



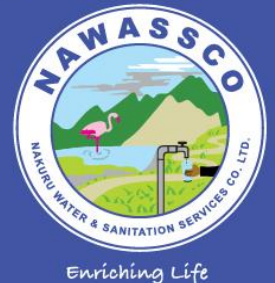
Enriching Life

Closing the loop on the sanitation value chain.

**Presented by; Eng. Margaret Kinyanjui
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INTRODUCTION

- ❖ Due to lack of proper sanitation conveniences, the Fecal Sludge in the Low-Income Areas finds its way in open drainage systems sometimes mixing with clean water systems causing diseases and other health challenges associated with poor handling of sewer sludge.
- ❖ In conjunction with the County Government of Nakuru and development partners, NAWASSCO has experimented different faecal sludge emptying technologies to determine their efficiency in reducing sanitation related diseases.



Sanitation challenges in urban low-income areas

- ❖ LIA's in urban Kenya predominantly use on-site sanitation facilities most of which are; traditional pit latrines with poor dilapidated superstructures.
- ❖ Toilet emptying is mostly done manually using buckets.
- ❖ Sludge is then disposed in open or unknown places causing considerable pollution of the environment and water resources.
- ❖ The manual emptiers involved do not have the right protective equipment and are susceptible to a variety of health risks.



Situation



Pit emptying using the gulper and PCP



Manual Desludging Unit (MDU)



- ❖ The company has an MDU that reduces human contact during pit-emptying.
- ❖ The MDU ensures that there's improved and hygienic pit emptying resulting to improved sanitation and reduction on WASH related diseases.

Transportation and Treatment

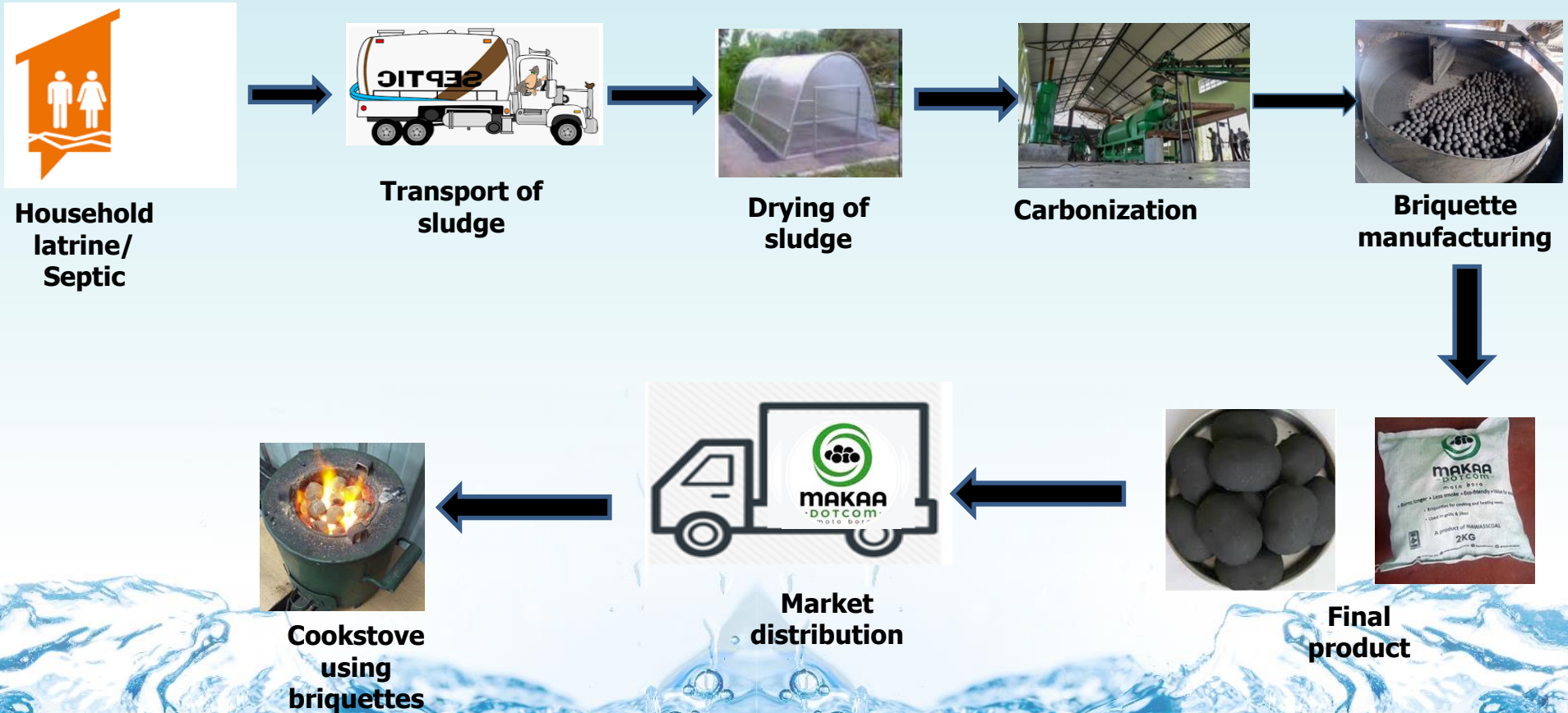


- ❖ From the MDU the fecal sludge is transferred into a primary collection point and subsequently tapered to the treatment plant where it is emptied into the sewer treatment plant for further treatment and processing into bio-fuels products.

Briquette production process



From the household to the household



Makaa Dotcom



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Why focus on completing the sanitation loop??

SDG 6: Clean water and Sanitation

- Improved sanitation
- Management of fecal sludge

SDG 7: Affordable Clean Energy

- MakaaDotcom is an alternative to charcoal
- Production target - 10 tonnes per day

SDG 8: Decent Work and Economic Activity

- Job Opportunities
- Creating circular economy
- Profits to the company

SDG 9: Industry, Innovation and Infrastructure

- Growth of manufacturing industry
- Contribute in achieving vision 2030



SDG 11: Sustainable cities and Communities

- Make Nakuru Town clean/Green
- Improved livelihoods

SDG 13: Climate Action

- 1 tonne of MakaaDotcom saves 88 trees
- Conservation of Forest/Water catchment Areas

SDG 17: Partnership for the Goals

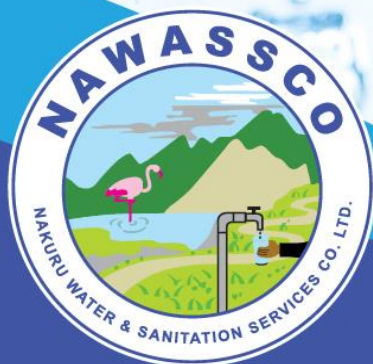
- Partnership development partners
- Partnerships with County Government

Challenges

- ❖ Lack of a ring-fencing model for onsite sanitation services
- ❖ Inadequate financing and consideration both in the county and national level.
- ❖ Rigidity to embrace emerging technologies
- ❖ Lack of proper regulation to guide on onsite sanitation



Q & A



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