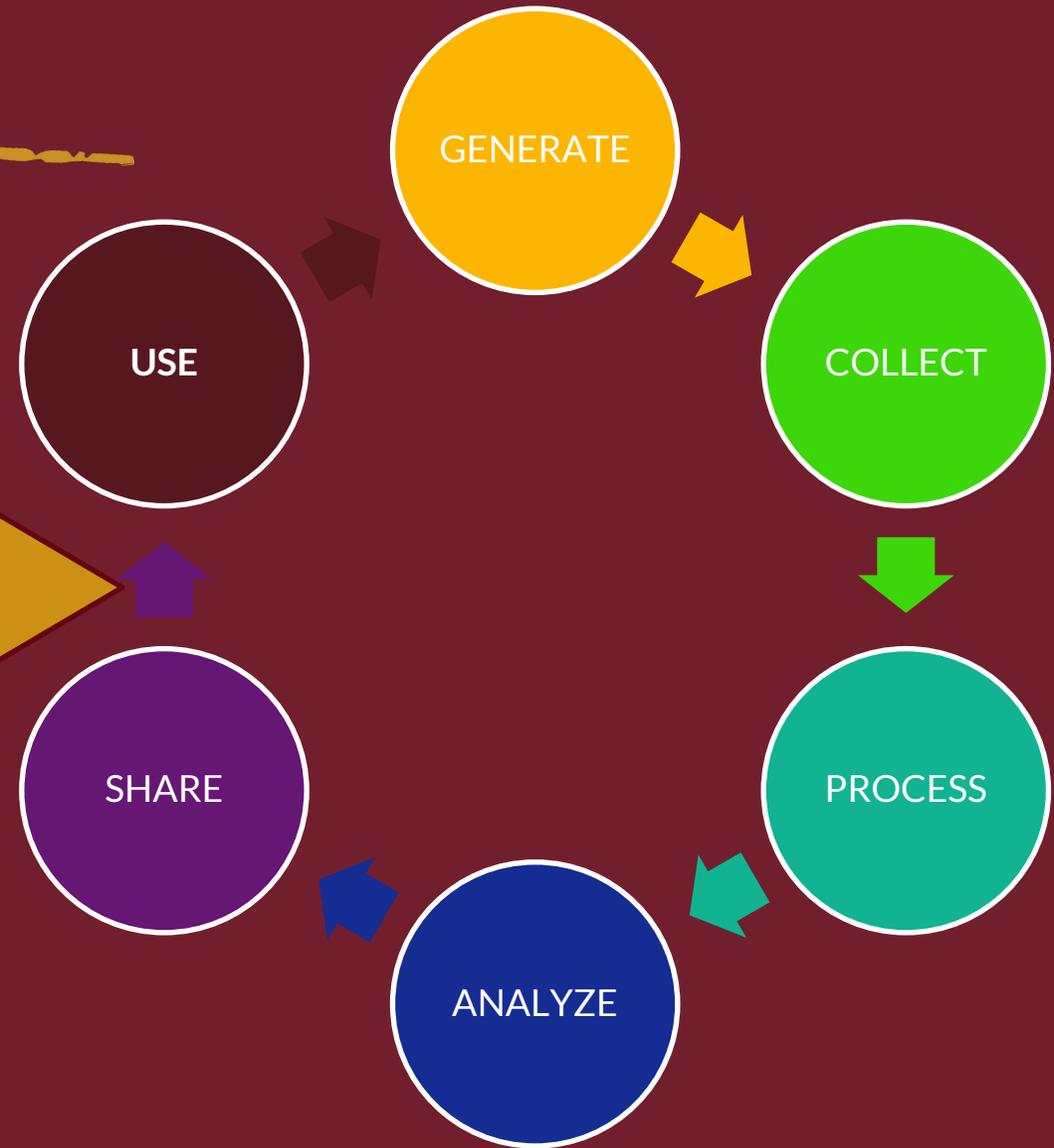
Malawi<sup>1,3,4</sup>



1. Welle, K. Water Point Mapping in East Africa; WaterAid.
2. Verplanke, J.; Georgiadou, Y. Wicked Water Points: The Quest for an Error Free National Water Point Database. IJGI 2017, 6 (8), 244.
3. Miller, A.; Nhlema, M.; Kumwenda, S.; Mbalame, E.; Uka, Z.; Feighery, J.; Kalin, R. Evolving Water Point Mapping to Strategic Decision Making in Rural Malawi. WEDC, Loughborough University 2019.
4. Welle, K. WaterAid Learning for Advocacy and Good Practice: WaterAid Water Point Mapping in Malawi and Tanzania; WaterAid, 2005.

# Data Value Chain Model

- **Gap/break** between Data sharing and Data Use. Why does this happen?
- What **assumptions** have we been making about this stage of the value chain?
- How can we change this?





Technology

Processes

People

What is going on here?

Technology is the visible part of the monitoring system, so stakeholders and donors tend to focus too much on it.

The real work of building national monitoring systems depends on the capabilities and motivations of people and the processes they use to get work done in their organizations.

