20th AfWA International Congress and Exhibition 2020
Breaking new grounds to accelerate access to water and sanitation for all in Africa

Outcome and Impact Indicators for Assessment of Water Safety Plans Implementation in Bushenyi Municipality, Uganda

23rd – 27th February 2020, Kampala, Uganda

BY:
CHRISTOPHER KANYESIGYE – NWSC,UGANDA

BACKGROUND

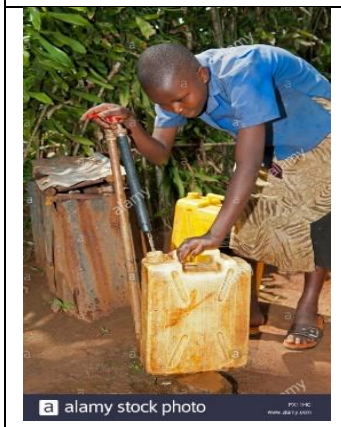
- Water Safety Plans (WSP) are recommended by WHO as the most effective means of consistently ensuring the safety of drinking-water supply

- Many countries worldwide have taken up the WSP approach as a means of ensuring sustainable safe drinking water supply

- In spite of the wide WSP uptake, assessment of WSP effectiveness has not been done in many of the countries

BACKGROUND

WSP scope

CATCHMENT	TREATMENT	DISTRIBUTION	CONSUMERS
State of: • Forest upstream of lake & River • River bank vegetation • Wetlands • Lake environs	*O&M of:* • Plant units e.g. clarifiers, filters • Machines & equipment	*O&M of:* • Reservoirs & tanks • Pipe network • Booster stations • Meters	*State of:* • Storage tanks • Containers • Hygiene status & practices
			

BACKGROUND

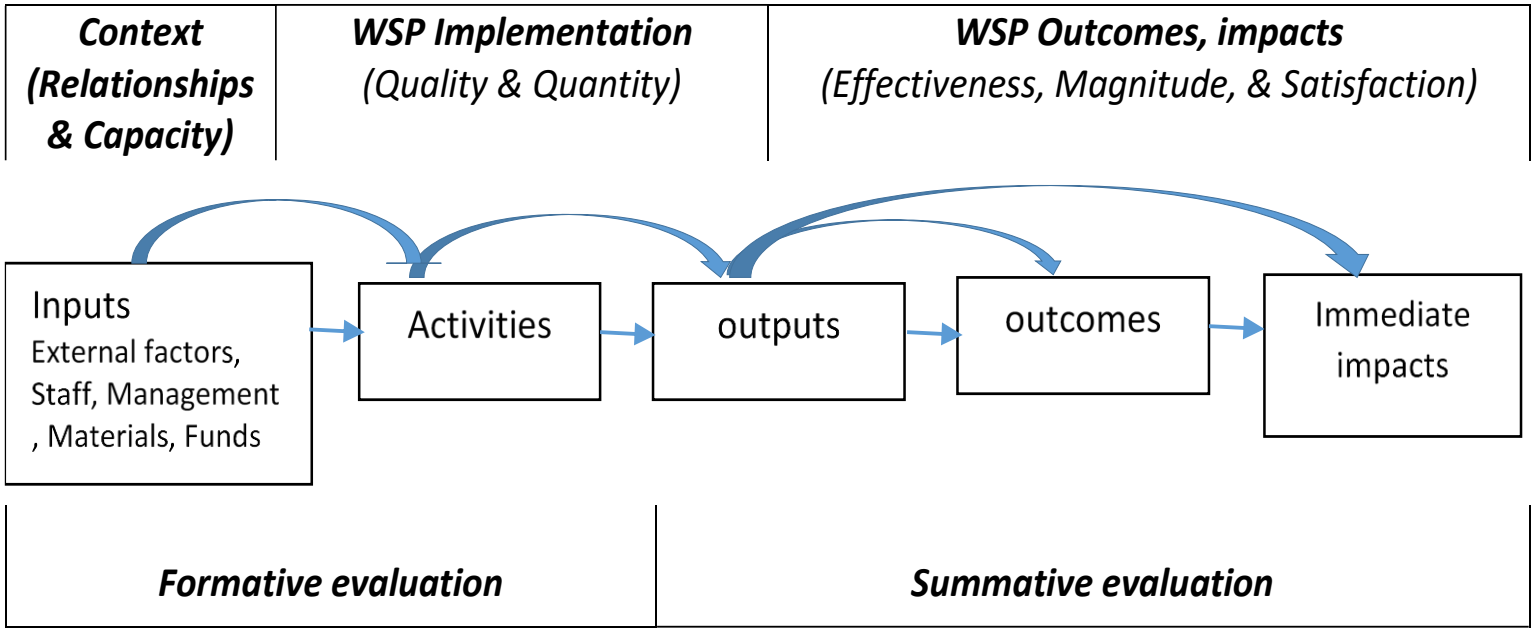
- The pace of WSP uptake in Africa has been slow, probably due to lack of evidence of its effectiveness
- It's not yet established as to what data is suitable for developing WSP indicators for Africa
- Hence the study for assessment of WSP Implementation in Bushenyi-Ishaka Municipality, ongoing since May 2019.

