



**Presentation on the preliminary findings on Establishment & Operationalisation of the Water Resources Institute**

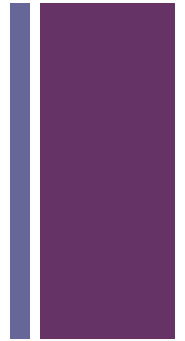


DFID /FAO Technical Support to the Water Resource Institute (WRI)

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Independent Consultant**

# + Agenda

- Introduction
- Background to the Study
- Overall goal of the Study
- Specific Objectives of the assignment
- Key Result and Output of the study
- Key Tasks
- The Institutions/individuals consulted
- Preliminary findings
  - ◆ Situational analysis
  - ◆ Stakeholder Expectations
  - ◆ Road map activities: Applied Research, Outreach, Applied training Dialogue
  - ◆ Benchmarking with other institutions
- Current Opportunities
- Next Steps



# Introduction

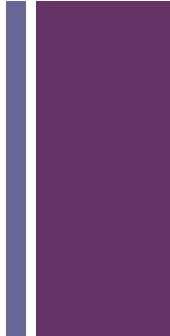
- The Directorate of Water Resources Management (DWRM) with financial and technical support from DFID/Food and Agricultural Organisation (FAO) plus WaterAid Uganda has commenced the process of establishment and operationalization of the Water Resources Institute (WRI).
- Specifically DFID/FAO is offering financial support towards obtaining views of the stakeholders that will be a basis for development of the road map.
- WaterAid Uganda is offering technical support in Conceptualising the WRI and is coordinating the consultation process in partnership with FAO and DWRM

# Background

- The Water Resources Management reform study undertaken from 2003 to 2005 recommended among others, establishment of a Water Resources Institute to *“address current and emerging water resources related issues in the country and globally.”* Specifically to cater for **research** in water related issues, undertake **tailor made training courses**, facilitate **policy dialogue**, and **dissemination of research** results through outreach activities.
- Study also recognized that the professional staff of MWE come from different backgrounds and levels of expertise due to the **specialized nature of courses** offered by universities and colleges & thus need tailor made training to carry out their tasks.



# Rationale for the WRI



## a) Existing Systems for Research, Training and Outreach

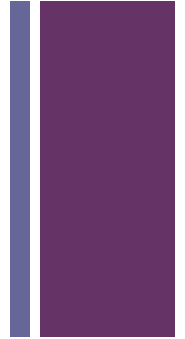
- Lack of organized programs, staffing and infrastructures for research, outreach and dialogues.
- The WRI would be **“a central clearing house”**

## (b) Training Programs and Facilities

- A Sector Capacity Development Strategy (SCDS) has been developed. However, sector needs are changing in terms of **skills, mindset, practices requiring a holistic approach**
- The sector is getting more **integrated to look at broader water and related issues**. The current sector set up may not be able to address broader sector strategic capacity building needs **due partly to limited resources, over stretched staff and also limited skills**. The WRI offers an alternative solution



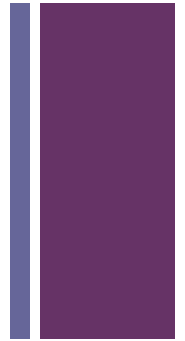
# Objective of the Study



- To develop a detailed and realistic roadmap to ensure the that the WRI is functional in collaboration with other stakeholders;

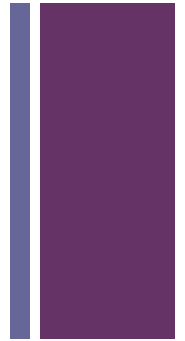
## + Key Tasks

- Undertake situation analysis of ongoing applied research and capacity building initiatives – create a database for the sector
- Mapping out the existing technical expertise, making an inventory of existing materials in research, capacity building, and outreach
- Collect those materials readily available for immediate use
- Propose a systematic approach to applied research, capacity building and dialogue within the Sector
- Propose a practical link between applied research, capacity building and dialogue
- Identify relevant institutions/stakeholders within Uganda and beyond as potential partners in enhancing the institute capacity in applied research, learning, documentation and outreach
- Develop a detailed research and outreach plan for the WRI in the short, medium and long term