How have their national MIS evolved to where it is now i.e. the country's journey from data generation to data use?

What are the contextually relevant pre-requisites for a functional national MIS i.e. success factors?

What major challenges are hampering a functional national MIS and how can these be overcome?

Is there a blueprint for setting-up a functional WASH MIS?



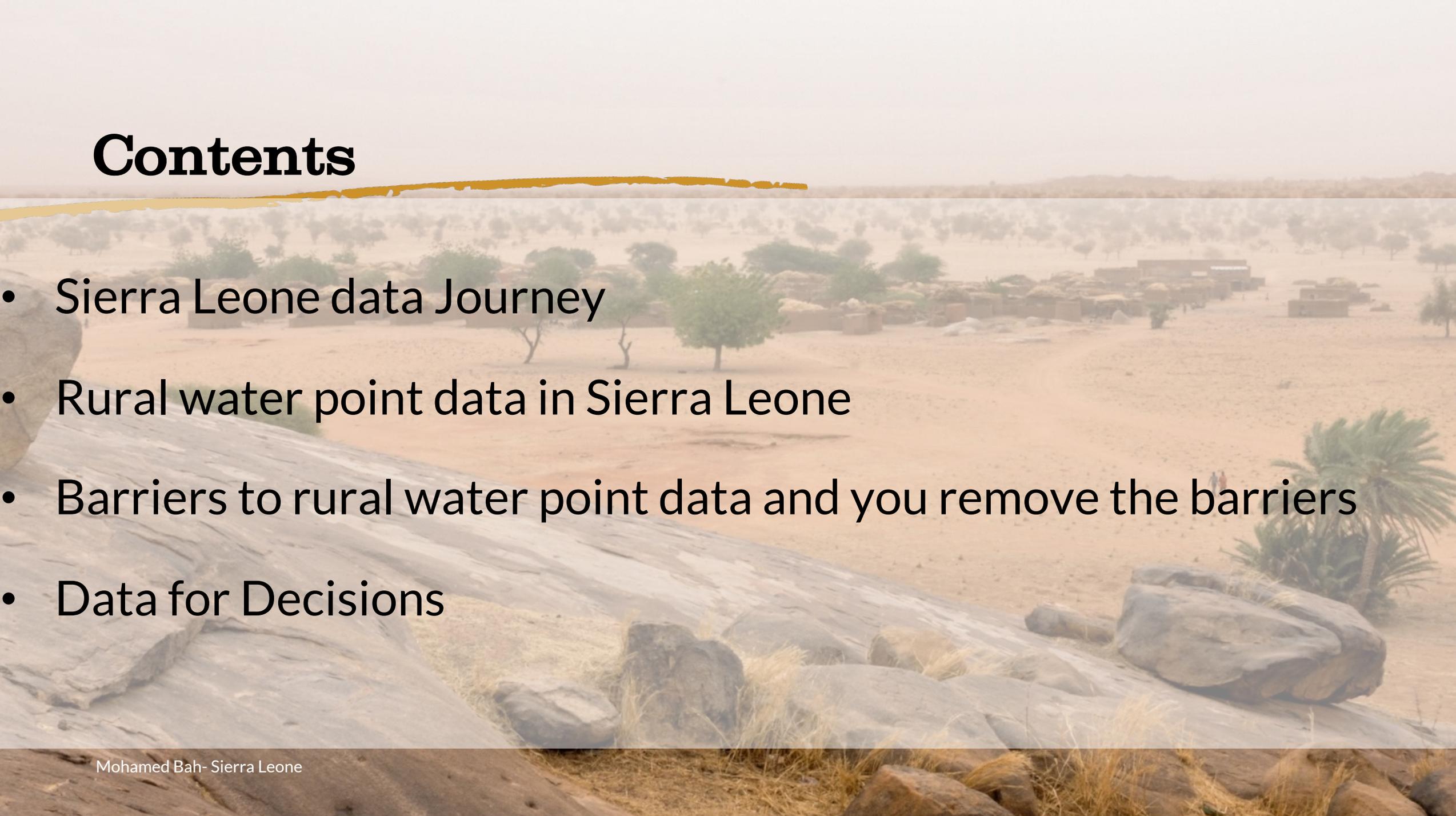
# All systems go Africa

## The use of data from National WASH Management Information Systems-Sierra

All systems go Africa  
19-21 October 2022



# Contents



- Sierra Leone data Journey
- Rural water point data in Sierra Leone
- Barriers to rural water point data and you remove the barriers
- Data for Decisions

# Background

2010 National WASH policy – “Strengthening of the sector M&E through the establishment of a result-base monitoring system”

- Min. of Water Resources – *Water services and overall coordination of WASH*
- Min. of Health & Sanitation – *Sanitation services & WASH in health centres*
- Min. of Basic Education and Higher learning- *WASH in schools*
- Min of Local Government & Rural Development – *District WASH*