STUDY OBJECTIVE

To select appropriate indicators for assessment of WSP effectiveness for piped water schemes serving small towns in Uganda, particularly Bushenyi-Ishaka Municipality

How to achieve this objective,----

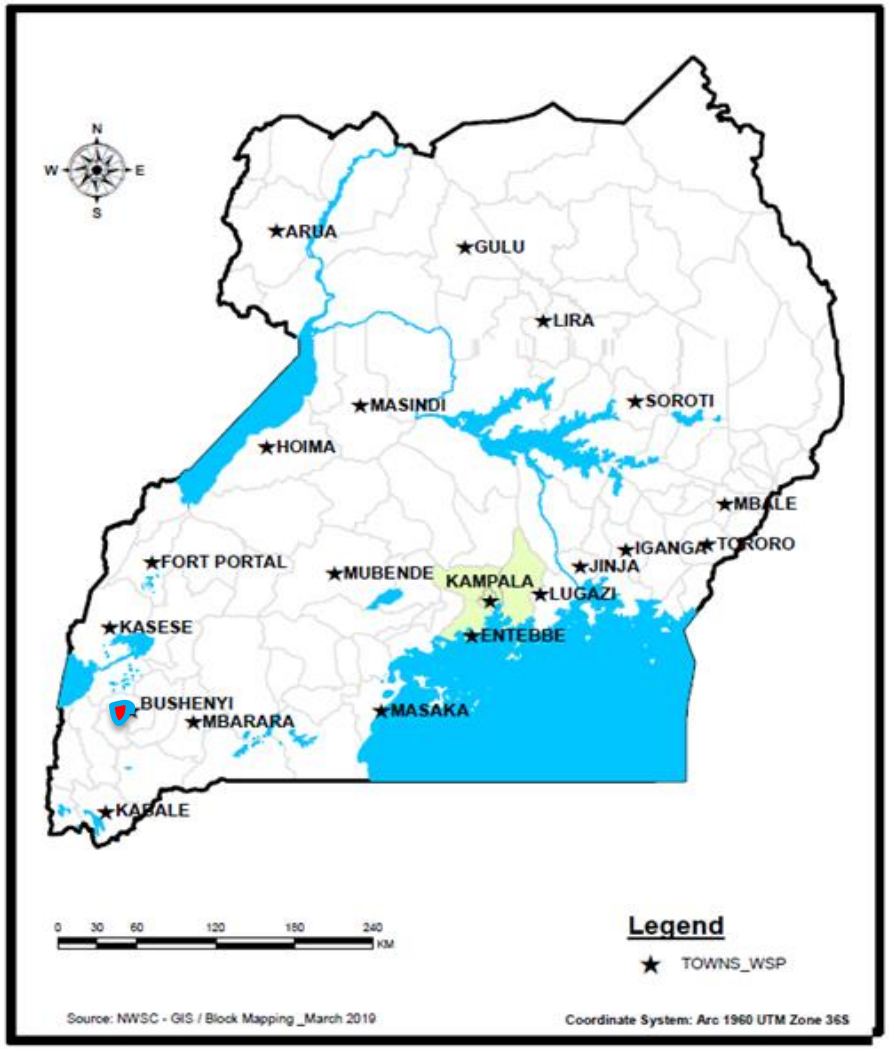
METHODOLOGY



The Bushenyi-Ishaka WSP evaluation logic model (adapted from W. K. Kellogg Foundation, 2004)

