

# Data-Driven Decision Support for Improved Water Security in East Africa

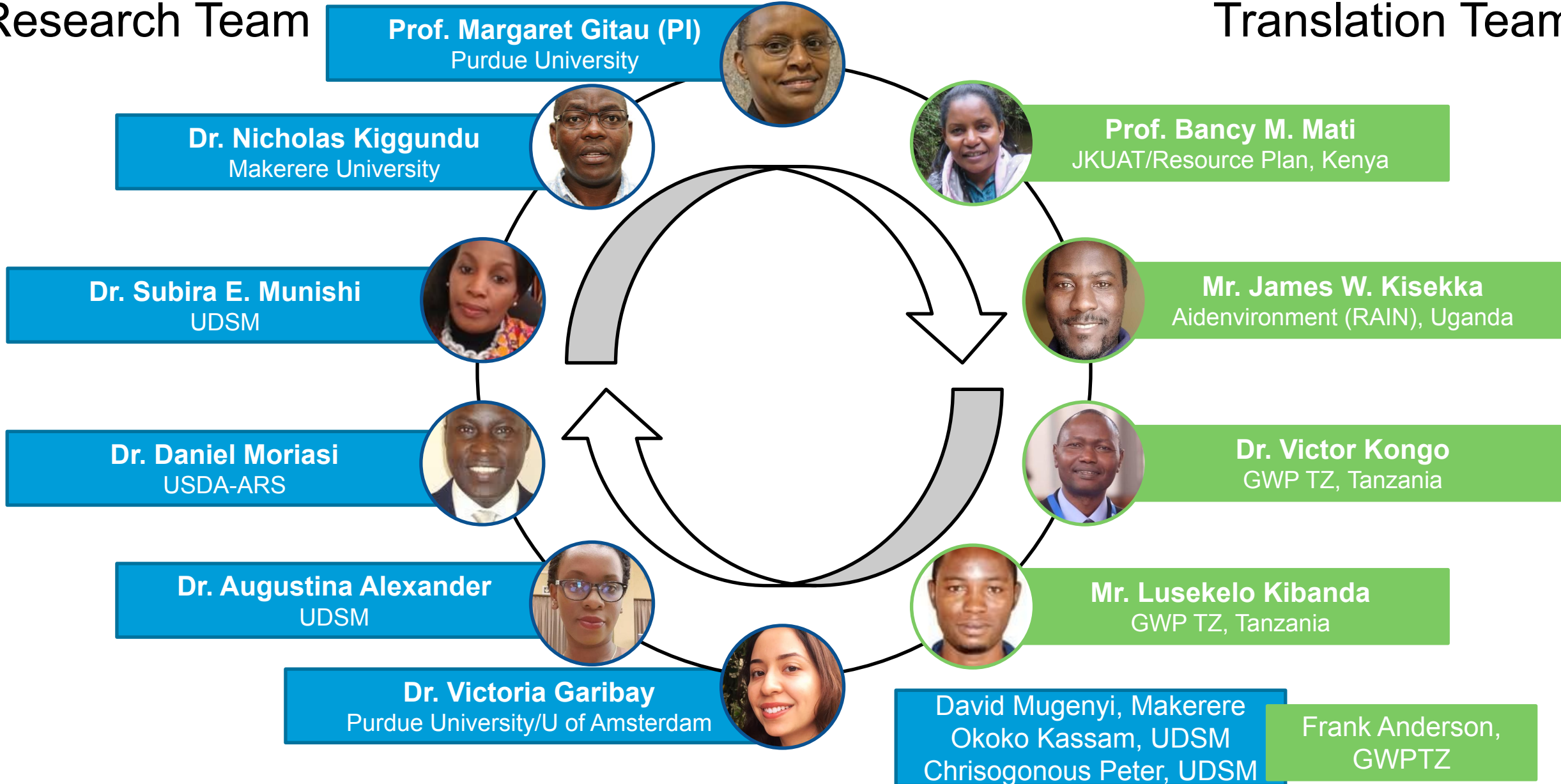
LASER PULSE EAST AFRICA WATER SECURITY (LPEAWS)  
PROJECT OVERVIEW + WAY FORWARD

January 2023



## Research Team

## Translation Team



## LASER PULSE East Africa Water Security Project Highlights

### Watershed Case Studies

One in each country  
Constructed hydrologic models and applied to water resources decision making; Highlighted areas warranting further attention.

