

**IWRA Webinar:
Water Reuse in the Circular
Economy.**



UNIVERSITY OF
WATERLOO



Toward SDG 6: Exploring the Potential for Wastewater Reuse in Nairobi, Kenya

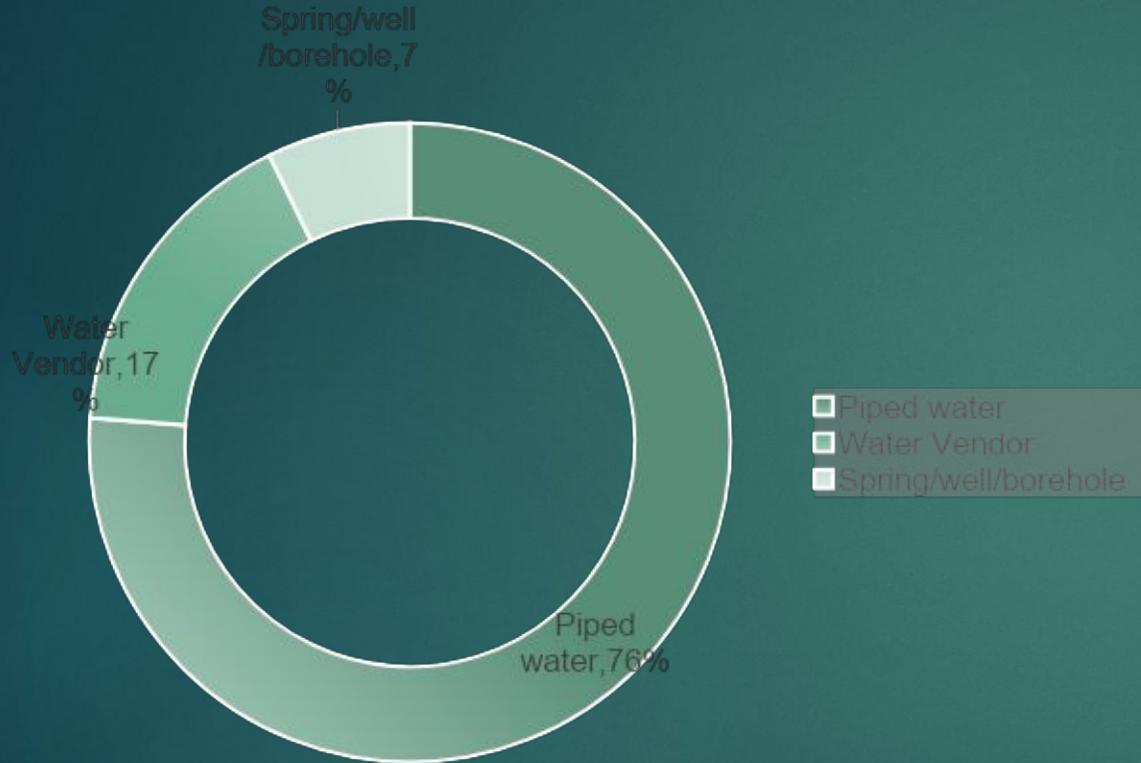
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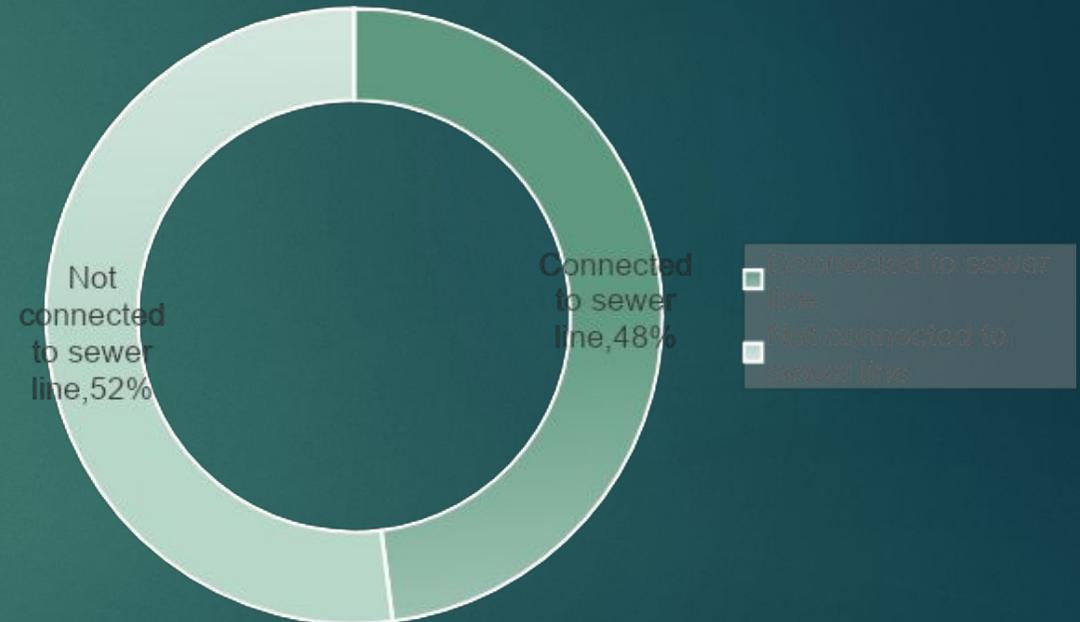
Introduction



