THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

Umbrella of Water and Sanitation
"Safe Water For All"

PROMOTING SUSTAINABLE FAECAL SLUDGE MANAGEMENT THROUGH SCHEDULED EMPTYING APPROACH IN NORTHERN UGANDA

A Case Study of Success Stories and Lessons Learned

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ACKNOWLEDGEMENTS

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SANITATION FOR MILLIONS

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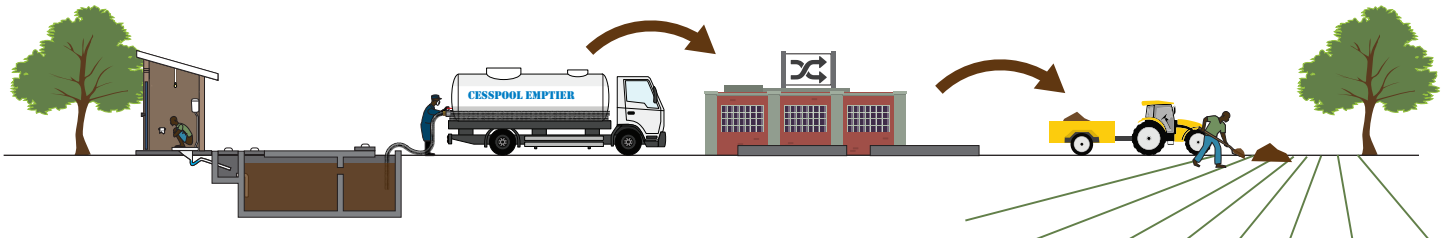
SUMMARY

Over 90% of population use onsite sanitation (OS) facilities in Uganda, implying a great need for safe emptying services to ensure a safely managed OS system. Sanitation facilities including lined pit latrines and Septic tanks must be regularly emptied so that they continue to operate as designed. When facilities are not emptied regularly, the sludge accumulates, there is inadequate volume for settling, and the effluent quality reduces. Overtime, the heavily solidified sludge becomes difficult to pump out or must be removed manually making emptying unsafe, costly and time-consuming for both community and services.

To address this challenge, Northern Umbrella of Water and Sanitation (NUWS), a public utility under Ministry of Water and Environment (MWE) in collaboration with GIZ Sanitation for Millions programme piloted a scheduled emptying model to ensure sustainable Faecal Sludge Management in Apac (Ibuje, Aduku and Apac) and upscaled this model in the Anaka cluster towns of Amuru, Koch Goma, Olwiyo, Purongo and Anaka. The scheduled emptying model is an organised service that removes the decision burden from the customer (household and institutions) by providing regular, preventative emptying at a frequency appropriate to local conditions, based on sludge accumulation and containment type and size, providing financial and sustainability benefits to both the service provider and the customer. This scheduled emptying model was complimented by key interventions across the sanitation service chain.



CAPTURE & STORAGE → **EMPTY & TRANSPORT** → **TREATMENT** → **REUSE**

- Testing of targeted household toilet incentives for safely managed sanitation.
- Development of minimum standards for containment (toilets).

- Leasing of cesspool trucks - (8,000 liters' cesspool truck with support from GIZ S4M.
- **Scheduled emptying.**
- Clustering of communities and towns.
- Capacity building on Standard Operating Procedures (SoPs).
- Digital tracking.

- Standardized infrastructural design of Faecal Sludge Treatment Plants (FSTPs) and construction (Apac).
- Development of Operation and Maintenance Guidelines for FSTPs.
- Capacity building on SoPs for FSTPs.

And as a result:

- Safe and affordable emptying services have been promoted.
- Increased private sector participation and investment in FSM.
- The volume of faecal sludge delivered to treatment plants increasing 3.5 times from an average of 40 m^3 between 2019 and 2023.
- Increased awareness of safe emptying practices resulting into household construction of safely managed toilets.
- Improved efficiency and reduced environmental pollution.
- Enhanced community resilience to climate change.

This case study therefore highlights the deployment of the **scheduled emptying** model, an innovative approach to deliver sustainable Faecal Sludge Management (FSM) in northern Uganda. The lessons shall support further refinement of tested sector approaches for potential upscale across Uganda and other developing countries.

OVERVIEW

Northern Umbrella of Water and Sanitation (NUWS) is one of the deconcentrated structures of Ministry of Water and Environment (MWE) under the Directorate of Water Development (DWD), in the Department of Urban Water Supply and Sewerage Services. It was registered as a government limited company (by guarantee) on the 3rd of February 2011. NUWS is mandated to manage piped water supply and sanitation systems in small towns (STs) and rural growth centres (RGCs) in Northern Uganda. NUWS is committed to improving the sanitation situation and this forms part of the on-going commitment by the government of the republic of Uganda to improve water and sanitation services in the RGCs and STs of Northern Uganda.

Northern Umbrella of Water and Sanitation with support from GIZ Sanitation for Millions program has over the years been promoting FSM in the Apac Cluster towns of Aduku and Ibuje Town councils and Apac Municipality with a catchment reach of over 62,834 people and in the Anaka cluster Towns of Anaka, Amuru, Purongo, Olwiyo and Koch Goma Town Councils with a catchment reach over 150,000 people.

Figure 1: *Geographical location of the cluster towns where the leasing model was piloted under NUWS.*

PROBLEM

In most towns in Uganda, households or institutions are responsible for deciding when to empty their facility (septic tank or pit latrine) and then contact a service provider. This is referred to as on-demand or on-call emptying. Given that many people are not aware of the need for regular emptying, it often occurs only when the system overflows or stops working (e.g., because sludge has blocked the inlet, or the system cannot drain because the leach field is clogged). In these emergency emptying situations, people may seek the easiest or fastest service, which may not be safe, so that they are not without a functioning toilet. On-demand emptying provides little incentives for households to practice timely emptying, particularly when there is limited awareness about the potential environmental and health consequences of inaction.