### Stakeholder Meeting

-  
Gained insights into common challenges and opportunities surrounding data, access, and use; Differences among countries, sectors, and genders.

### Project Resources

-  
\$250,000  
2-2.75 years  
14-member team  
In-kind support

### Climate and Water Data Policy Study

-  
Survey of 50+ official legislation, documents and websites in East Africa and beyond to observe common elements leading to or hindering free and effective access to data.

### Training Workshop

-  
Modeling: general perspectives; applications  
Research Translation  
Improving Data Policies  
Rapid Assessment  
Hybrid

### Targeted Meetings

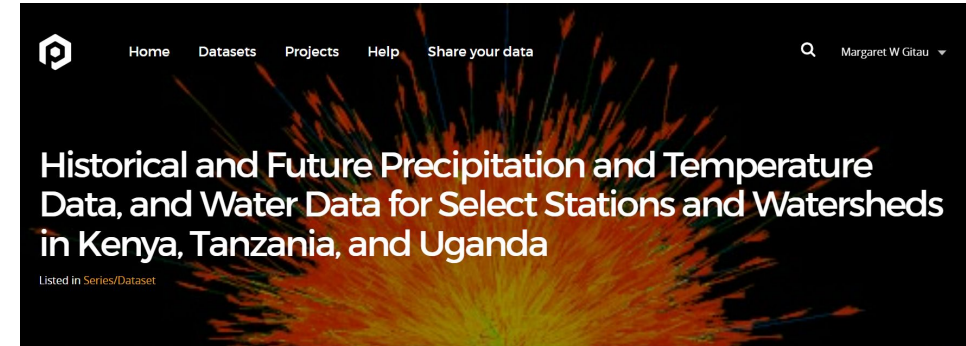
-  
\*USDA-ARS National Program Leader  
\*IGAD /ICPAC, ICRAF  
Kenya WRA, WRUA  
\*Tanzania Director of Water and Direct Reports  
\*Lake Victoria Basin

### Dataset Products and Publications

Published **Data Series**: Bias corrected reanalysis data for 12 stations (1979-2019); CMIP6 model comparisons all watersheds + 12 stations; observed climate data as available and shareable. **Climate Dashboard**: CMIP 6 data.  
Published **articles** “Evaluation of Reanalysis Precipitation Data and Potential Bias Correction Methods for use in Water Resources Applications in Data-Scarce Areas”; “Comparative Evaluation of Water Resource Data Policy Inventories Towards the Improvement of East African Climate and Water Data Infrastructure.”  
Other **documentation**: Quick Reference Guide; Modeling Products document; Workshop Report; Training Manual

## Data Products

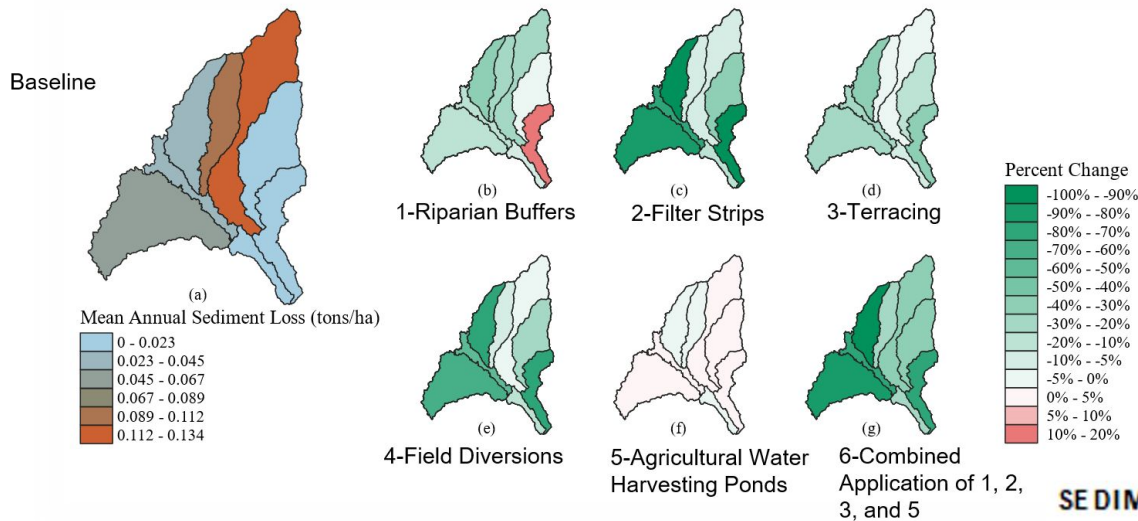
|             |           |
|-------------|-----------|
| 2*          | 14        |
| Data Series | Datasets  |
| 2070        | 484       |
| Views       | Downloads |



Series I comprises 14 (7 historical and 7 future datasets) for 3 pilot watersheds and select 12 stations in Kenya, Tanzania, and Uganda. The data can be used for hydrologic and water quality modeling or other water resources applications and are formatted for easy use with such applications.