Water Access



Sewerage service connectivity



Research Objective

Can domestic grey/wastewater reuse be a meaningful contributor to achieving SDG 6 in Nairobi?

Drivers for and benefits from recycling wastewater

Barriers against the uptake of wastewater reuse

Feasibility of wastewater reuse systems

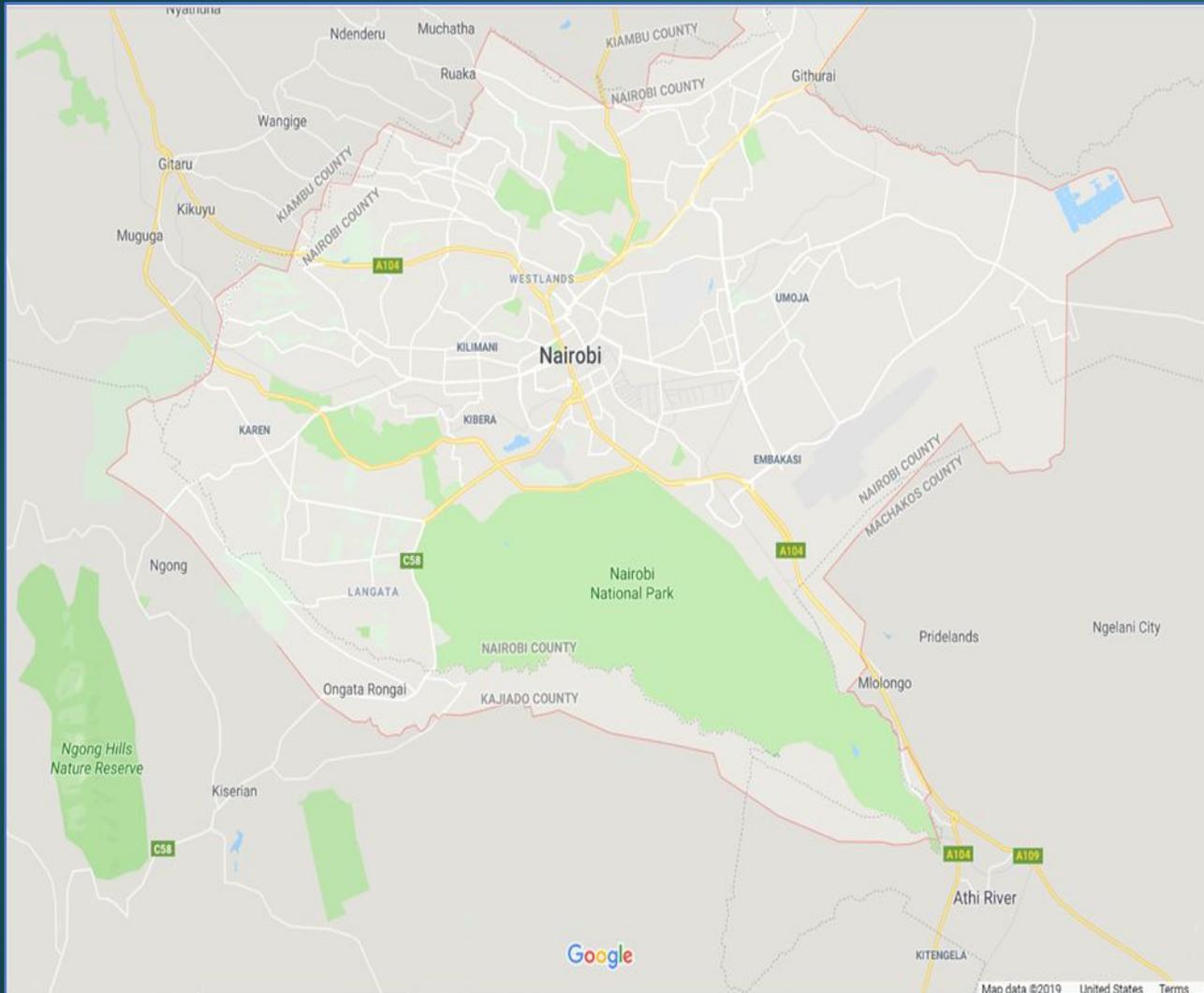


Chambers 1, 2 and 3 of a recycling system



Greywater in bucket/basin that can be reused for a different purpose

Study Area



Kibera

Dense population

Water and sanitation challenges

Middle to high income areas

Increased use of wastewater reuse systems

Discussion

Drivers for and benefits from
grey/wastewater reuse

Inadequate sewerage services

Water quality regulations

Practical benefits to the user

Appreciation for modern technology and
environmental concern



Lawn watered with recycled water



Example of
greywater
being used
for irrigation

Discussion

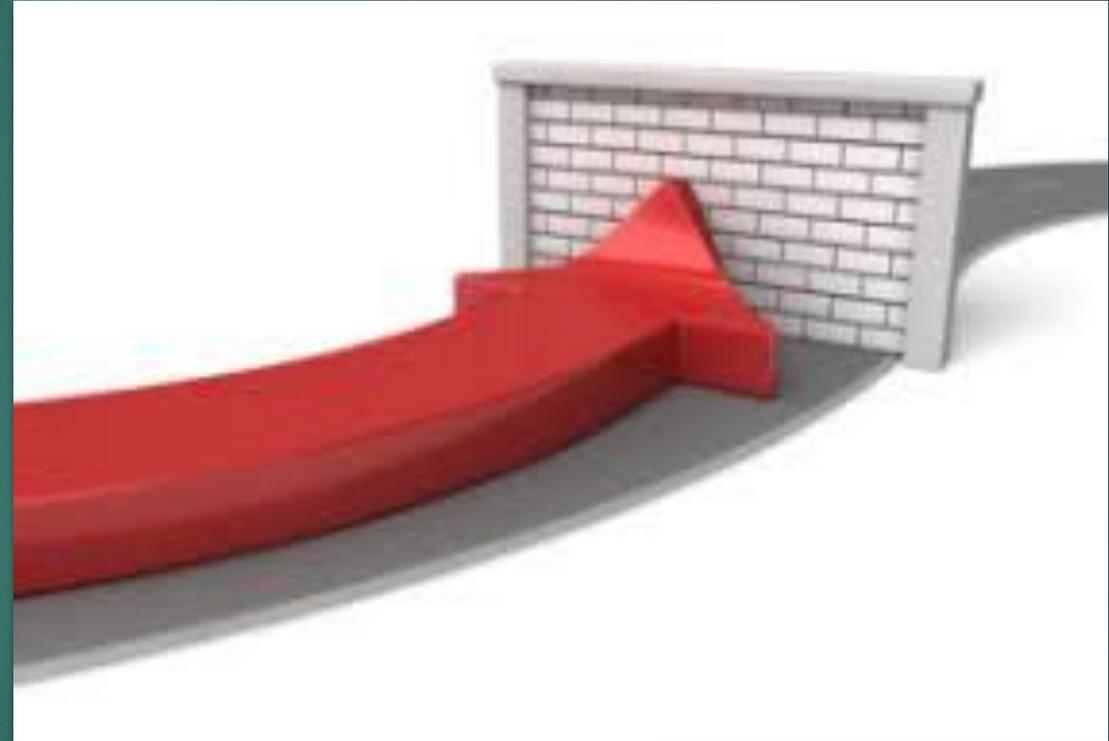
Barriers against grey-wastewater reuse

Cost

Lack of governance/ government support

Public Perception - Attitude towards water (abundance), 'yuck' factor

Lack of knowledge



Discussion

Barrier	Ways to overcome barrier
Financial	Subsidies, tax rebates, credit facilities, local manufacture
Lack of governance	Enforcement of current regulations, establishment of sound policies for domestic wastewater reuse
Public perception	Sustained education, information and communication campaigns, partnerships between private and public stakeholders
Lack of knowledge	Educational efforts tailored towards different audiences

Feasibility

Economic

Cost of system

Cost of water

Social

Public perception

Public Education

Technical

Land availability

Maintenance

Water Utility Pathways in a Circular Economy



A circular economy for more resilient cities

Conclusion

Wastewater reuse: A strategy for sustainability efforts

It presents a climate-independent water supply strategy that is increasingly important with increase in water use

Wastewater reuse is both a water conservation strategy and a sanitation solution

Implications and Policy Recommendations



Build an enabling environment for wastewater reuse by:

Improving governance through appropriate policy development, institutional alignment and stakeholder participation

Establishing sound financial foundations through incentives, taxes and prices

Provide mechanisms to support alternative water management