# Data Journey in Sierra Leone

## 2012 Water point mapping data:

- Why was it done?
  - How was it done?
  - What challenges do we face
  - The major achievements
  - What we learn about the process
  - How did we use the data? What challenges did you face in using the data?
- 2013 a standalone Ministry was established
  - Water information management unit (WIMU) was established at the Water Directorate (WD) in the Ministry.
  - 28 Engineers and Water point mappers were recruited and deployed across the county.
  - Conscious agreement on the indicators
  - M&E Framework developed and agreed upon by all stakeholders
  - A routine M&E plan was developed

# Learning from

# 2012

- Align Sierra Leone WASH indicators to the Sustainable Development Goal (SDG) WASH indicator definitions
- Add Sierra Leone-specific indicators for areas not adequately covered by the SDG WASH indicators
- **KIS – Keep It Simple** – reliable data on a few key indicators is better than unreliable data on very comprehensive indicators describing all aspects of the water sector.
- Collaborate with all WASH Actors to align the M&E strategy National requirements and other documents.
- A Digital monitoring tool was adopted ([www.1wash-salone.akvoflow.org](http://www.1wash-salone.akvoflow.org))
- Over 300 staff were trained in data visualization, data storytelling (designing dashboards) and sharing
- Digital water quality monitoring (water sampling, water point risk assessment, Chemical testing using photometers, Microbiological testing using CBT )
- Institutionalise the digital system to all WASH actors

# 2016 WASH Baseline & Water-point

## Mapping

### Overcoming 2012 Challenges

- Involved parties with a conscious agreement of KPI indicators
- Introductions of digital data collection platform (Akvoflow)
- Additions of variables to the data collection