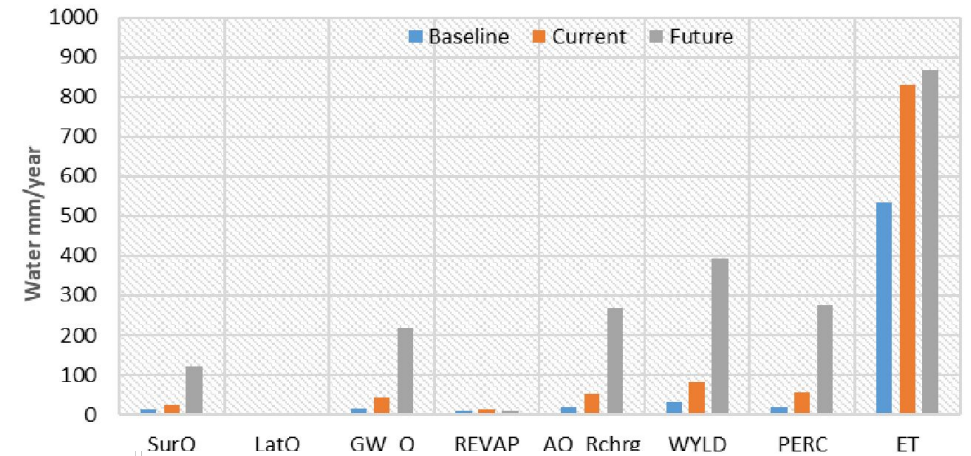
## Sample Modeling Products

### Climate, Land Use Change, & Management Scenarios

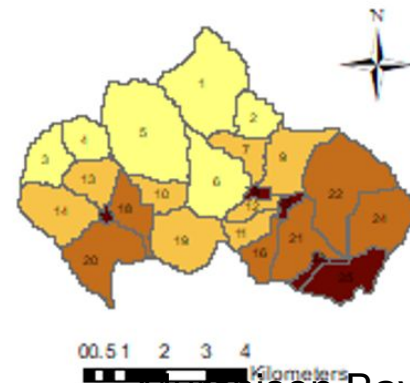


Sasumua River Watershed, Kenya

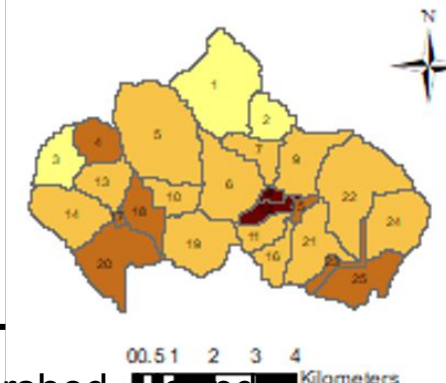
Simiyu River Watershed, Tanzania



SEDIMENT YIELD at VFS 2 m width



SEDIMENT YIELD at VFS 1 m width



Murchison Bay Watershed, Uganda

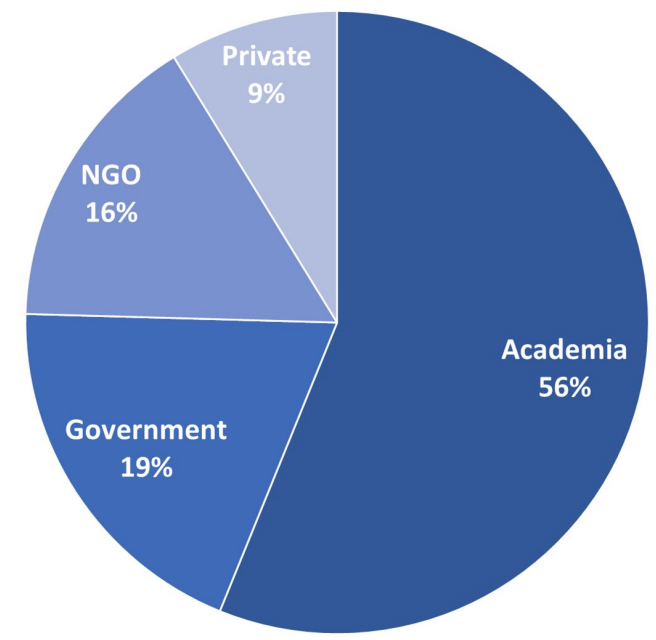
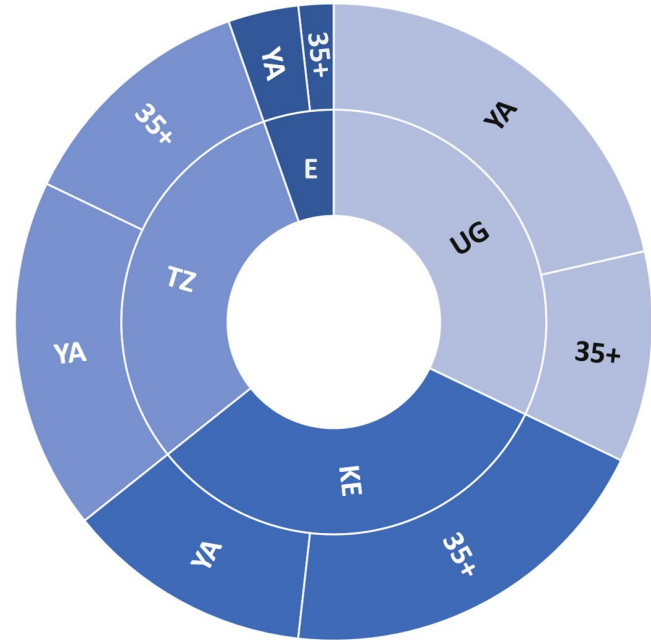
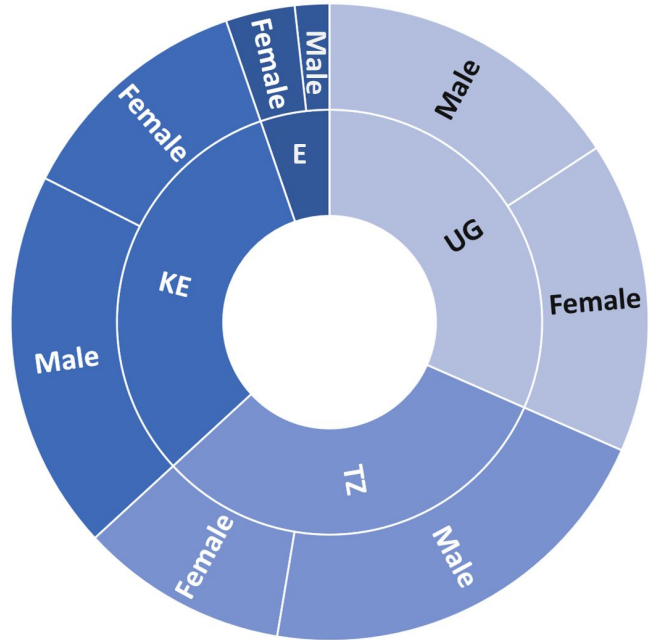






## Gender & Sector Engagement

Goals: 30-35 participants; 50/50 distribution between men and women; minimum of 25% young adults (YA, ages 18-34).



Details in Workshop Report to be published as part of Series II; E: external to pilot study area

n=57

## Key Takeaways

### Data and Data Policies

There is the need for dedicated investment in data collection and curation by governments and a commitment to make the data freely available and accessible at least to researchers.

### Research Translation

Research Translation needs to be embraced in all projects and to be taught to both researchers and practitioners at an early stage in their careers.

### Gender Considerations

Early career interventions targeting females age 18-34 in the water sector are needed to avert a leaky pipeline.

Details in Workshop Report to be published as part of Series II



## Way Forward

- Capacity building including data literacy training workshops (targeting different levels of stakeholders, more countries)
- Demonstration projects for current study results
- Extend work into other watersheds (urban, coastal, Nile Basin)
- Extend work beyond pilot study area (greater EA, Africa)



Broader Initiative based on our experience and stakeholder inputs

# Thank You

Questions?

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