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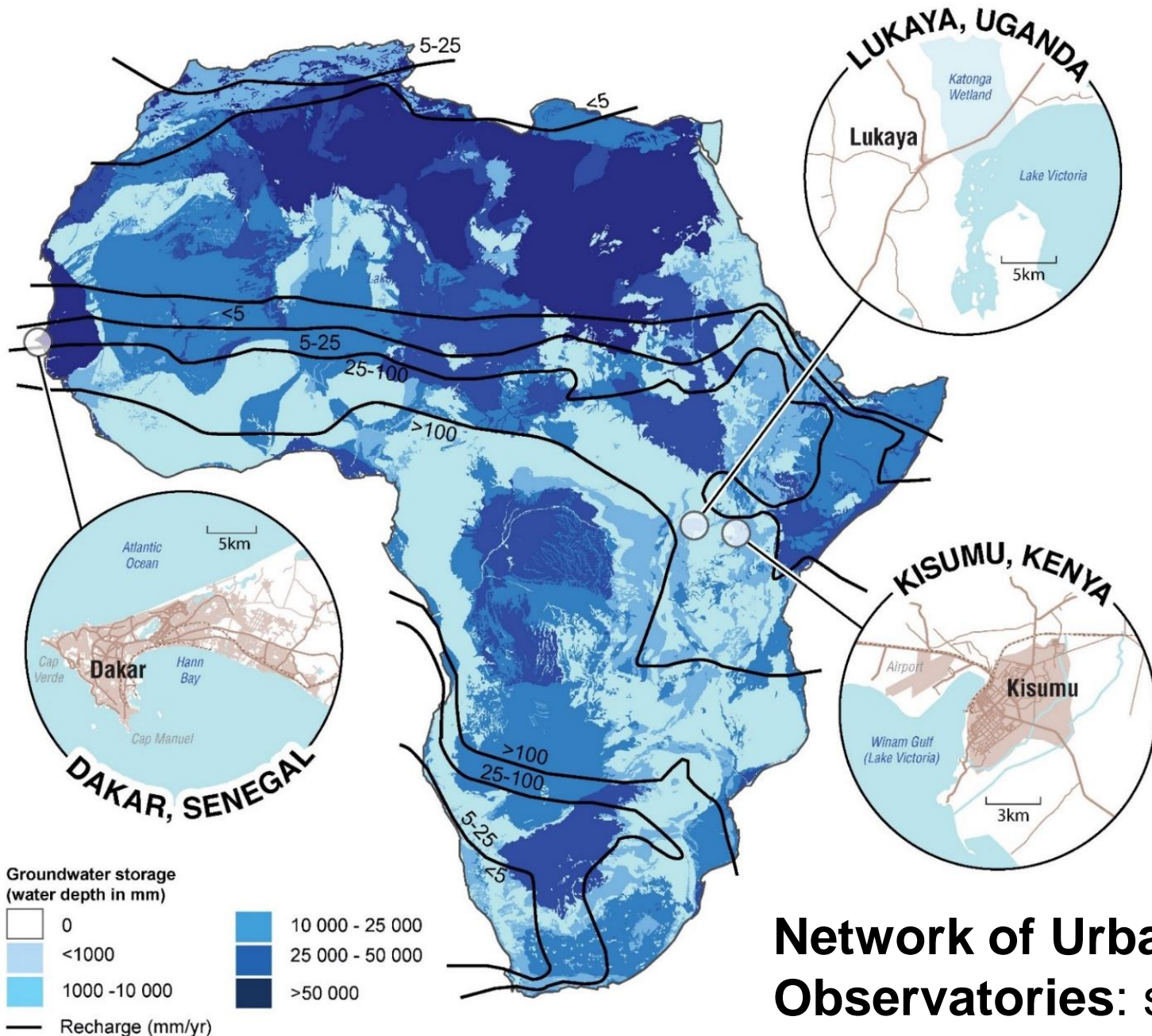


