

# 20<sup>th</sup> AfWA International Congress and Exhibition 2020

## Breaking new grounds to accelerate access to water and sanitation for all in Africa

Novel partnership between NWSC and Kabarole District  
to provide safe water to communities in hard-to-reach  
Kabende subcounty

23<sup>rd</sup> – 24<sup>th</sup> February 2020, Kampala, Uganda



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# “BREAKING NEW GROUNDS TO ACCELERATE ACCESS TO WATER AND SANITATION FOR ALL”



- Districts have responsibility for rural water services
- Nation Water and Sewerage Corporation (public parastatal) is extending into more small towns and-through the SCAP100 Programme– to more than 12,000 new villages during 2017-2020
- As a result, NWSC has distribution networks in increasingly rural areas which makes further expansion of piped water into additional villages more feasible

***How can Districts, who are responsible for reaching unserved villages, work with NWSC, who has large capacity for building and maintaining piped networks, to accelerate access to water for all?***

# REALISING A PIPED DREAM?



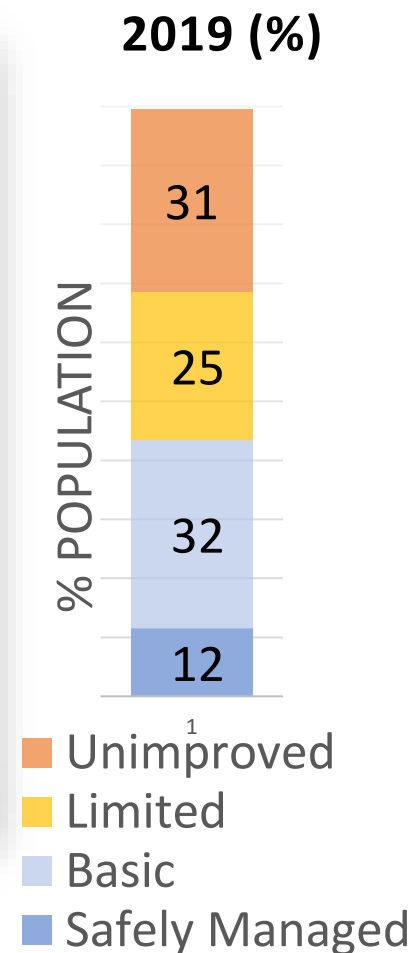
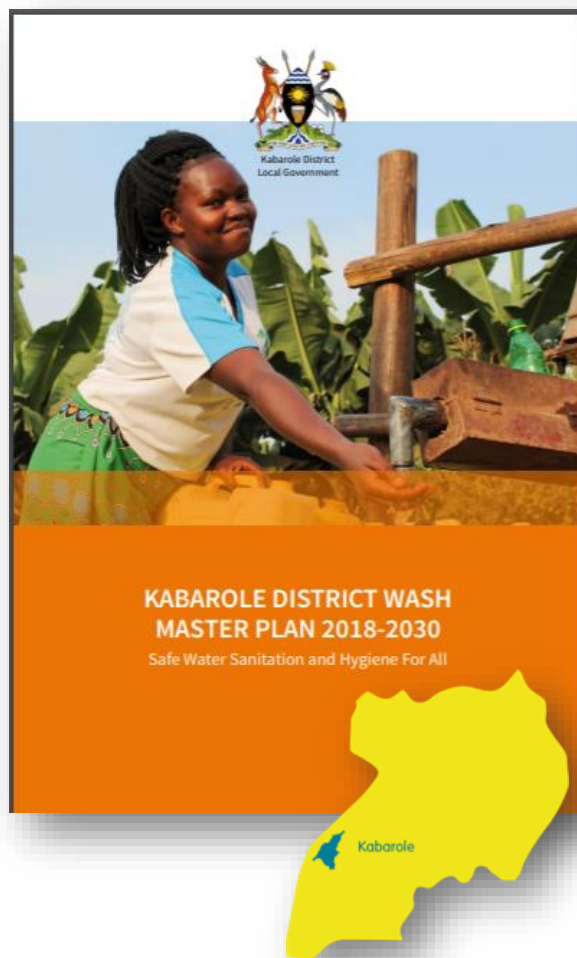
- Serving a rural community with piped water requires a lot of investments and leveraging of resources elsewhere to meet operational costs. Currently, only NWSC has that capacity

*How can Districts, who are responsible for reaching unserved rural villages, work with NWSC, who has large capacity for building and maintaining piped networks, to accelerate access to water for all in Uganda?*

# THE CASE OF KABAROLE DISTRICT



- Kabarole District has strong leadership for WASH and a Masterplan for achieving universal WASH services in the District by 2030.
- The Masterplan includes a strategy for developing co-financing mechanisms to help reach challenging or under-served areas
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- Kabarole is home to Fort Portal Municipalities, 4 Town Councils and 11 sub Counties

