



FSM is not just an urban issue

Findings from a rapid assessment in rural Vietnam

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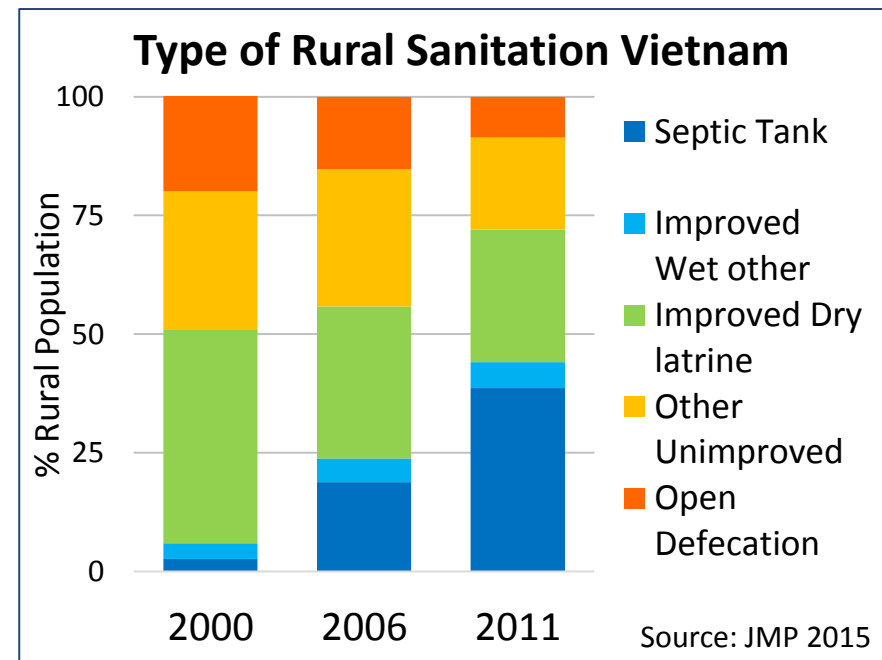
Outline

- i. **Why** study FSM in rural Vietnam?
- ii. **Rapid assessment** –3 provinces in Red River Delta
- iii. **Key findings** – current status of containment, emptying, treatment, reuse and regulations/institutional
- iv. **Recommendations** for Vietnam and knowledge gaps



Why study FSM in rural areas?

- World Bank supporting Government of Vietnam Results based Rural Water Supply and Sanitation
- 2013-2017 program in 8 provinces proposed 130,000 new toilets
- But what about FSM?
 - Do current practices compromise the health and environment benefits of access to sanitation?
 - Is FSM an issue in rural areas and what are the next steps?



How: A rapid assessment in Red River Delta

- World Bank, supported by VIHEMA (Health and Environmental Agency) assessed the status of FSM in 3 provinces over 2 weeks
- Assessment included:
 - 6 in-depth interviews with representatives from province and district
 - 6 interviews with commune leader, health centre and school
 - 56 household surveys
 - Interviews with 7 emptying providers
 - Assessment of 4 disposal sites
- Final workshop with representatives from central government and all 8 provinces to discuss way forward

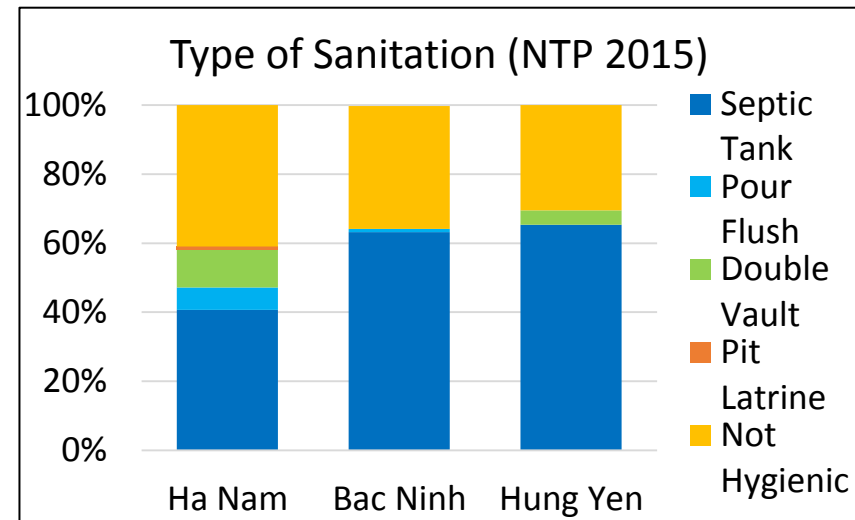


Other program provinces: Ha Noi, Bac Ninh, Hung Yen, Quang Ninh, Vinh Phuc

Findings On-site sanitation: Shifting to septic tanks

Type of on-site system

- 50-80% hygienic latrines in these provinces, average 62% are septic tanks. (NTP data 2015)
- Survey found mostly septic tanks, also: biogas, improved and unimproved pit latrines



- Systems 1-40 years old, average 10 years
- Septic tanks typically: 5m³, overflow to drain and 40% located under the house.

