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

Chengyan Zhang
Mathews Mullackal
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.
**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.
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.
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
Lessons Learned 4: Treatment technology selection needs to consider long-term requirements.

Technology selection depends on local context:

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

TOTEX = CapEx + 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**

- **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
Questions?

Mathews Mullackal
mmullackal@worldbank.org

Chengyan Zhang
Chengyan.zhang@Stantec.com