

Management and Institution Approaches: 3 Successful Cases from Sri Lanka, Philippines and Malaysia

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FSM Practice is Location Specific

- Showcase successful cases from three countries:
 - Sri Lanka,
 - Philippines,
 - Malaysia
- Draw out insightful **principles** and how they depend on different context



Case 1: Greater Colombo, Sri Lanka

- Only 1/3 HHs access sewerage.
- Septic tanks - not designed correctly, no treatment
- The World Bank /GPOBA supported pilot for inclusive safe sanitation (Results based subsidy for low income houses)
 - simplified sewer connections,
 - DEWATS and
 - PPP for onsite sanitation & FSM
- 9000 HHs benefitted ; Safer environment; Scaling up



<https://youtu.be/OOeJHLZtsQc>

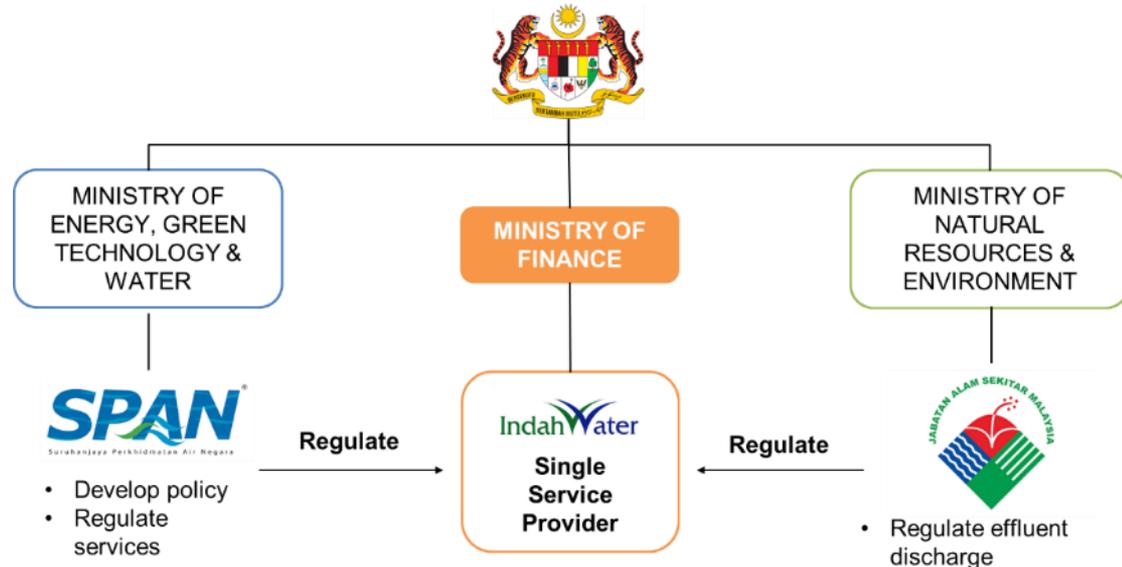
Case 2: Baliwag and Dumaguete, Philippines

- National mandates **water and wastewater/septage** service
- Implemented by local government units
- 2 different cases:
 - **Baliwag**: mechanized system, commercial loan financed
 - **Dumaguete**: conventional treatment, user fee financed



Case 3: Malaysia

- Top-down strategy by federal government
- One single service provider, Indah Water Konsortium (IWK)
- Strong regulatory framework with clearly defined role of different players