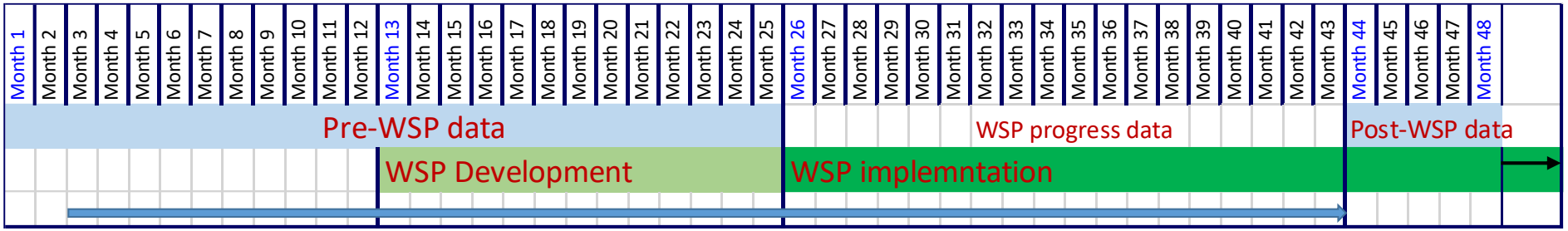
METHODOLOGY

WSP development and implementation in Uganda has been carried out in 20 urban centres for over a decade (including Bushenyi-Ishaka Municipality)



METHODOLOGY

- Baseline data for 2 years (July 2016-July 2018) was collected
- Progressive data collection during implementation is ongoing



METHODOLOGY

Outcome indicators (Kumpel *et al*., 2018)

1. infrastructure change as a result of WSP
2. level of operation and management practices
3. revenue to cost ratio
4. holding internal and external meetings and trainings
5. level of staff understanding of the water supply system and the hazards faced

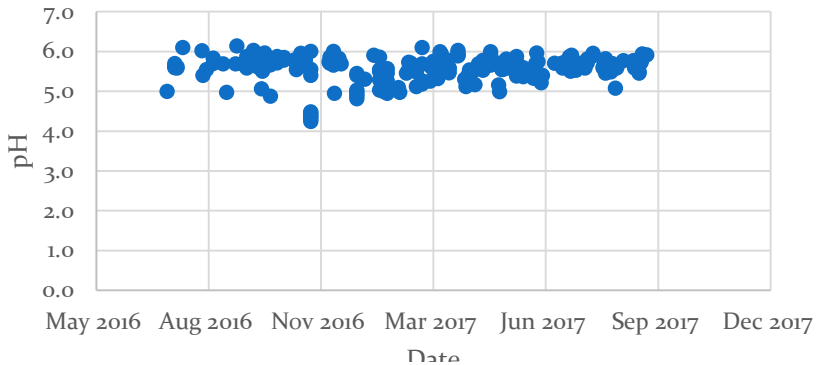
METHODOLOGY

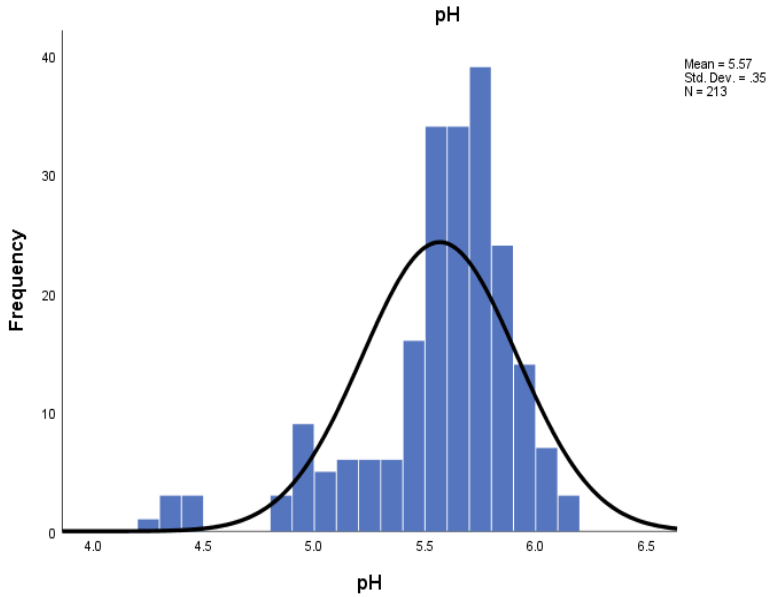
Short-term impact indicators (within 2 years)