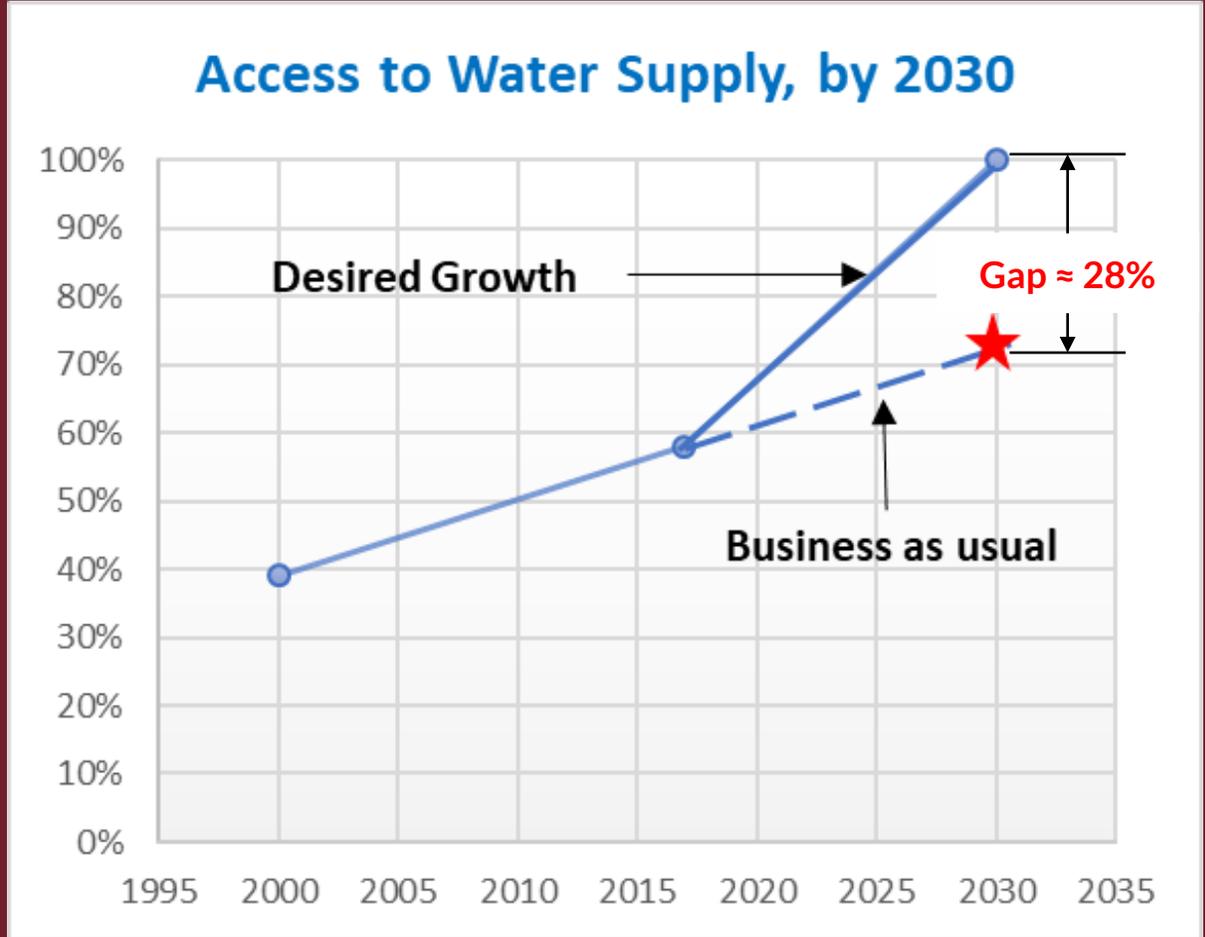
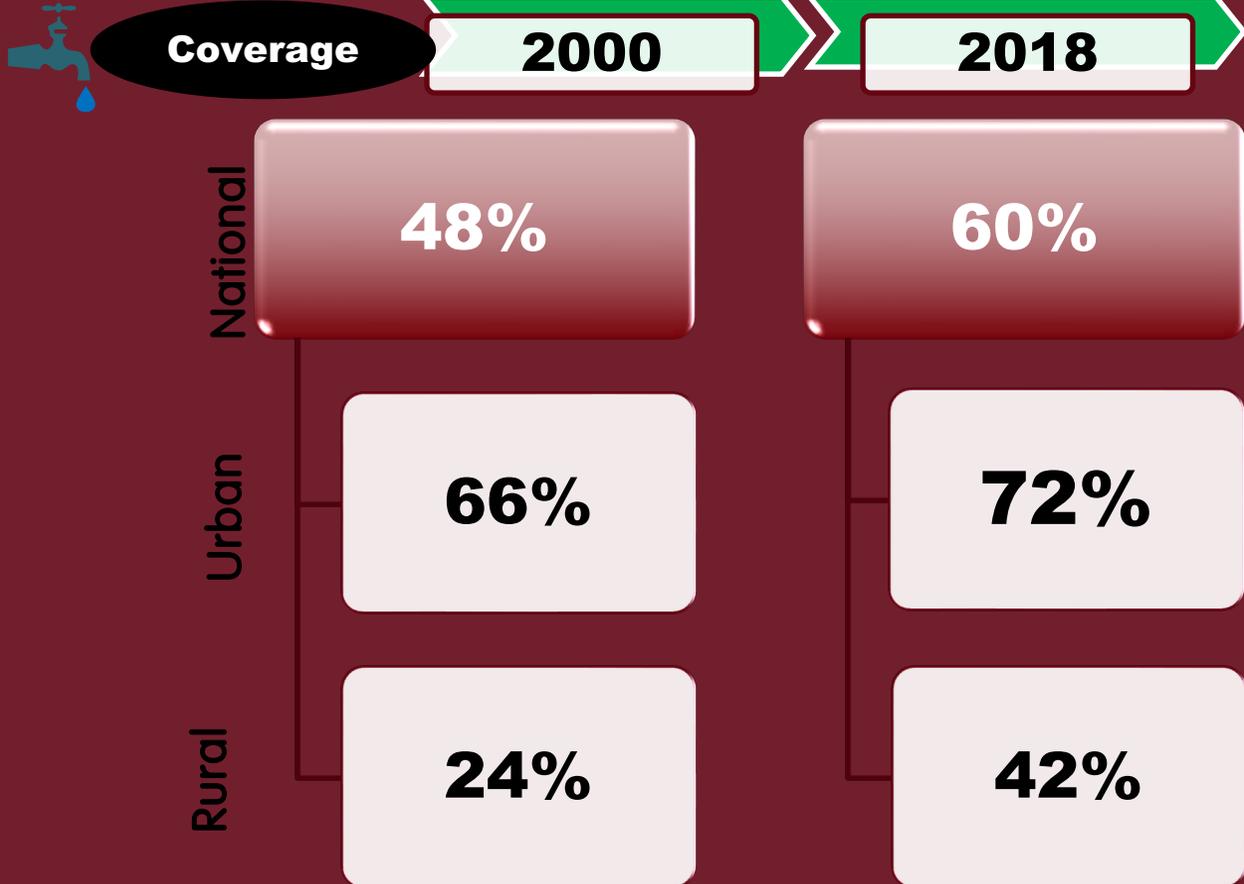
### Opportunities in 2016

- Strengthen collaboration with sector players
- Confident in the data and we share our data
- Allow deep-dive into the situation of the sector and enable to make critical decisions using the information
- Technical support to answer the policy questions

# 2016 data used to project needs for basic water

Districts	2022	2023	2024	2025	2030
Bo	71%	75%	78%	82%	100%
Bombali	64%	69%	73%	78%	100%
Bonthe	52%	58%	64%	70%	100%
Kailahun	72%	75%	79%	82%	100%
Kambia	52%	58%	64%	70%	100%
Kenema	69%	72%	76%	80%	100%
Koinadugu	65%	70%	74%	78%	100%
Kono	68%	72%	76%	80%	100%
Moyamba	55%	61%	67%	72%	100%
Port Loko	66%	70%	74%	79%	100%
Pujehun	77%	80%	83%	86%	100%
Tonkolili	68%	72%	76%	80%	100%
Western Rural	71%	75%	79%	82%	100%
Western Urban	71%	75%	79%	82%	100%

# Water Supply Situation





# Sierra Leone

## WASH data portal

[Homepage](#)[Water point data](#)[WASH data](#)[Interactive maps](#)[Media library](#)[About](#)[Contact](#)[WASH data Sierra Leone](#) > [Water point data](#)

## Water point data

The Sierra Leone WASH portal is a comprehensive mapping exercise carried out by the Ministry of Water Resources (MOWR) and its partners in 2016. Over 28,000 public improved waterpoints across all of Sierra Leone's districts and chiefdoms have been mapped during this period. The exercise constitutes a comprehensive update of the earlier mapping in 2012. This website presents and analyses this data in detail.

