Container-Based Sanitation:

A viable additional to citywide inclusive sanitation

Professor Kory Russel

Container Based Sanitation Alliance

CBSA
Container Based Sanitation Alliance

AfricaSan5 FSM5

What is Container-Based Sanitation?

X-runner


Loowatt

CBS consists of an end-to-end service that collects waste hygienically from waterless toilets built around sealable, removable containers.

Why Container-Based Sanitation?

01 Rapid urbanization

02 Space limitations

03 High water tables and flooding

04 Unsafe emptying practices

05 Unreliable water access

06 Renters lack investment for infrastructure and lack of gov. recognition

How does CBS improve fecal sludge management?

Credit: Andrea Bruce

Safely Managed Sanitation

A safely managed sanitation system protects people from exposure to disease causing excreta at all points in the sanitation chain

Container-Based Sanitation Alliance (CBSA)

The CBS Alliance is a coalition of CBS practitioners around the world with extensive experience developing and providing CBS services


SOIL
x·runner
Clean Team
Sanivation
SANERGY
Loowatt

Primary Objectives

- To extend collective impact
- To promote knowledge sharing and learning
- To create a set of common CBS guidelines and standards
- To enable scale
- To create partnerships

CONTACT US

contact@cbsa.global

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CBSA
Container Based Sanitation Alliance

https://cbsa.global

Evaluating the Potential of Container-based Sanitation

Rebecca Gilsdorf

World Bank

WORLD BANK GROUP Water

GWSP GLOBAL WATER SECURITY & SANITATION PARTNERSHIP

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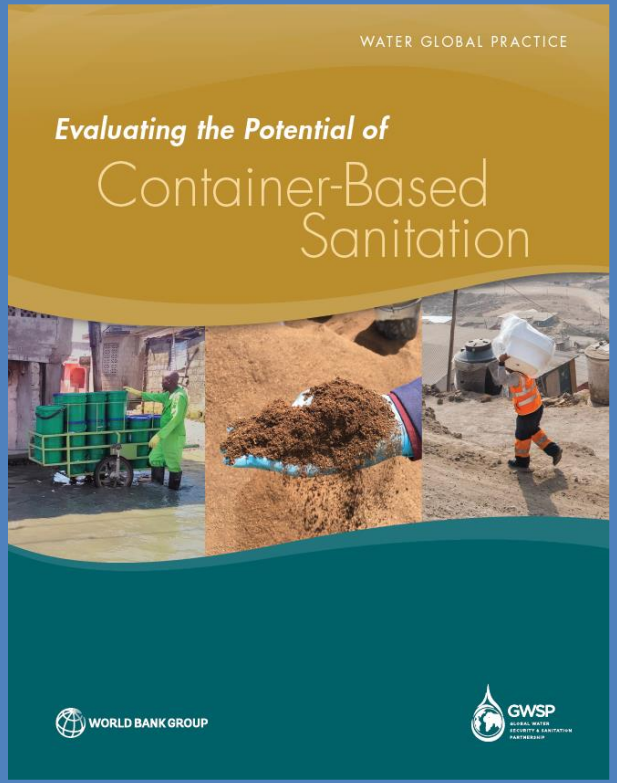
Evaluating the Potential of Container-based Sanitation



Julian Parker, Adrien Mazeau, Sophie Trémolet,
Ruth Kennedy-Walker, Clémentine Stip

http://www.worldbank.org/cbs

Study objectives

To document and assess existing CBS approaches, with a particular focus on **evaluating** their safety, reliability, affordability, and financial viability.

Four case studies

Sanergy
(Nairobi, Kenya)

SOIL
(Cap-Haitien, Haiti)

Clean Team
(Kumasi, Ghana)

x-runner
(Lima, Peru)

Where does CBS make sense?

01 Densely packed settlements, where other solutions are not feasible

02 Rented accommodations or no formal land titles

03 Difficult to access for tank/pit emptying

04 Flood-prone areas

05 Temporary or refugee settings

06 Areas with limited or unreliable water supply to households

Main findings

- **Customer satisfaction** with existing services is high.
  - CBS services are perceived as **safe** but there are some areas for improvement.
  - **Service reliability** is high, but clear contingency plans are needed to avoid service disruptions.
- Providing a high level of **treatment** compared to what is currently practiced in the areas where they operate.
- **Prices** are considered similar to the main sanitation alternatives in their service areas.
  - The proportion of total CBS service costs covered by revenues is still small (currently between 10 and 19%).
  - Service fees could potentially be increased to cover a greater portion of total costs.
- To reduce costs per household, a certain scale and density of customers are needed.
- **Growth** of service provision has been steady but slow.

Emerging lessons

01 CBS approaches should be considered as part of a **menu of CWIS options**.

02 Especially for urban populations for whom **alternative sanitation solutions might not be appropriate** or where there are water supply constraints.

03 Adopting a conducive **policy and regulatory environment** are often an important first step for governments looking to foster CBS services in suitable areas.

04 Service providers, in partnership with governments, may need to explore ways to ensure that CBS services are **sustainably financed**.

05 CBS services are **customer-oriented with strong customer outreach/engagement**

06 Overall **service standards** could enable broader replication of CBS service models and benchmarking of service quality

Areas for future work

01 What constitutes a safe CBS service, and what are its essential features?

02 How could performance-based contracts be designed for CBS services?

03 What lessons from CBS are relevant/useful for other sanitation solutions?

04 How does CBS compare in financial and economic terms to other alternatives?

05 What kind of support is needed for scale up – what is appropriate?

06 How can CBS best be integrated into a menu of options and adapted management models for urban sanitation services?

THANK YOU!

Access the reports:
http://www.worldbank.org/cbs

Contact us:
Rebecca Gilsdorf, rgilsdorf@worldbank.org
Clémentine Stip, cstip@worldbank.org

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