AfriWatSan - Uganda: Highlights of Preliminary Findings

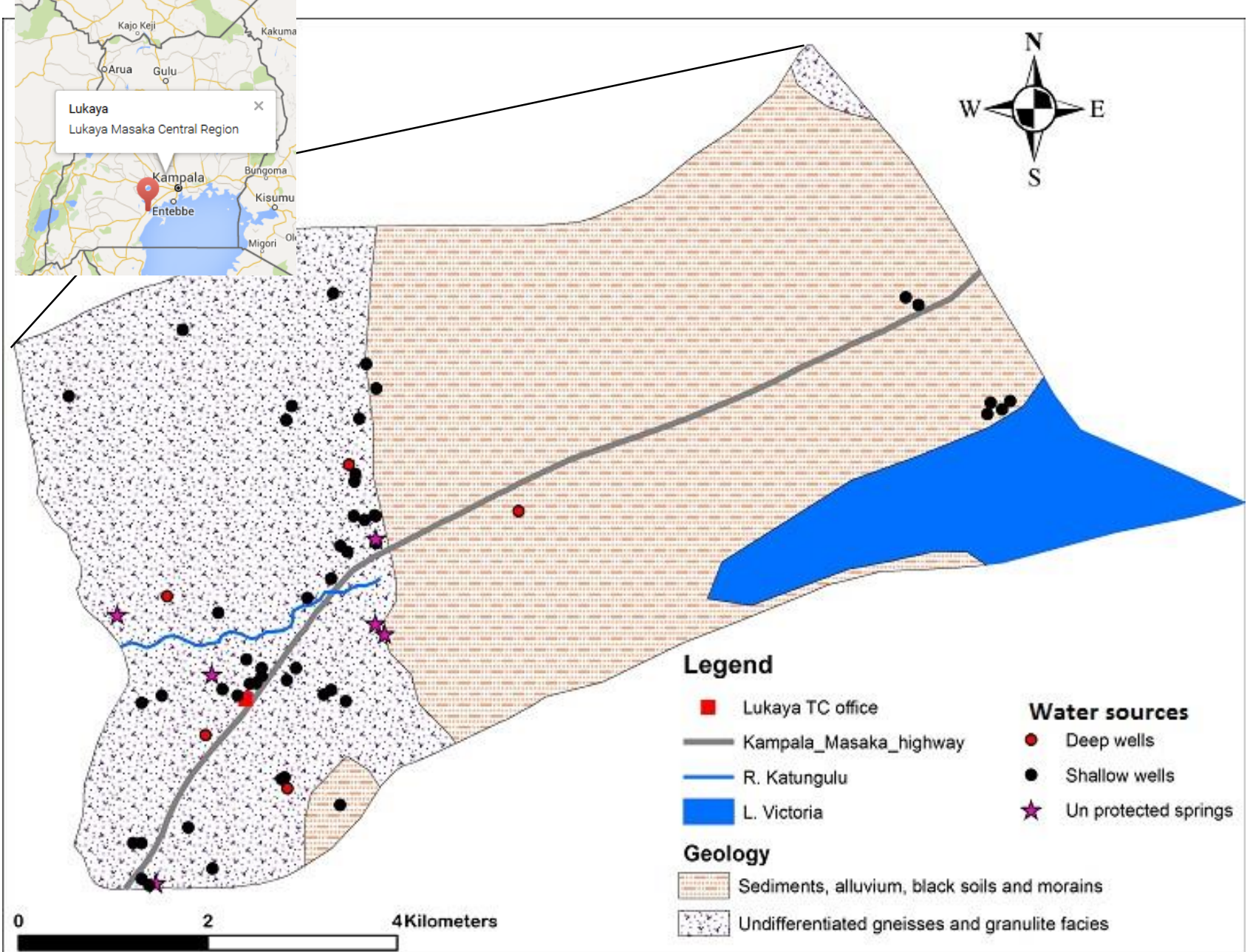
3rd International Stakeholders Workshop, Kisumu, Kenya