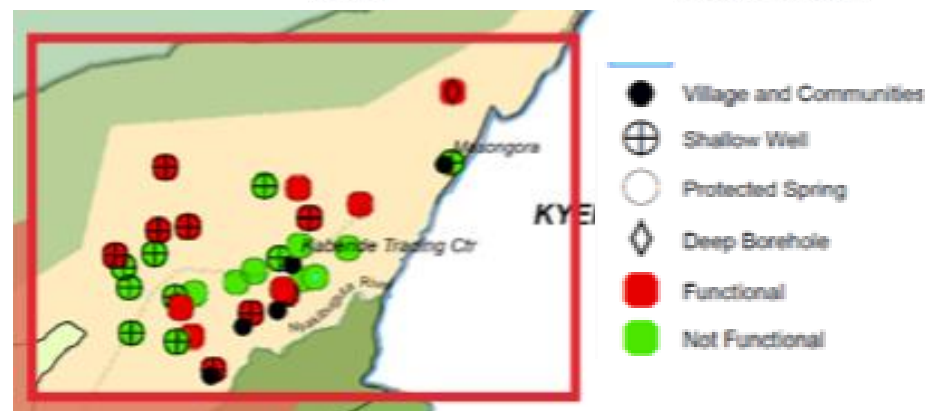
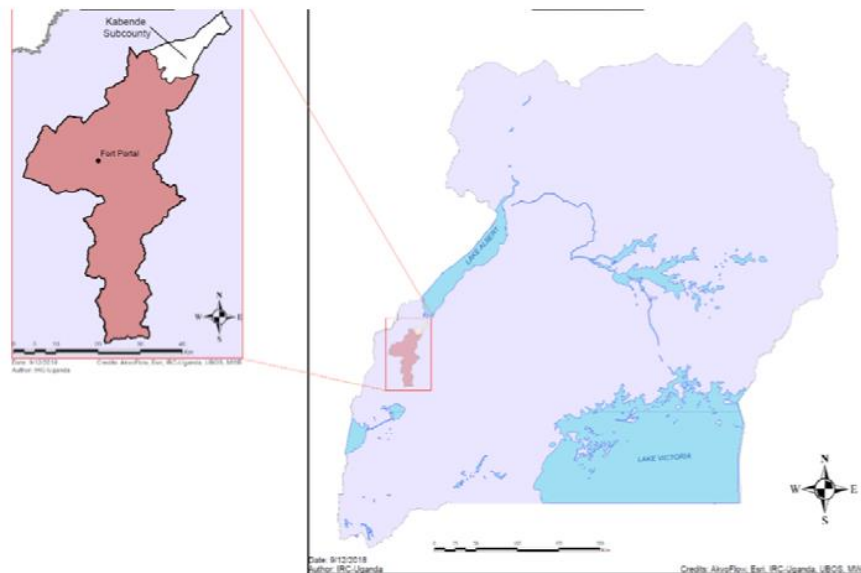


# THE CASE OF KABENDE SUB COUNTY IN KABAROLE DISTRICT



## The case of Kabende sub county in Kabarole District

- Population Kabende (2018): 12,500
- Access to improved water (2018): 37% and high level of non-functionality of point water sources.
- Access to improved water in Kabarole overall (2019): 69 %
- Reasons for low access: Distance from road, high seasonal impact on groundwater supplies and protected springs that dry,
- ***A study by IRC Uganda explored water resource potential and opportunities to improve supply in Kabende***



Villages and water sources in Kabende



# KABENDE SUB COUNTY, KABAROLE DISTRICT

- IRC Uganda study suggested either exploitation of deeper groundwater sources or the utilization of piped networks
- Sources identified in scoping for the development of new piped schemes had low volumes and high levels of contamination with e.coli.
- Surface water from river Sogahi and Nyakibuguta required huge energy to pump water and advanced treatment units because of high turbidity and e.coli levels.
- ***Another option was proposed... what about extending the network of an existing nearby larger piped scheme... i.e. the scheme run by NWSC?***



*Photos: Kyamwirukya & Kyabakama Protected springs that Dried up. Shallow well at Rwensene is non functional*

# APPROACH TO IMPROVE WATER SERVICE IN KABENDE



- An MOU between Kabarole District and NWSC was concluded to share costs for infrastructure development for a pipe network extension of 9.6 Km in the first phase
- A build- Own – Operate arrangement that maximize benefits of NWSC utility management and reduces the burden of Local government on Operation and maintenance

APPENDIX 1: DESIGN AND BOQ FOR EXTENSION OF WATER TO MASONGORA

Bills of Quantities for extending water to Masongora village

Sl. No	Item Description	Units	Quantity	Rate	Amount
1	HDPE DN60 PVI10	m	3,000	16,951	50,853,000
2	HDPE DN60 PVI10	m	2,000	9,052	18,104,000
3	HDPE DN125 PVI10	m	2,000	2,460	4,920,000
4	HDPE DN125 PVI10	m	2,000	3,008	6,016,000
5	Trenching for all pipework	Item	2	16,632,840	33,265,680
6	Trenching for HDPE DN60 PVI10	m	3,000	2,500	7,500,000
7	Trenching for HDPE DN60 PVI10	m	2,000	2,500	5,000,000
8	Trenching for HDPE DN125 PVI10	m	1,000	1,000	1,000,000
9	Construction of pipe	No.	6	300,000	1,800,000
10	Transportation of pipes	Item	5	8,000,000	40,000,000
<b>Sub-Total</b>					<b>129,899,280</b>
Add 10% (10%)					<b>14,288,921</b>
<b>TOTAL</b>					<b>144,188,201</b>