1. water supply continuity
2. non-revenue water
3. water quality (No. of tests done and compliance) in terms of
   - -microbial (faecal coliform, e-coli)
   - -turbidity,
   - -chlorine disinfectant residual and
   - -pH
4. the level of customer satisfaction
5. Customer complaints handling

SOME PRELIMINARY RESULTS (baseline data for water supply network of Bushenyi Municipality)

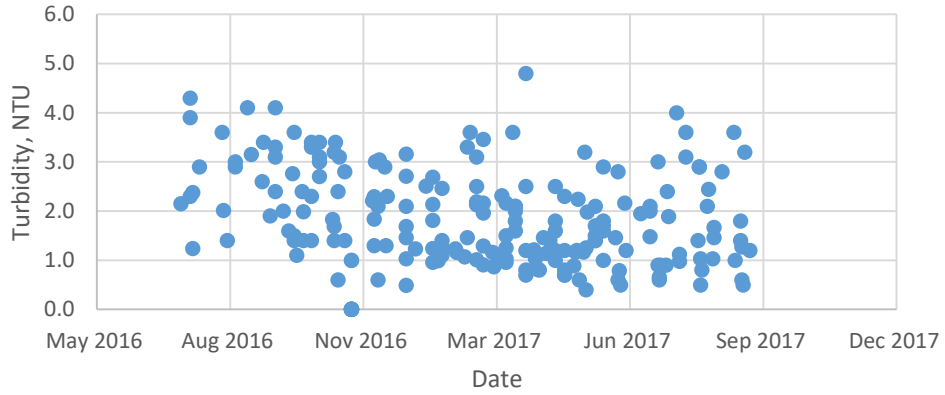
RESULTS

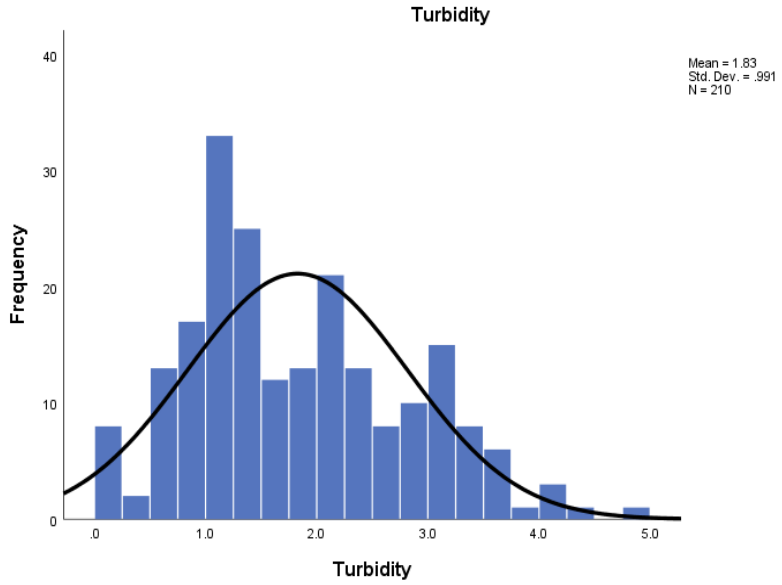




pH: mainly acidic

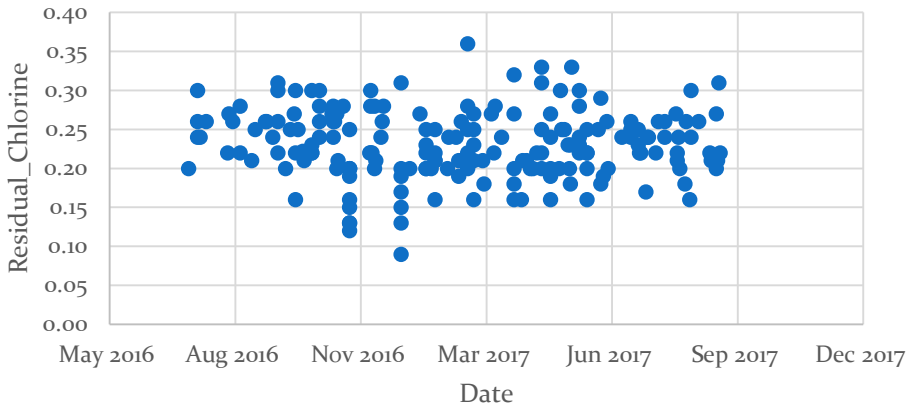
RESULTS

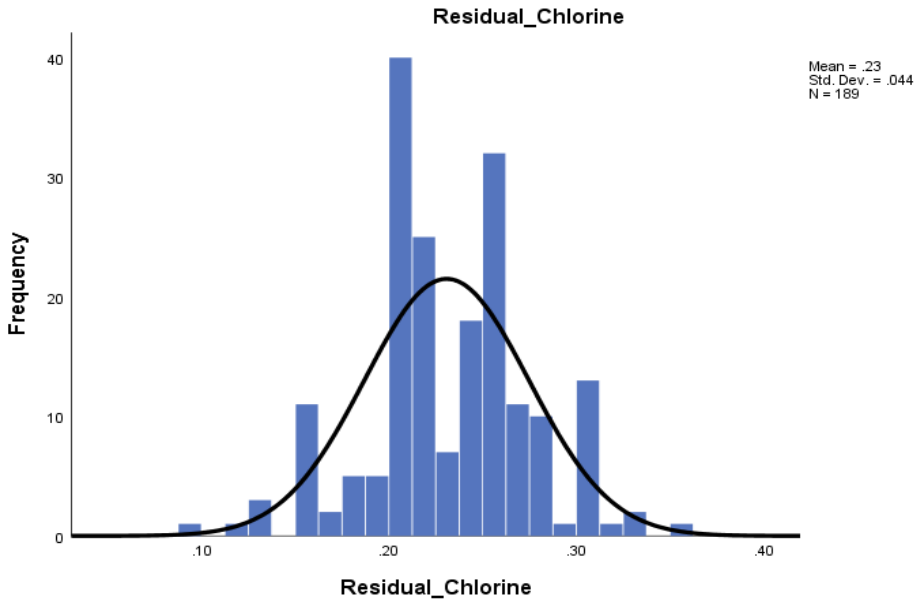




Turbidity: within the national standard (<5NTU)