9-16 July 2017





Network of Urban Observatories: smallest scale of town - Lukaya TC



Lukaya TC: 38 km²; population: 24,335 (UBOS, 2014), largely groundwater-fed, limited piped water source, dominated by latrines

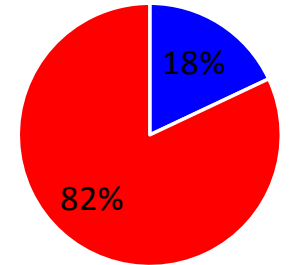
Key research methods

- Construction of **hydrometrical network** (e.g. piezometers, rainfall gauges) - for water level monitoring and event sampling;
- **Field mapping** of on-site **sanitation** facilities and **water points** as well as evidence from **public health monitoring**;
- **Laboratory analyses** to include an assay of standard indicators of **microbiological, chemical** (e.g. **nitrates**) and **stable-isotope tracers**;

Completed Activities - 1

- **Mapping of water sources** – $n = 62$ (94% functional) sources;

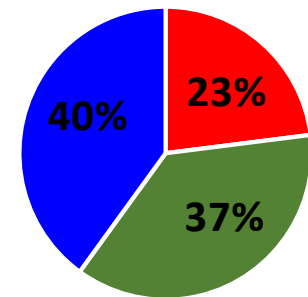
- **Deep** - 18%
- **Shallow (<30m)** - 82%



■ Deep ■ Shallow

- **Identification of water source users:**

- **Individual** - 23%
- **Institutional** - 37%
- **Communal** - 40%

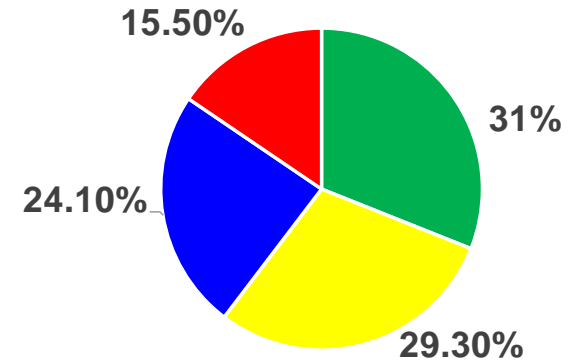


■ Individual ■ Institutional
■ Communal

Completed Activities - 2

- **WHO (1985) sanitary survey of water sources ($n = 58$)** – ranked as presence or absence of risk for overall vulnerability to contamination;

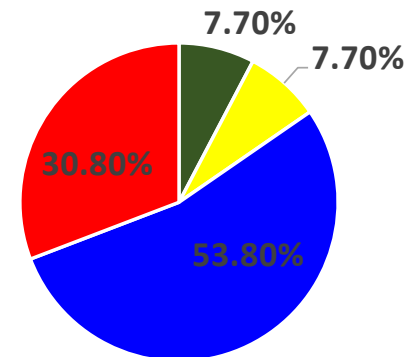
- 0-2 Low
- 3-4 Medium
- 5-7 High
- 8-10 Very high



■ Low ■ Medium ■ High ■ Very high

- **WHO (1985) sanitary survey of latrines ($n = 13$);**

- 1-3 Low
- 4-5 Medium
- 6-8 High
- 9-10 Very high



■ Low ■ Medium ■ High ■ Very high⁶

Ongoing Activities: Construct and instrument urban observatories

- Site location factors depend on geology, population density, aquifer depth;
- Characterisation of aquifer depths and types using lithological logs and geophysical surveys (e.g. VES and resistivity profiling);
- To be followed by test pumping, and
- Install water level data loggers and rain gauges;
- Event sampling for chemical and microbiological analyses;

Ongoing Activities: Public health surveys

- Public health survey questionnaires have been tested;
- Subsequently, administer questionnaires for targeted public health parameters;

Ongoing Activities: Identify Capacity strengthening needs

- Identification and review of thematic research literature;
- Thematic field methods;
- Thematic laboratory methods;
- Data analysis and interpretation;
- Publishing and communication of research outcomes;