## + Stakeholders consulted so far

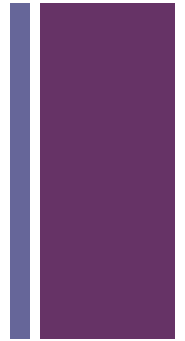
- **Government Ministries, Departments and Agencies:** DWD, DWRM, NWSC, UNMA, NARO; Fisheries Training institute.
- **Academia:** Makerere University, Ndejje, UMI, Kyambogo and UCU
- **DPS:** GIZ, FAO, ADA
- **CSOs:** WaterAid, IRC, NETWAS, UWASNET
- **Private Sector:** Individual Consults,
- International Institute for Applied systems Analysis (IIAA)





## + Quotations from some S/holders

- *"This initiative has been long over-due" one of the Lecturer's in the Department of Agriculture engineering;*
- *"The WRI is long over due, considering some of the challenges we are experiencing" quote from DWD*
- *" I hope to have an Institute that is integrated between ENR & water unlike the current practice which is lip service e.g. carry out the cross cutting issues together" quote from ENR colleague,*
- *"The WRI should prioritise the themes- 4 themes is too much for a start"! Quote from NWSC.*
- *"The WRI should be modeled following business principles and optimise use of ICT" from the NGO fraternity*

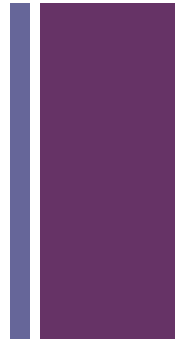


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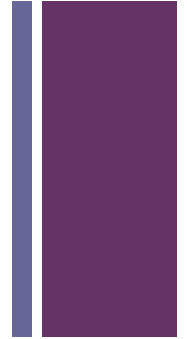
# Preliminary Findings

## + **Situational Analysis – Applied Research and outreach**



- Low prioritisation of research, putting research into use, fragmentation of research across the sector actors
- Limited grounds for testing and gracing new frontiers in applied research
- Applied research and outreach is adhoc in terms of organized programs, infrastructure and staffing
- Minimal documentation and dissemination of applied research findings to the end users for application .

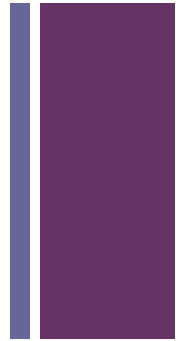
## + **Situation Analysis- Applied training**



- No structured mechanism for those outside the sector for learning and contributing to sector developments;
- Unstructured graduate trainee program;
- Various pilots conducted through sector projects and by stakeholders yet the lessons have not been adequately harnessed. i.e. there is lack of a systematic feedback mechanism of capturing lessons learnt to influence practice through actions such as updating manuals, curriculum improvement etc.

## + **Situational Analysis: *Academic Institutions***

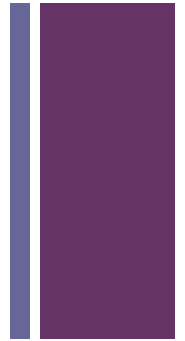
- Nine universities
  - Human resource development – undergraduate, masters and PhDs qualification in various WASH related disciplines
  - Skilled and experienced workforce in proposed thematic areas of the WRI
- Ongoing Applied research projects and specialized courses e.g. WaSo presents an opportunity
- Functional Laboratories
- Stocked Library with online inventory and book bank
- Access to online journals and database of published research
- Uncoordinated and duplication of efforts and programmes
- Limited practical application of academic knowledge in solving sector challenges.



## + **Situational Analysis**

- **Government Departments:** 9 subsectors in Water & Environment undertaking
  - Disjointed and duplication of capacity development activities
  - Studies on ongoing challenges in the sector- (Rural , Urban Water and Sewerage)
  - Applied research efforts (Forestry, Water Resources, Wetlands, Rural- WASH Technologies)
- Low motivation in attending trainings that are locally organized

SA2



**Slide 14**

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**SA2**

are we able to quote some of these studies?