The Water point data is structured in four broad sections:

- [Water point functionality](#)
- [Water point management](#)
- [Water point source types](#)
- [Water availability](#)

# Partnership with Water Point Data

## Exchange (WPDx)

- Gain a good understanding of how accurately collected data can be analyzed in-depth to inform decisions and planning for equitable WASH development
- Learn about advanced analytics including WPDx analytical tools
- Identify which decision-makers can benefit from WPDx analysis tools and how to apply them
- Developed a set of core WASH monitoring standard codes (building on the WPDx Standard) and validated by all WASH actors digital through the WASH monitoring learning forum
- Developed a clear action plan (including monitoring) to increase the use of data in decisions and planning
- Identified local champions to lead the use of data use in the country

# Data systems

The screenshot shows the 'akvoflow' web interface. At the top, there are navigation links for Surveys, Devices, Data, Resources, Maps, Users, Messages, and Stats, along with a 'Log out' button. Below the navigation is a 'Home' button and 'Create survey' and 'Add folder' buttons. The main content area displays a list of survey folders, each with a pencil icon for editing and a 'Move' button on the right. The folders are:

- 1. National WASH digital monitoring
- 2. Previous WASH monitoring surveys
- 3. Emergency response surveys
- 4. Other surveys
- 5. WASH ASSESSMENT IN PHUs
- Demo
- Kaffu Bullom Training

The data available through the Water Point Data Exchange provides a foundation for advanced analytics. Each of the decision support tools uses geospatial datasets to help governments and their partners make informed decisions. The links below provide access to each of the tools and their methodologies, and limitations.

 [Measure Water Access by District](#)

 [Prioritize Locations for Rehabilitation](#)

 [Prioritize Locations for Construction](#)

 [Predict Current Water Point Status](#)

The screenshot shows the 'WPdx Rural Decision Support Tools' interface. It features a map of Sierra Leone with various administrative regions highlighted in shades of orange and yellow. The interface includes a search bar for regions, a 'Region Filter' dropdown set to 'Sierra Leone', and several control buttons like 'Show Region Titles' and 'Show Water Points'. The map shows district boundaries and some water points marked with red dots.

## Rural Water Point Data for Evidence-Based Decisions

WPdx is excited to continue to promote transparent data sharing and use of open data in the rural water sector through our second annual Open

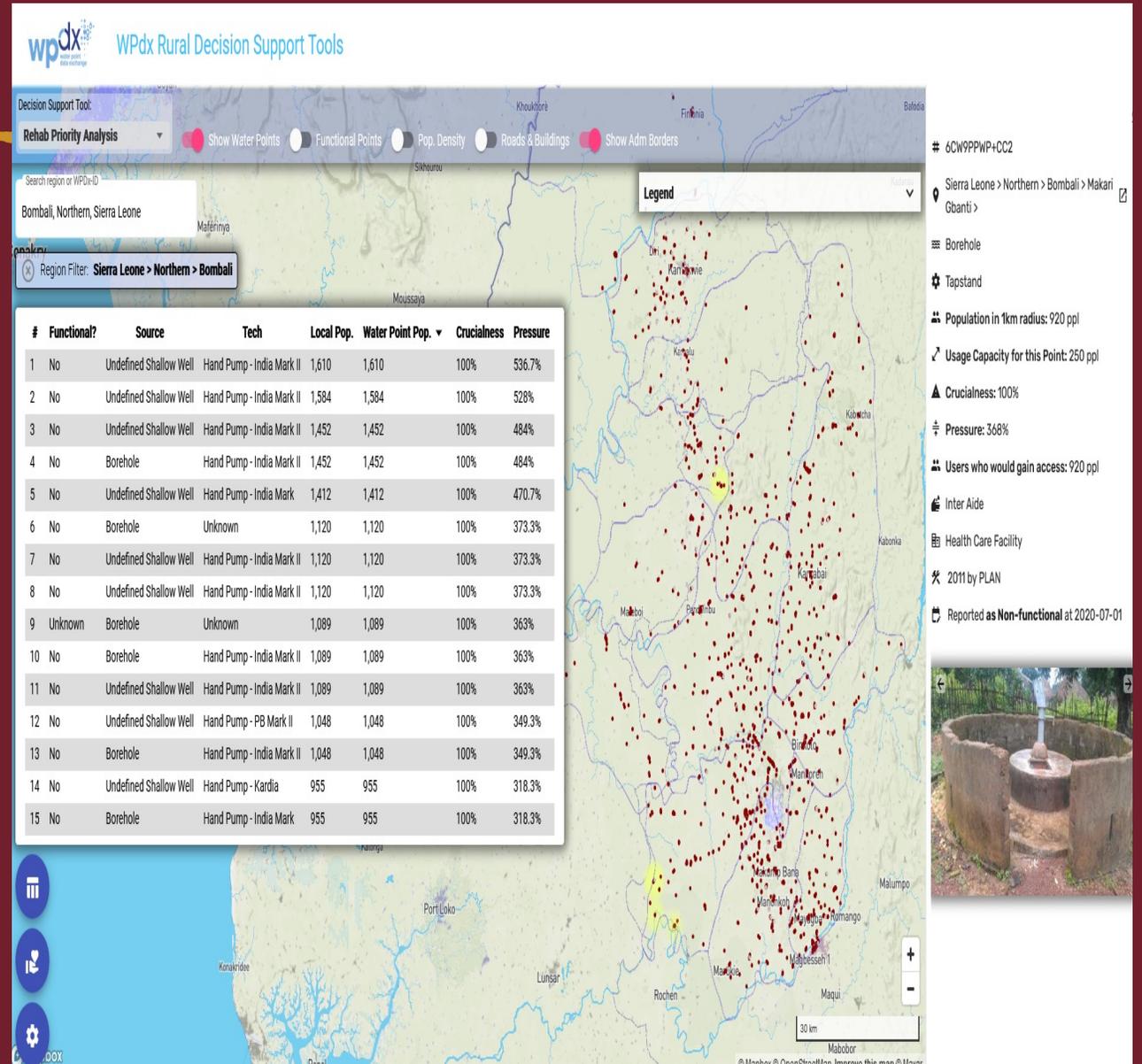
[Read More »](#)