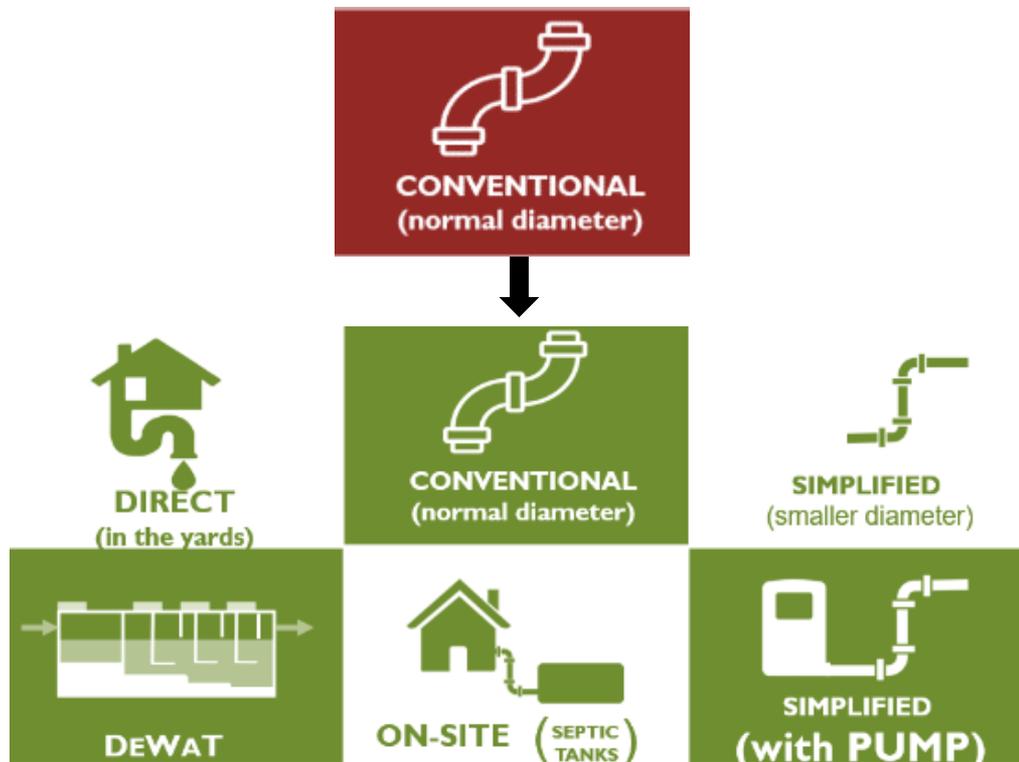
Lessons Learned 1: An integrated approach helps achieve universal sanitation service provision

Water Board, Sri Lanka

Shifted its conventional approach of **sewerage alone**

to

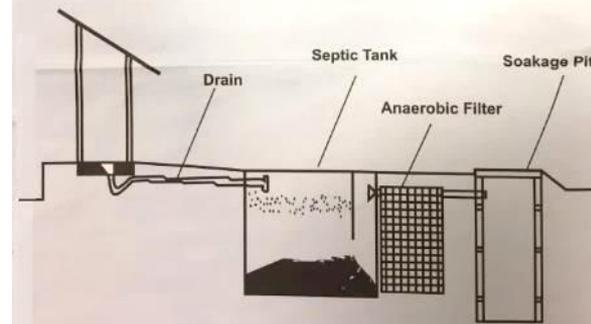
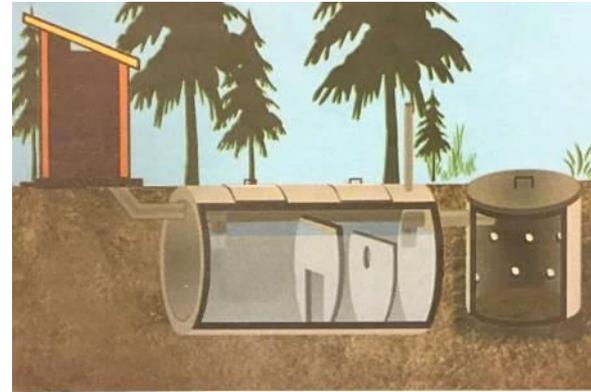
an **integrated approach** with suitable solutions for different settlements



With scheduled desludging and treatment

Lessons Learned 2: Properly designed and installed on-site unit/system limits contamination

- The design and quality of onsite unit/system is critical
- **Greater Colombo's PPP** ensures properly designed and installed onsite unit



