

# Managing Faecal Sludge in Rural Areas: CSE's recommendations

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# Why do we need to manage the faecal sludge?

- In the last five years around 107 lakh toilets household built in the rural areas of India
- Since these are on-site sanitation systems – hence there is a need for correct toilet design
- **Wrong containment structures** lead to discharge of wastewater into waterbodies, drains – further **contaminating** the soil and groundwater
- Research studies show that choice of wrong toilet technology, substandard construction and neglect of the local hydrogeology during the selection of any technology to treat excreta – lead to unsafe sanitation



# Why do we need to manage the faecal sludge?

- Department of Drinking Water and Sanitation has emphasized on proper management of faecal sludge along with solid and liquid waste management activities to sustain sanitation gains made by SBM-G Phase I
- **The need of the hour is to treat the excreta completely before any disposal or reuse**
- Reuse of the wastewater and faecal sludge will reduce health burden and contamination of water sources
- Essential to talk about access to clean water and public health during COVID -19

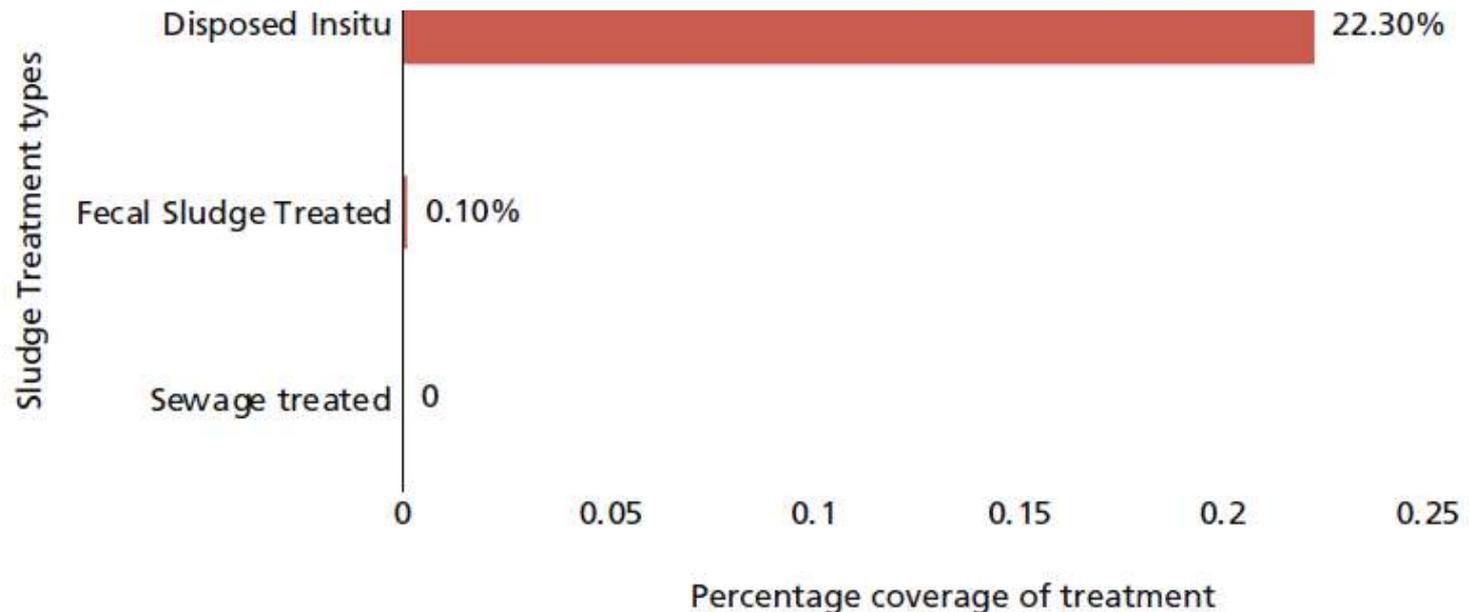


# Sub Saharan Africa – a review of the state of sanitation

1. Global South is gearing up to reach SDG
2. Since early 2000, many countries has been working on sanitation strategies and policies. The recent development plans also brings in the importance of improved sanitation
3. But there is still a need to cover a lot of ground in the sanitation sector –especially the rural areas, where 70 per cent of the population resides in many countries of east and west Sub Sharan Africa
4. There is a need to develop a strong institutional framework for sustainable management of faecal sludge and wastewater management
5. The countries need to rethink on technologies to treat black and grey water safely— there is also a need for major capacity building programmes.