# WPdx Decision Support Tools

The WPdx decision-support tools combine asset data with population data and provide visualizations and tables of the following:

1. Prioritised water points for rehabilitation
2. Prioritised potential locations for new rural water point

Mohamed Bah From Sierra Leone



# Tips to Data for Decisions

- Parameters align with the strategic plan
  - Quality and reliability of the data.
  - Data Strategic Alignment
  - Managerial Commitment
  - Data Demand Results
- Parameters align with the strategic plan
  - Quality and reliability of the data.
  - Data Strategic Alignment
  - Managerial Commitment
  - Data Demand Results

# Challenges



- Managerial Commitment
- Government support for data collection is still low
- Sharing of data by partners
- The transformation from a traditional system to an Evidence base

# Thank you

**Mohamed Bah**

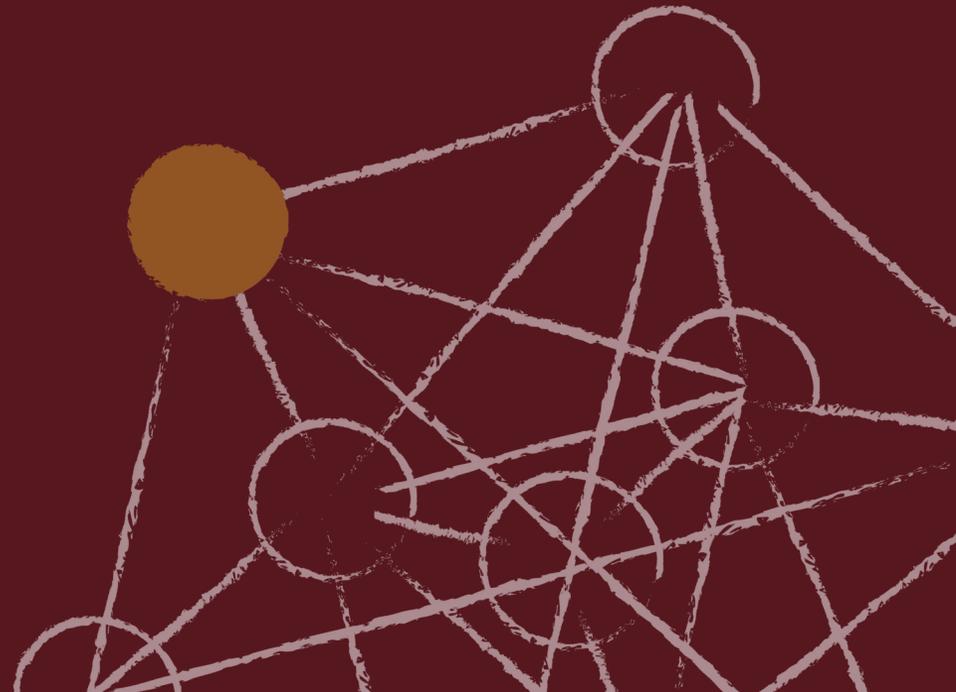
Ministry of Water Resources- Sierra Leone

Head of Programme Management and Monitoring and  
Evaluation

MSc( Information System and Water Management and  
Governance at Njala University and IHE Delft institutes for  
Water Education-Netherlands)