Notes:  
 11. Land for construction of 60m<sup>3</sup> steel tank and 2 Nos. 7.5m steel break pressure tanks To be provided by Kabarole District Local Government  
 12. 60m<sup>3</sup> steel tank and 2 Nos. 7.5m steel break pressure tanks To be provided by NWSC  
 13. 60m<sup>3</sup> steel tank and 2 Nos. 7.5m steel break pressure tanks To be done by NWSC

DESIGN OF NEW PIPELINE TO MASONGORA AND KASESENJE VILLAGES

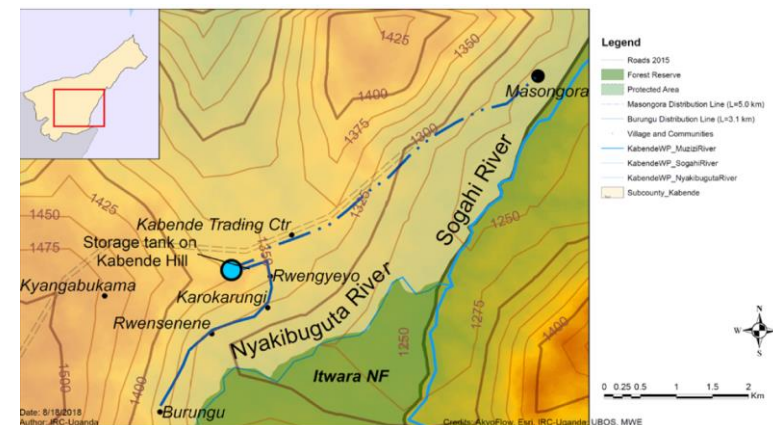
Projected households to be served by 2033 = 400 households

Demand per household = 30l/day

$$\text{Demand, } Q = 400 \times \frac{30}{24} = 500 \text{ m}^3/\text{day}$$

$$\text{Flow Velocity, } V = 1 \text{ m/s}$$

$$Q = VA$$

$$A = \frac{Q}{V}$$


Photos: MOU, existing storage tank, and design from pre-feasibility study

# APPROACH TO IMPROVE WATER SERVICE IN KABENDE



- NWSC networks include private connections and Public Stand Posts (PSPs) Kiosks.
  - Private connections cost household 0.93 USD/m<sup>3</sup>
  - PSPs/Kiosks are managed by an entrepreneur who collects fees per jerry can and pays NWSC a discounted rate of 0.23USD/m<sup>3</sup>
- NWSC can build an extension to reach unserved villages through a subsidized PSP, then can help cover costs by obtaining new private customers nearby who can help offset the costs
- In Kabende, the District helped cover the cost to extend NWSC network to hard-to-reach villages in Kabende, then NWSC can aim to maintain and sustain supplies using their business-oriented approach



# PROGRESS TO DATE

- Necessary infrastructure including, transmission and distribution lines, a 5000 litre Break Pressure tank and public stand Posts(PSP) has been developed in only four months
- Six New PSP have been developed in Kabende Sub County providing access to atleast 1,200 people with a potential increase of access to improved water sources by 11%.
- 3 villages of Masongora Parish have been served with two PSPs and thus covered – 2 villages are remaining to reach 100% coverage for this parish.
- 35 new household connection in Kabende and Masongora Parish have been made bringing the level of safely managed water access to 210 (2%) in the Sub County.
- Plans in phase two cover another parish that includes a Health centre II and 5 villages.



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*Photo: Some of the new infrastructure included a Break Pressure Tank and Public Stand Posts*

# LESSONS LEARNT



- No single technology can be used to effectively serve hard to reach communities in Kabarole District
- Water Stressed areas have not simply been neglected; but are limited on possibilities for improved Water technologies and limited water source potential
- It is possible under SCAP 100 for National Water and Sewerage Corporation to serve rural communities.
- Utility-District partnership on Water service provision is essential but does not imply that districts abdicate their role for service delivery.
- Districts need more support in helping plan for efficient investments with limited budgets

# FUTURE CONSIDERATIONS



- Are regulatory mechanisms adequate for ensuring accountability and enforcement of such arrangements?
- If this case is a success, what can the MWE do to encourage the model from Kabarole to be more systematically applied in Districts across Uganda?
- Are the water and sanitation conditional grants (a key funding source for Districts) able to be used toward such partnership arrangements?
- With high Assets management potential and efficient O & M, partnership between the district and NWSC could be a major part of achieving sustainable WASH services for even rural communities.



# IRC



# 20<sup>th</sup> AfWA CONGRESS

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