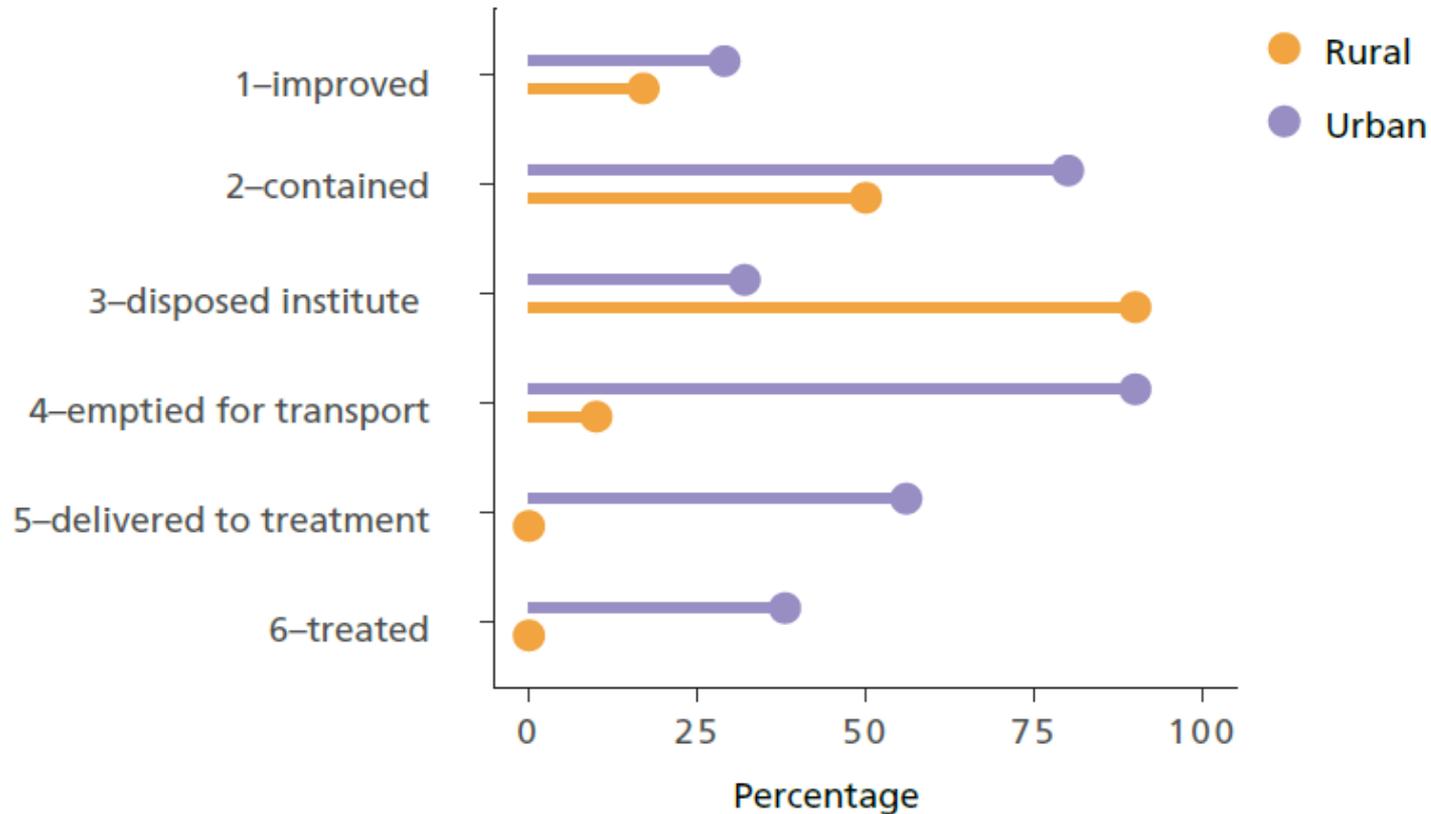
# Status of sludge treatment and disposal in rural Tanzania



Source: Joint Monitoring Progress 2019 data, <https://washdata.org/data/household#!/table?geo0=country&geo1=TZA>