Findings Emptying: Low awareness of the need to empty septic tanks

Emptying Septic Tanks and Biogas

- “I thought it if it was built properly it would not need emptying”
- Limited knowledge of household and district representatives that septic tanks require emptying.
- Latrine guidelines recommend to empty when full



Emptying Dry Latrines

- Knowledge about the safety requirements for emptying dry latrines – but not always practiced
- Guidelines require 6 months storage

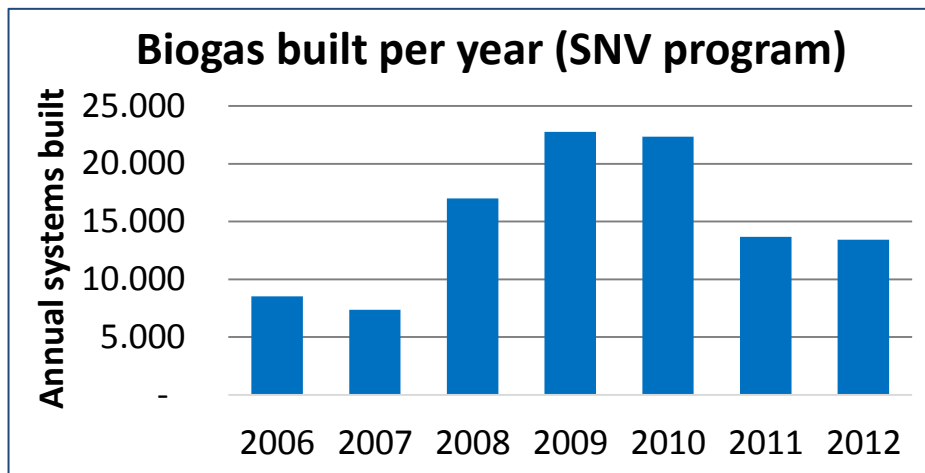
Findings Emptying: Demand expected to grow

Dry latrines

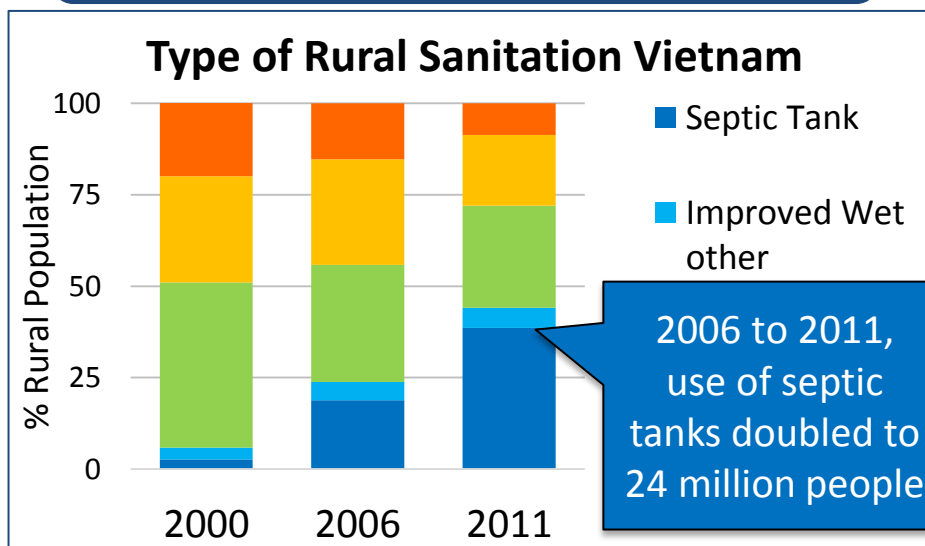
- Emptied every 2-6 months/full
- Sludge typically stored in piles for 2 weeks-1 year before use

Septic Tanks and Biogas

- Emptied after 10-11 years
- Government and commune representatives reported emptying is increasing but not common
- Private sector says demand is increasing and it is profitable.