Containment

Emptying

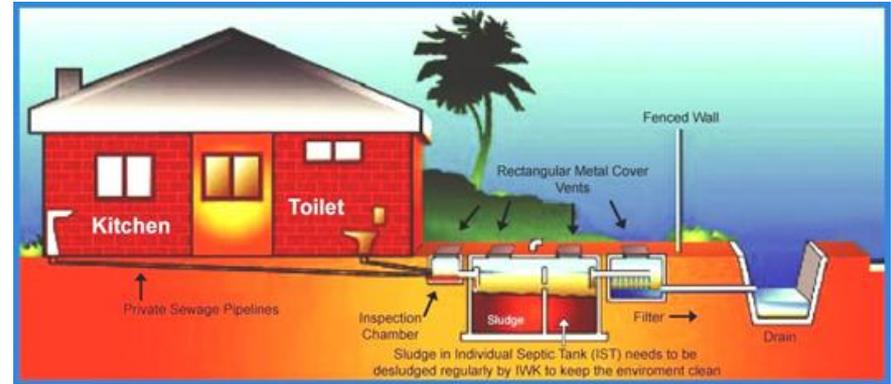
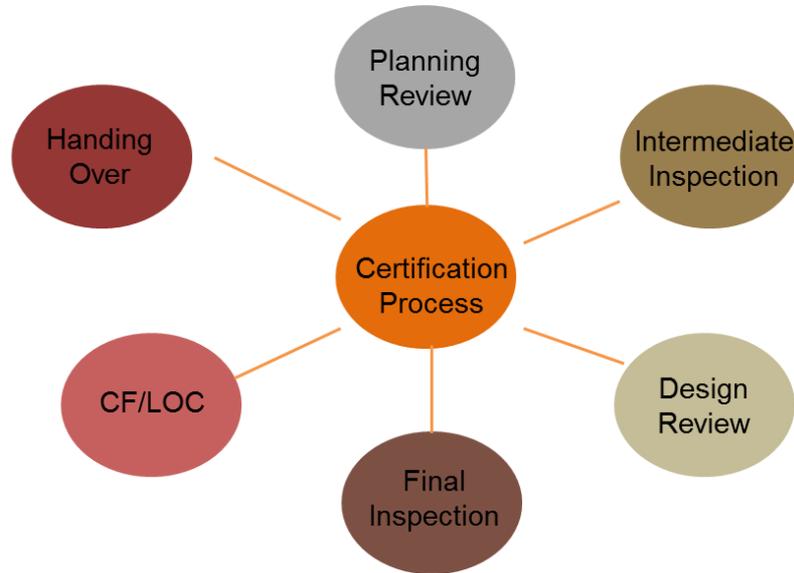
Transport

Treatment

Recycle

Lessons Learned 2: Properly designed and installed on-site unit/system limits contamination

Malaysia has a process that reviews, approves and regulates design and installation of onsite units