Spera Atuhairwe, 3/27/2017

# + Situational Analysis

SK1

SA3

**NGOs** (International, National, CBOs and Private Sector)

- A number of NGOs are involved in the four themes at community and sub county level;
- A number of **NGOs** are involved in applied research and capacity development at community and sub county level

## **Development Partners**

- Fund innovations and programmes in the four themes
- Provide technical assistance
- Matching skills to market demand- content of the programmes sometimes are not relevant to the sector needs



## Slide 15

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**SK1**

I thought it could be useful to indicate the opportunities that present themselves in this current situation e.g what are opportunities are there among DPs, NGOs so that it can be shown that operations in the short term is actually possible

Solomon Kyeyune, 3/26/2017

**SA3**

this slide is not clear and so i am wondering whether it should be kept

Spera Atuhairwe, 3/27/2017

## + Stakeholder Expectations: WRI should support/provide (MWE stakeholders)

### ■ Training content and subject Matter Delivery:

- Sustainability e.g. on planning, water quality, infrastructure, Operation & Maintenance (O&M)
- Support the operationalisation of the Sector Capacity Development Strategy 2013 -2018;
- Innovations in technology efficiency
- Support to Climate Change- e.g. modelling on issues of flooding, extreme weather events etc.

### ■ Research and Development:

- Identification of sector needs and challenges on which solutions can be sought
- Undertake action research and innovation aimed at addressing the identified challenges and needs

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**SA5**

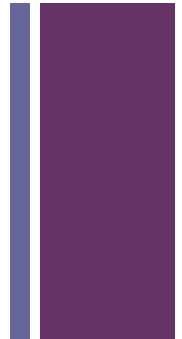
in my view this would be outside the mandate of the WRI

Spera Atuhairwe, 3/27/2017

## + Stakeholder Expectations: (DPs)

### ■ Proposed Areas of Delivery:

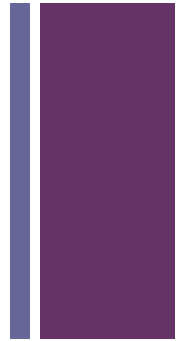
- Water quality issues e.g. testing heavy metals, bacterial, soil contaminants: implications and solutions for improving soil fertility;
- Applied capacity building focused on adapting relevant good practices
- Applied research and dialogue on the connection between food security and water in the face of Climate Change;
- Platform for bringing together CSOs, private sector and government to undertake joint researches and innovations
- Develop research grants to address the needs of the sector;
- Joint publication;
- Training for WRI/local researchers;
- Raise awareness e.g. on the system's approach to WRM such as the water – energy nexus, water – population nexus etc;
- Supporting the development of the conceptual framework of water resources scenarios;
- Support the development of African continental observational data through the AMCOW /Pan African level - Uganda could be the good practice country and influence neighboring countries.



## + **Stakeholder Expectations: WRI should support/provide (NGOs).**

### ■ **Proposed Areas of Delivery:**

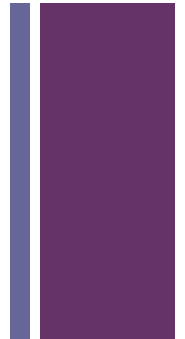
- The WRI should be modeled like a private business with cutting edge, top of the range solutions for the water user stakeholders;
- Organise memorial lectures – invite renown guest speakers;
- Develop modules on Water as a Business, Sanitation as a business e.g. packaging briquettes, manure, bio gas etc
- Develop a training module on M&E of natural resources for community level stakeholders etc,
- Develop a module on basic awareness on Oil & Gas from water quality perspective.



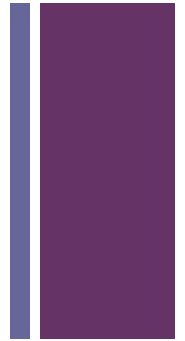
## + **Stakeholder Expectations: WRI should support/provide (Universities)**