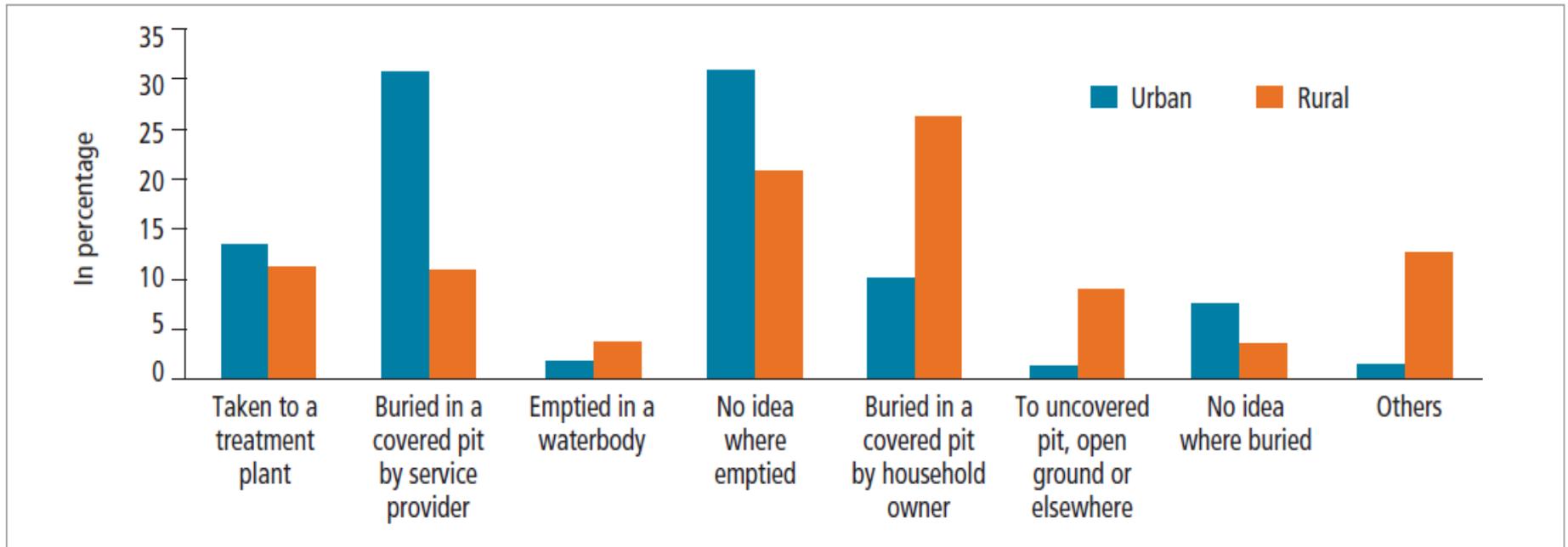
# Sludge management in Uganda



Source: [https://www.susana.org/\\_resources/documents/default/3-2747-7-1488881310.pdf](https://www.susana.org/_resources/documents/default/3-2747-7-1488881310.pdf)



# Sludge management in Nigeria



Source: WASH-NORM survey, 2018.

# Need to reuse the wastewater

- There is huge scope for reuse of treated wastewater in the **agriculture sector** in rural areas
- Treated wastewater can also be used for **aquaculture** and non-potable uses like **flushing**
- It is very important that wastewater is treated to a standard that will make it safe for users
- A **centralized national policy for reuse of treated wastewater** is the need of the hour



# Task 1: Strengthening legal and institutional structures for effective implementation

1. The roles and responsibilities of the different stakeholders, from household owners to government authorities and private agencies, should be well defined.
2. Capacity-building and awareness programmes should be planned for users, artisans, NGOs, CSOs and government authorities involved in the sanitation sector.
3. The local government authorities should develop and implement faecal sludge by-laws, comprising conversion of insanitary toilets to sanitary toilets and implementing best practices of emptying and collecting faecal sludge and transporting it to treatment facilities. Conditions for issuing licenses to private de-sludgers should be well defined to safeguard the health of the people who empty the pits/tanks as well as the community.



## Task 2: Create a manual/menu of toilet technologies linked to treatment systems

Generally the countries in Asia and Sub Saharan Africa have huge variation of hydrogeological conditions. The groundwater varies from shallow to deeper levels from one region to the other. The countries should accordingly choose the types of toilets. Following are few options:

1. Biogas-plant-linked toilets are the best option for all hydrogeological conditions
2. Dual-pit toilets are suitable for areas that have limited water supply and the groundwater level is not less than 8 metres below the ground.
3. Ecological sanitation toilet is suitable for areas where water is scarce as well as those that easily get waterlogged.
4. Septic tanks are suitable in small towns (classified as rural) without a centralized sewer system, where cost is not a constraint.



## Task 3: Work on ensuring safe treatment or reuse of household excreta

The following options are suggested:

1. Constructed wetlands at the community level are the best option for rural areas. In areas that are prone to severe waterlogging, the base of the wetlands should be structurally modified as per soil conditions.
2. Soil biotechnology is the best option to treat wastewater at the community level in small towns, where cost is not a constraint.

In cases where existing sewage treatment plants are nearby, sludge from the settlements can be brought to these plants and co-treated with sewage. This is a more cost-effective option than building new faecal sludge treatment plants. But if there is no such option sludge from cluster may be carried to a Faecal Sludge Treatment Plant



## Task 4: Link water availability with sanitation and reuse

The rural areas mostly depend on the groundwater for their domestic needs. It is very important have a sustainable flow of water in the toilets – to keep the toilets functional. **The link between toilet sustainability and water supply in toilets must be understood.**

The rainwater harvesting potential should be effectively used.

A country should implement the following:

1. Introduce small-scale water-harvesting systems;
2. Revive traditional water-harvesting systems;
3. Focus on groundwater-recharge structures;
4. Involve communities (especially women) in small-scale projects.

Make them aware and motivate them through incentivized schemes; and

5. Water should be mandated for functional toilets. Government should provide support to the communities.



# Thank You