Sanitation facilities including pit latrines and Septic tanks must be regularly emptied so that they continue to operate as designed. When they are not emptied regularly, the sludge fills up, there is inadequate volume for settling, and the effluent quality reduces. These unemptied systems can continue to operate for much longer than designed but when eventually emptied, the heavily solidified sludge is difficult to pump out or must be removed manually which makes the emptying service unsafe and unaffordable for the community, time consuming and potentially not viable for emptying service providers.

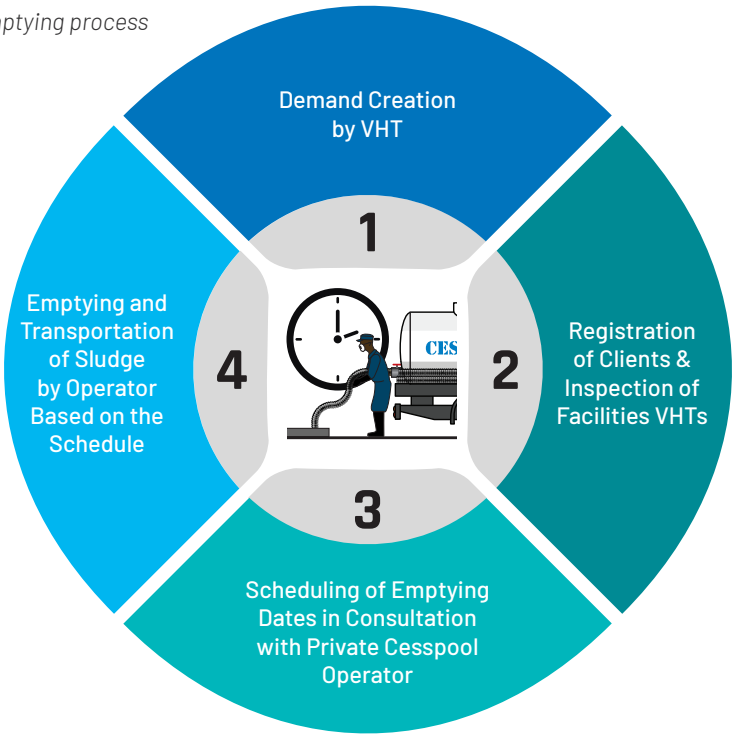
Therefore, to address persistent issues facing FS service provision in small and medium sized towns in Northern Uganda, the Ministry of Water and Environment (MWE) with support from GIZ Sanitation for Millions program have invested in deploying innovative approaches like **scheduled emptying model** to ensure sustainable FSM in Northern Uganda.

SOLUTIONS

Scheduled emptying model

The program piloted a scheduled emptying model, where the Cesspool truck and Gulper operators emptied household sanitation facilities according to a planned schedule, rather than on an emergency basis. Led by Town council Health inspectors and Sanitation Promoters including the Village Health Teams (VHTs) during their regular visits to the communities would ascertain facilities that require emptying. Ultimately, they coordinated with the facility owners to work out a schedule based anticipated fill-up timelines and the required financial resources to be paid to the service provider. The established scheduled emptying job was then forwarded to the operator for follow up and service delivery.

Figure 2: *Scheduled emptying process*



SUCCESS STORIES

Optimized cost of operations

The model provided distinct benefits to the operators by optimizing routes, reducing fuel and labour costs, improving staff and resource planning and minimizing downtime. Additionally, it ensured resources were available precisely when needed, enabling more thorough, high-quality emptying services without rushed or incomplete work.

"Scheduled Emptying approach has increased customer loyalty, and we now have more repeat emptying jobs"

Odokonyero Daniel – Health Assistant, Aswa Connection Emptying Services

Flexible operation by an operator

The model enabled the private operator with one cesspool truck to service multiple towns within two or more clusters in Northern. This is because, the proposed schedules are shared with the operator for better planning of the routes.

Affordable service provision to customers

The benefits enjoyed by the operators through reduced cost of operations were extended to the customers (community) through access to safe, affordable and prompt emptying service provision.

Reduced marketing cost

The model reduced the financial burden of demand creation for the operators as it guaranteed ready emptying customers.

LESSONS LEARNED

The model requires increased Private Sector participation

Scheduled emptying would likely require a greater role for private sector in most small to medium towns to meet the growing demand for emptying services as facilitated by the implementation of the model. In towns where private sector is not yet fully engaged, the local governments and other key stakeholders may need to promote the emptying business opportunities to existing enterprises and provide the link with customers (Households and Institutions) whilst managing the regulation and oversight of the emptying service quality. All the Key FSM stakeholders should focus on the clarification of institutional responsibilities and regulations, development of viable business and finance models involving both public and private sectors, community behaviour change, demand creation and building capacity of service providers to reliably deliver a safe emptying service.

USEFUL LINKS

https://afwasakm.afwasa.org/produit/scheduled-emptying-services-as-an-entry-point-for-change.

https://www.sanitationformillions.org/wp-content/uploads/2022/06/2021-success-stories-and-lessons-learned.pdf.

FURTHER READING AND REFERENCES

Freya Mills, Juliet Willetts, Kumi Abeysuriya, Antoinette Kome, Nadira Khawaja, Maria Carreiro, Rajeev Munankami: *Scheduled Emptying services as an entry point for Change.* 2019. The Hague: SNV / ISF.

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