### ■ **Proposed Areas of Delivery:**

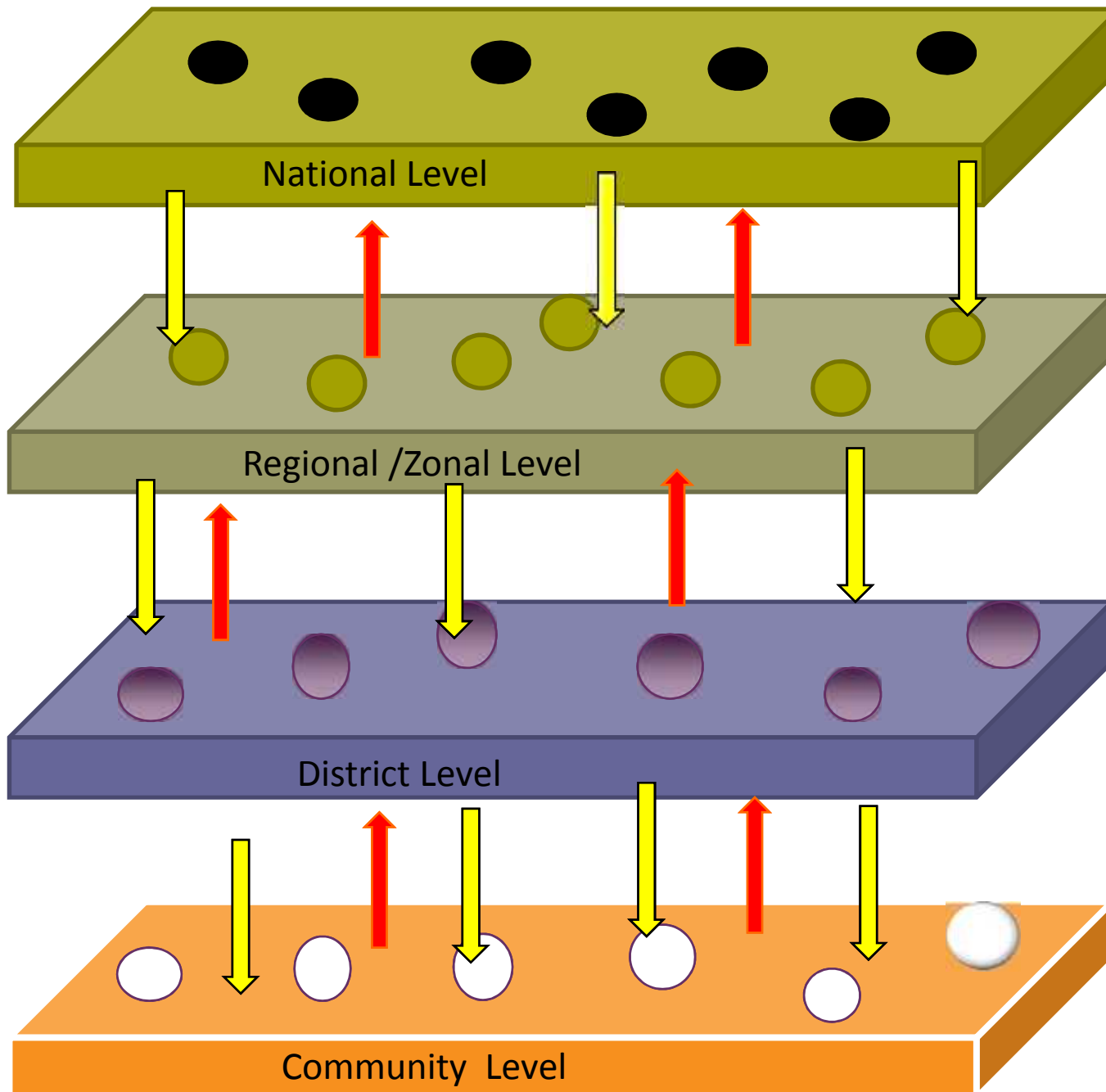
- Curriculum Development – informed by research & practice
- Joint researches, publications & design and delivery of relevant cap. building interventions
- Offer internships and joint student supervision
- Provide guest lecturers to infuse practice with theory
- Repackaging and dissemination of research to policy makers and other stakeholders
- Set up experimental/demonstration sites for both farmers and professionals for practical application of the theory e.g. Basics of irrigation such as the most economic use of water for maximum yields;
- Develop capacities for taking innovations (technologies, approaches and practices) to scale;
- Provide learning centers for the outreach programmes



## + **Proposed applied Research themes**



- **Water Quality:** Advancing the science of water quality and sustainability, modeling the environment to aid in disaster management, and studying exposure of water systems to pathogens and toxic substances to aid in decision making;
- **Groundwater:** Analyzing of available groundwater data and developed systems to model a ground water map for Uganda;
- **Social Sciences:** Exploring how human behavior is influenced by factors such as climate, water and unraveling the role environments and behavior play in disease and health disparities;
- **Sustainability of Water Systems:** Benefits of systems approach to management of water systems.
- Financing mechanisms for piped water systems
- Innovation in new appropriate technologies and their costs
- The NEXUS approach to IWRM by looking at IWRM in relation to food, water, health, ecosystems etc