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All systems go  
Africa

# Evolution of Sanitation Monitoring in Uganda

By: Martha Naigaga

All systems go Africa

19-21 October 2022





# CHANGES IN OVERALL FRAMEWORK

PROJECTIZED  
IMPLEMENTATION -  
90s  
Project Reports

SECTOR WIDE  
APPROACH - 2002 -  
2020

11 Golden indicators 2 of  
which are for sanitation  
and hygiene  
42 Indicators aligned to  
SDGs

PROGRAMME  
APPROACH 2021 - 2025

18 Programs under  
NDPIII  
WASH under Human  
Capital Development

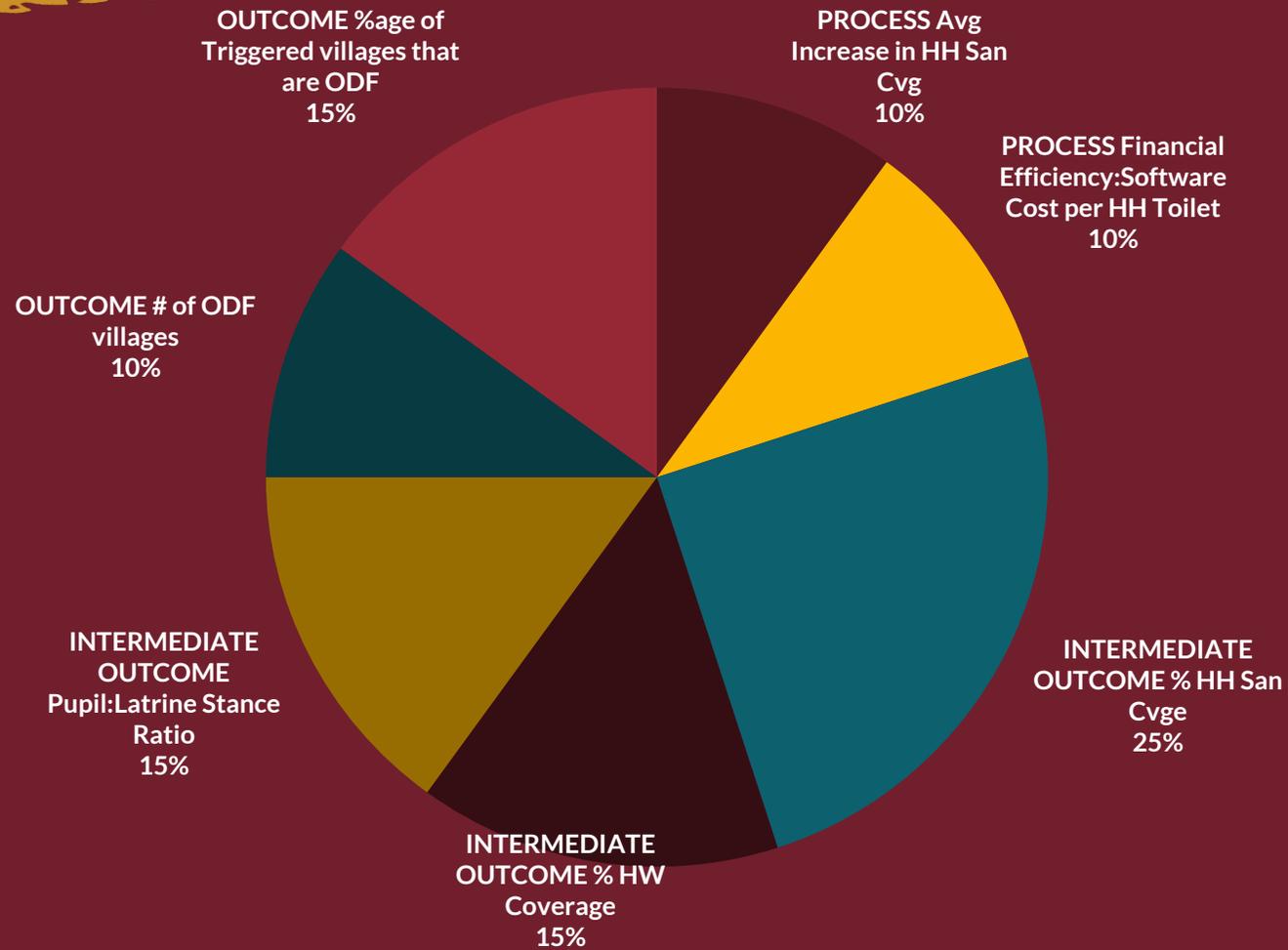


# SHIFT IN MEASUREMENT INDICATORS

Shift from tracking Infrastructure Investments

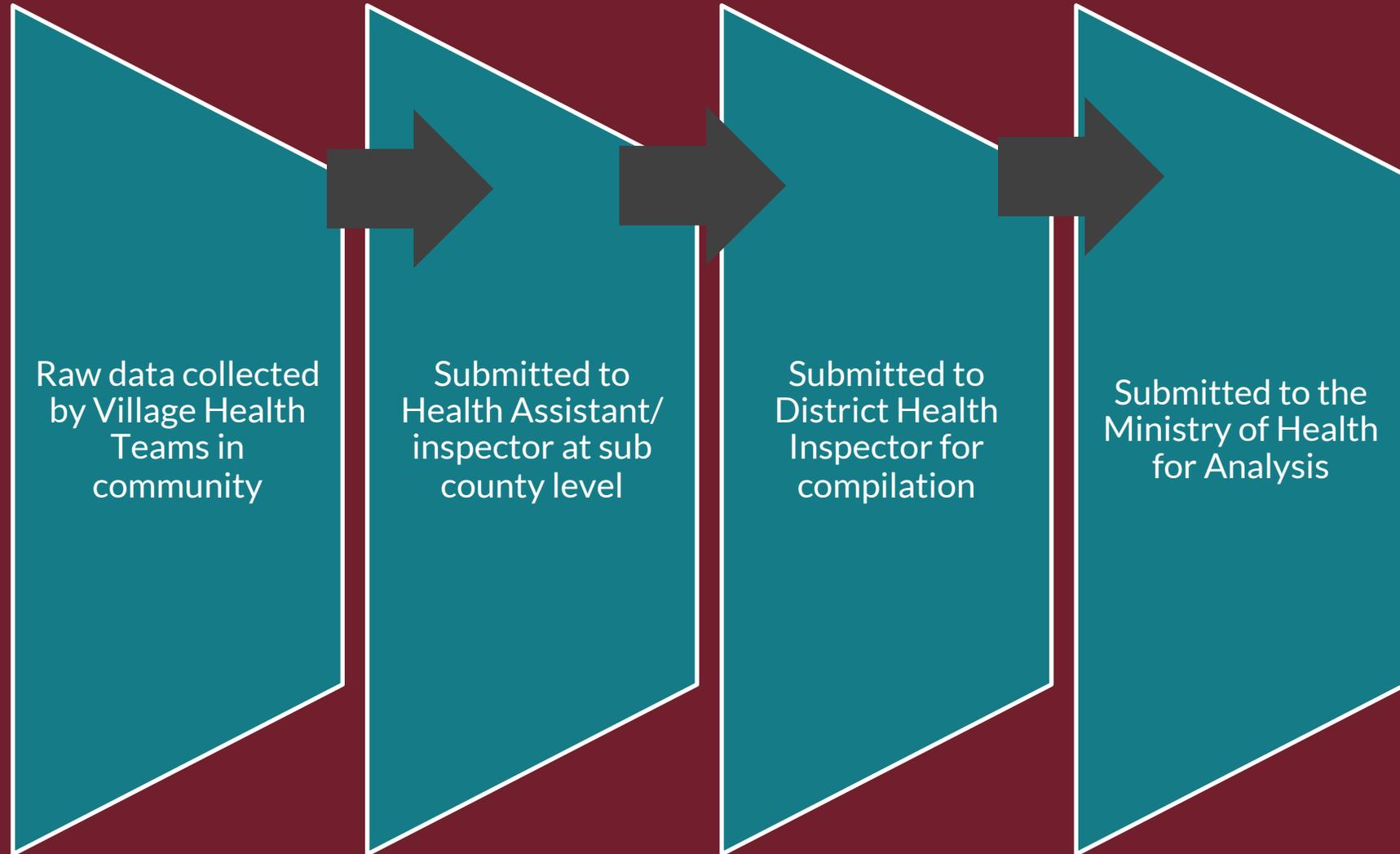
- **Inputs,**
- **Processes**
- **Behavioral and quality outcomes**
- **Sustainability and equity of services**

# Weighted scoring of benchmarking indicators





# FLOW OF DATA





## GAPS BEING ADDRESSED

1. Frameworks, Approaches and Tools not harmonized
2. Reliance on Village health Teams for manual data collection
3. Inadequate resources allocated to this exercise
4. Challenges in dissemination of results
5. Inadequate use of data for planning and decision making
6. Limited analysis at the subnational level
7. Largely paper-based system

## REVISED MIS ENABLES:

- Focus on behavioral and quality outcomes
- Avails more diverse monitoring aspects and actors
- More focused on sustainability and equity of outcomes and services
- More systemized and harmonized
- Facilitates linkages between local, National and International systems
- Customization and localization of definitions

## Opportunities

- **Revised Performance measurement framework**
- **Robust Institutional set up**
- **Vibrant support structures**
- **Development Partners**
- **Government Leadership**
- **Digital Migration**



## DIGITAL MANAGEMENT INFORMATION SYSTEM

- Facilitate seamless monitoring of gaps across sectors
- Integrated one stop centre for information from village to National
- Provides time-based evolution on achievements on WASH vis-à-vis the investments
- Provides a robust framework for SDG 6 reporting
- Enables access by stakeholders
- Provides outlook on inequities in WASH e.g. Rural Vs. urban



# PENDING ISSUES

1. Rolling out the system Nation wide
2. Training and equipping of local governments
3. National Wide Baseline survey