Containment

Emptying

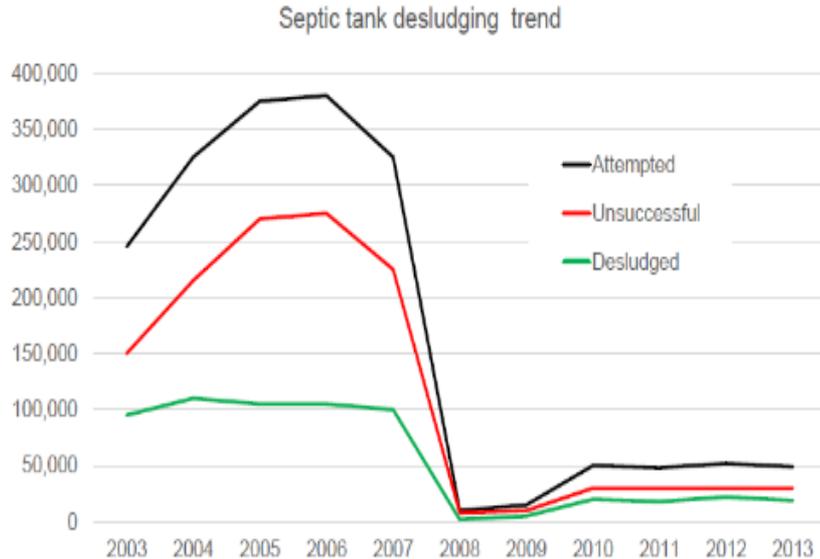
Transport

Treatment

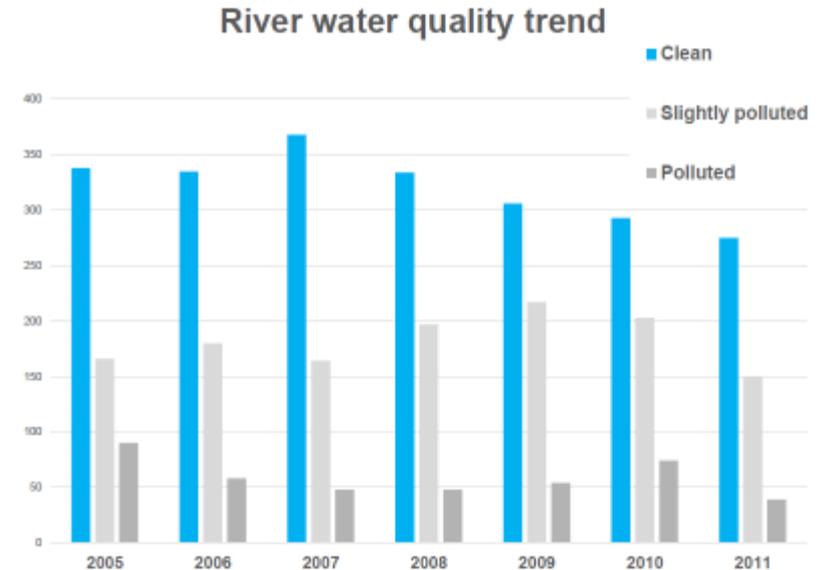
Recycle

Lessons Learned 3: Scheduled desludging is critical in successfully achieving goal of FSM

Voluntary demand-based desludging practice can be difficult to achieve



Poorer water quality correlates with decreasing desludging



Containment

Emptying

Transport

Treatment

Recycle

Lessons Learned 4: Treatment technology selection needs to consider long-term requirement

Technology selection depends on local context

- FS characteristics
- Effluent standard
- End use
- Funding capability
- Land availability
- **Operation requirement**
- Local staff skills



Containment

Emptying

Transport

Treatment

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FSM financing mechanisms



$$\text{TOTEX} = \text{CapEx} + \text{OpEx}$$



CapEx funding sources

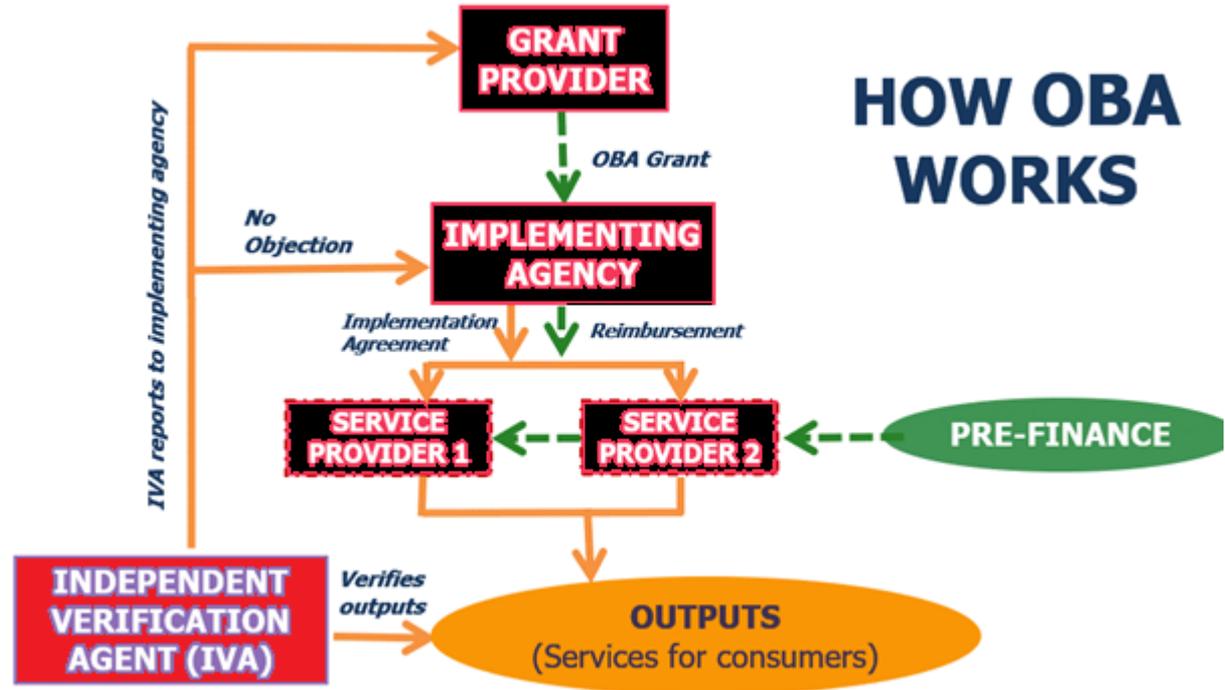
- Government: national and/or local
- Development institution
- Commercial loan