**Learning  
Alliance  
Approach  
for  
Outreach  
and  
Dialogues**



# + Funding and fundraising for the WR

- Various funding modalities are considered. Below are some of the feasible ones.
- **Short term:** Subvention within the MWE ceiling; Collaboration and partnership with on going Interventions (e.g. WASO, NGOs-WaterAid)
- **Medium to long term Options:**
  - **Option 1:** Negotiate to retain the non tax revenue generated by MWE;
  - **Option 2:** Water tariff/levy on the water bills under the NWSC. Similar to levy by the National Higher Education, %age levy by Rural Electrification Fund (REF) on the electricity bill.
  - **Option 3:** Consider establishing a consultancy arm in order to provide specialized services to raise funds to support the Institute,
  - **Option 4:** Adopting a mixed model of all the above

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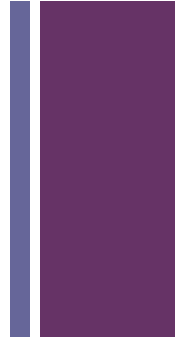
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### SA6

it will be important to discuss the implications of these funding options. it would have been good to provide an analysis on what the different options mean through scenario building

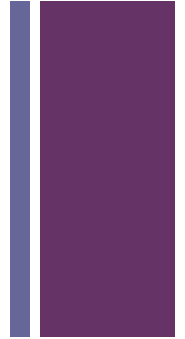
Spera Atuhairwe, 3/27/2017

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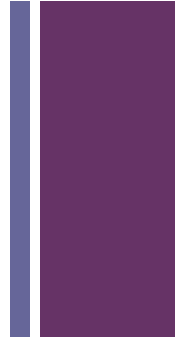
# Benchmarking with other institutions

# + National Water and Sewerage Cooperation external Services



- **Use Internal Capacity within NWSC:** Developed an appraisal/ performance based system for staff who are seconded to offer trainings and they are provided extra remuneration
- **Has an in built self financing mechanism:** A consultancy arm targeting both local and international market. Funds obtained from the consultancy arm are ring-fenced

# + Uganda Management Institute



- **Publication of Information:** UMI publishes a Uganda Journal of Management and Public Policy journal which is printed bi-annually
- **ICT incorporation within Training and Dialogue:** State of the art conference room for webinars, video conferencing etc



# Kenya Water Institute

- It is a state cooperation under the Ministry of Water and Irrigation established by an act of parliament 2001. It was first established as a unit in the Ministry in 1960, upgraded to a training section then to a school and now an Institute
- Provides short courses at a fee. It has a calendar that is published every financial year and disseminated to all stakeholders.
- All courses are aimed e.g Customer care and public relations, Water Governance, Hydrogeological survey and drilling operations, Use of GIS in support of IWRM, Metering and installation of HH connections, Microbial Water quality Testing and standards, Non revenue water etc
- Institute has 4 other satellite campuses in the country

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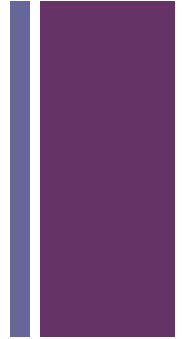
**SA8**

would have been good to provide information on other institutes for comparison purposes

Spera Atuhairwe, 3/27/2017



# Institute for Water & Sanitation Development(IWSD)



- The *Institute for Water and Sanitation Development (IWSD) in Zimbabwe* is, for example, providing training to middle and senior level managers in the water sector besides undertaking scientific and institutional research within the sector. The collaborating University of Zimbabwe is an important source of manpower development and research, especially in technical areas.



**Slide 27**

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**SA9**

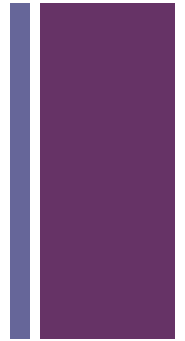
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Spera Atuhairwe, 3/27/2017

# + Next Steps and ongoing activities

## Consultancy Team

- Continue stakeholder consultations with stakeholders not met (DEA, DWRM, DPs, Private Sector, NGOs etc)
- Organize a National & a regional multi stakeholder dialogue on the setting up of the WRI
- Finalize consultancy report and disseminate to stakeholders
- Finalize conceptualization and Roadmap for the establishment of the WRI





Thank You

Questions and Recommendations on the WRI roadmap activities  
in the short, medium and Long term