Many systems built 7-10 years ago will soon be full and require emptying



Findings Emptying: Private sector services but not always safe

EMPTYING PRACTICES

- Septic tank/biogas typically emptied with vacuum truck.
- A manual / irrigation pump also used. Available and easy to fix but unsafe transport/discharge.
- Manual emptying also common. Entering biogas a safety concern
- 70% private sector, 30% self emptied.
- Households paid average VND1.1 and 2.1 million to empty septic tank and biogas (\approx US\$50-100).



Findings Emptying: Unregulated private sector serving rural areas

EMPTYING SERVICES

- Small scale private operators empty systems in rural areas
- Little information about private emptiers, since it is unregulated
- State owned enterprises occasionally exist but don't serve rural areas.
- Regulations and licencing for private sector unknown and unclear.
- Provincial government perceived it is expensive to establish emptying services and not profitable.



*MOC Circular 4/2012:
Requirements for septage
collection and transport:
“Equipment shall be
specialised ones, .. in
compliance with
regulations on
transportation and
environmental protection.”*

Findings Treatment: Unsafe disposal and reuse

Serious service gaps in rural areas

Sludge discharged next to system or onto neighbours land



Sludge dumped at landfill



Reuse: flowers, vegetables, rice



- No sludge treatment plants or official disposal sites.
- Unclear responsibilities and no guidelines for sludge treatment limits management or the inclusion of FSM in planning

Findings: Unknown regulations and institutional responsibility

- Recent decrees relevant to FSM (Decree 38 and 80) not well known at province and district levels and not implemented
- Lack of responsibility or planning for FSM in the surveyed provinces
- Ministry of Health (MOH) responsible for sanitation in rural areas, Ministry of Construction allocated responsibility for FSM based on urban areas.
- Domestic wastewater regulations somewhat unclear in reference to septic tank sludge treatment and discharge



We haven't thought about faecal sludge before

Provincial MOH "We can promote toilets and hygiene but we can't operate sludge trucks or treatment"

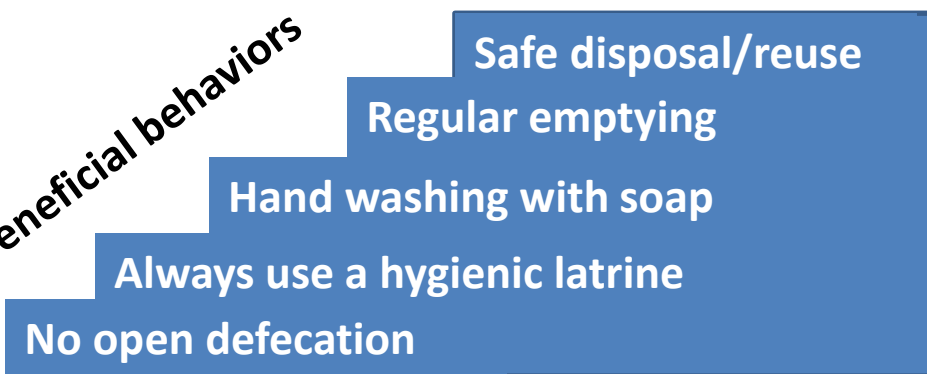


Key Recommendations: Vietnam

Short Term

- **National and provincial: Clarify and allocate institutional responsibilities**, including management, monitoring, enforcement and enacting regulations.
- **Provincial** include sludge emptying and treatment provisions in planning.
- **National and Donor: Update education material** to include:
 - Household: Need for safe and regular emptying
 - Emptiers: Risks of faecal sludge and safe emptying practices
 - Disposal/reuse: multiple barrier approach for untreated sludge.

Beneficial behaviors



Extend the sanitation ladder used in rural education and promote O&M



Key Recommendations: Vietnam

Support improved private sector involvement



Examples from public/private waste collection



Medium/Long Term

- National guidelines on regulation of private sector emptying, treatment and reuse and how to enforce safe practices.
- National guidelines on suitable sludge treatment for rural areas, low-cost and simple.
- Develop FSM business models suitable for rural areas and considering reuse.

Can we fill knowledge gaps from FSM4?

- Examples of combining low tech sludge transport/treatment with a multi-barrier approach
- National FSM regulations that consider rural areas
- Successful public-private business models suitable for rural/less dense areas

Key points when considering FSM in rural areas

- ✓ **Current unsafe FSM practices** will become an environmental and health risk with increasing septic tanks in rural Vietnam demand for FSM is growing.
- ✓ **Increased awareness** for FSM needed in rural areas and national regulations may require adaption as actors differ.
- ✓ Rural sanitation **education and promotion** should expand from access and hygiene to include FSM.
- ✓ More **low cost, low technology** emptying, transport and treatment options are required
- ✓ **Incremental** improvement and a **multi-barrier** approach needed.