OpEx funding sources

- User fee
- Subsidy from national and/or local government

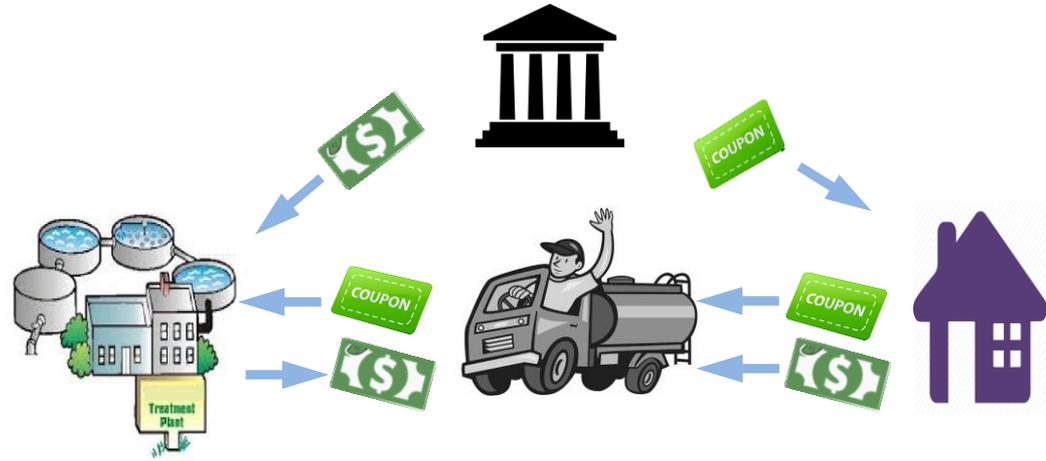
Lessons Learned 5: Result-based funding improve effectiveness in achieving outcomes

Greater Colombo adopted Output Based Aid (OBA) approach



Lessons Learned 6: Reaching Poor require smart subsidy

- Providing services to low income houses is often costlier (narrow lanes, high water table etc)
- Desludging & transportation constitute a majority of the O&M cost of the FSM value chain
- Subsidy targeted to poor in **Greater Colombo**



Lessons Learned 7: Integrated water and sanitation management allows cross-subsidy

Baliwag uses revenue from water to cross subsidize on-site sanitation (CapEx and OpEx).

- Commercial loan of \$1.2M @4% interest for 10 years
- Cost recovery through user fee of 10% of **monthly water bill**



Lessons Learned 8: Bundled service fee spreading out over time can be affordable

- **Before:**
 - Desludging by private service provider
 - On-demand emptying service only
- **After:**
 - Desludging, transportation and treatment by the City
 - Total user fee spread in 3-5 years on monthly basis
 - Poor household pay less

Comparison of Septage Service Fee in City of Dumaguete



Questions?

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