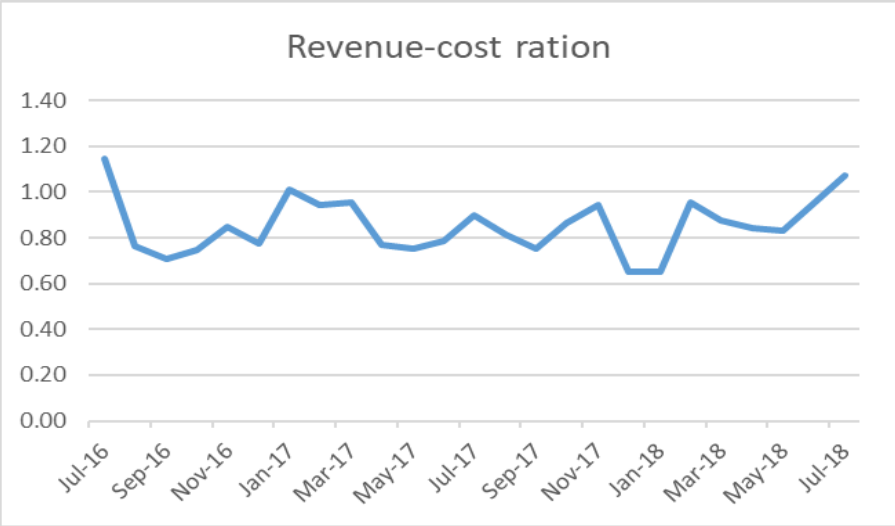
RESULTS



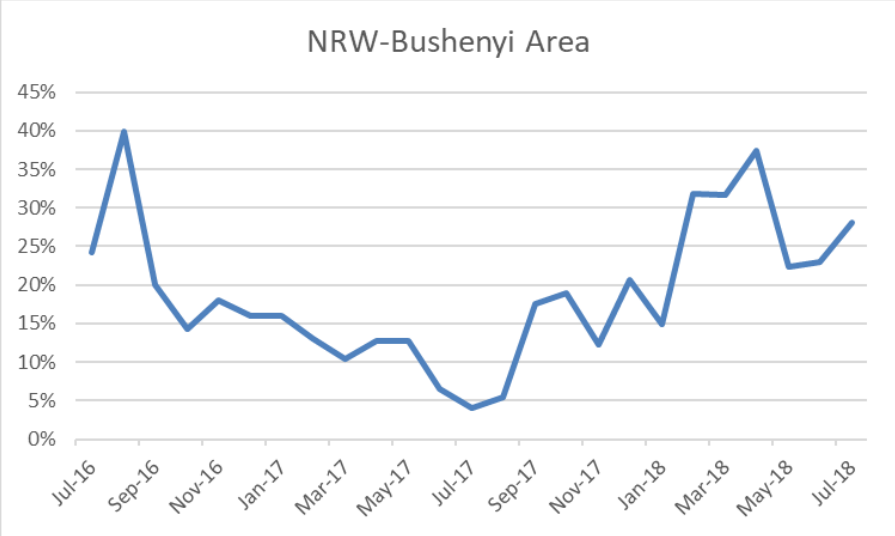


Residual Chlorine: occasionary below the WHO guideline

RESULTS

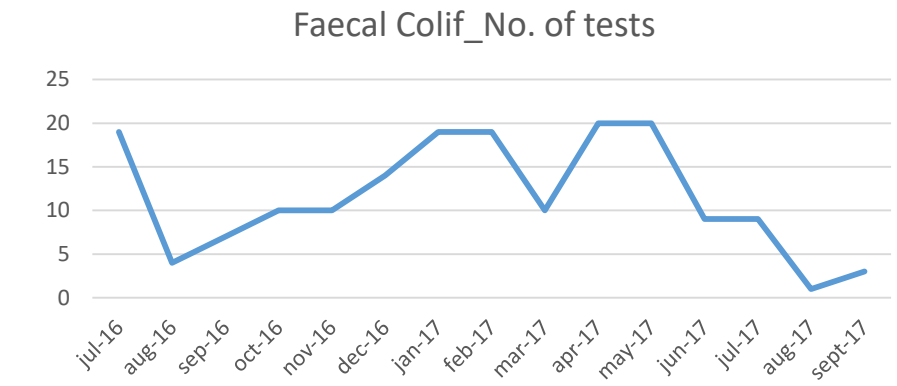


The Revenue-Cost ratio was mainly below the break-even level

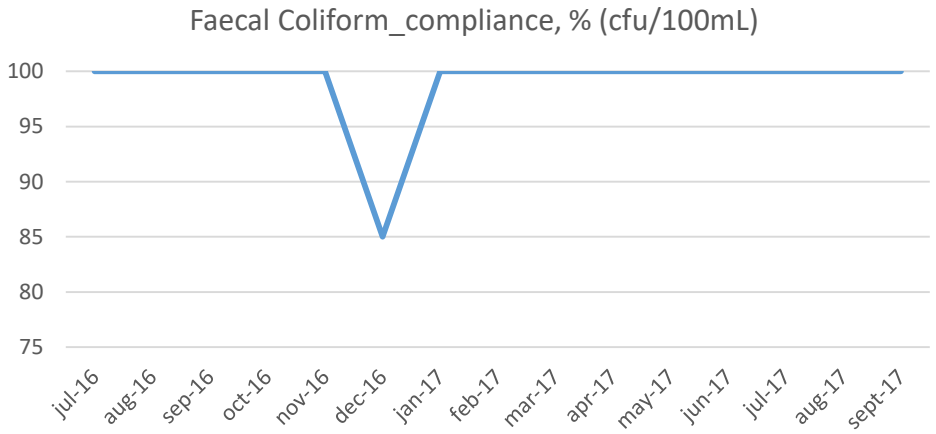


NRW improved but got worse in the second year

RESULTS



Monthly number of distribution samples analysed



100% compliance achieved, save for 2 samples

CONCLUSION

Conclusion:

- Successful determination of the indicators will form a basis for an evaluation framework for the Bushenyi-Ishaka WSP
- This will act as a benchmark for the rest of the WSPs in Uganda, and probably other regions of the developing world

Next steps:

- Further data collection continues during the ongoing implementation
- Plans for relevant data collection at the end of 2 years of implementation have been put in place to facilitate comparison with the baseline data

Thanks for your attention
(Asante sana)