



**TN**  
TAMIL NADU

**US**  
URBAN SANITATION

**SP**  
SUPPORT PROGRAMME

**iihs**<sup>TM</sup>  
INDIAN INSTITUTE FOR  
HUMAN SETTLEMENTS

In Association With:



# What does Feasibility study mean?

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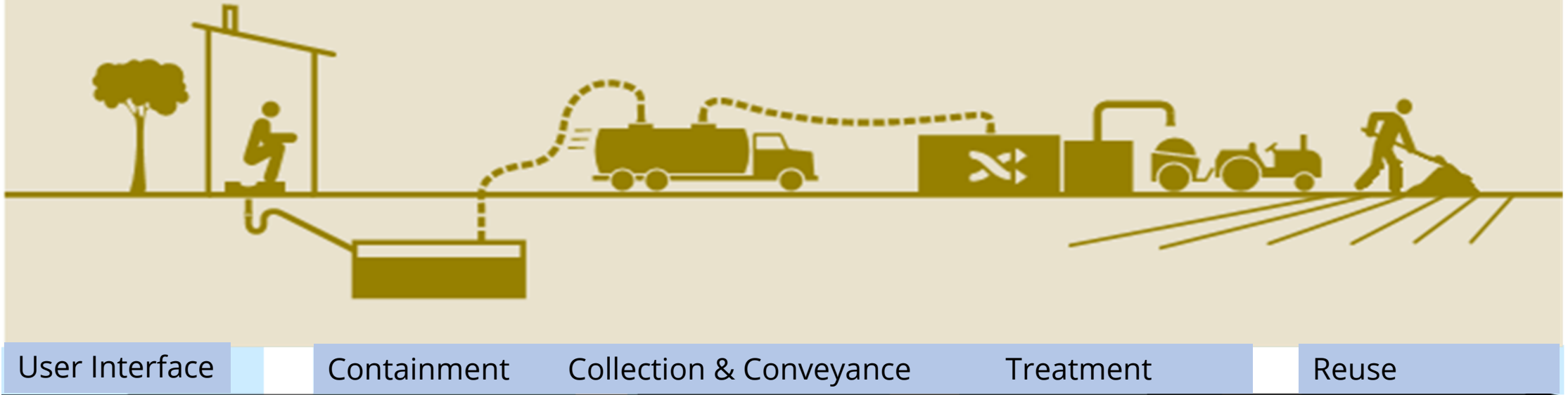
“The state or degree of a project being easily or conveniently done”

# Why feasibility study?

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- What is the quantity of faecal sludge?
  - What is the quality of the faecal sludge?
  - What is the treatment concept?
  - What is the Disposal option?
- How sustainable will the project be?
- To finalise the Design capacity of the FSTP
- To Finalise the treatment concept
- To determine the Reuse potential of treated FS
- To know the sustainability of the FSTP

## Sanitation Value Chain



User Interface

Containment

Collection & Conveyance

Treatment

Reuse

- Individual Toilets
- Public Toilets
- Community Toilets

- Septic Tanks
- Single Pits
- Twin Pits
- Masons

- Manual Scavengers
- Desludging Operators
- Vehicle Manufacturers

- Existing faecal sludge treatment plants( if any).

- Farmers
- Agri-input Retailers

# Secondary data for FSM planning

It is important that the following data is properly maintained in order to be used for FSM planning:

- Census – Population, households
- Water supply details
- Septic tank / pit details
- SBM dashboard – updated regularly
- Number of public toilets, community toilets
- Ward map and Storm water draining map
- Solid waste management
- DPR of any wastewater infrastructure built in the town/ municipality
- Metrological data



# Data collection

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In order to ease the process, data collection is prioritized under five main categories:

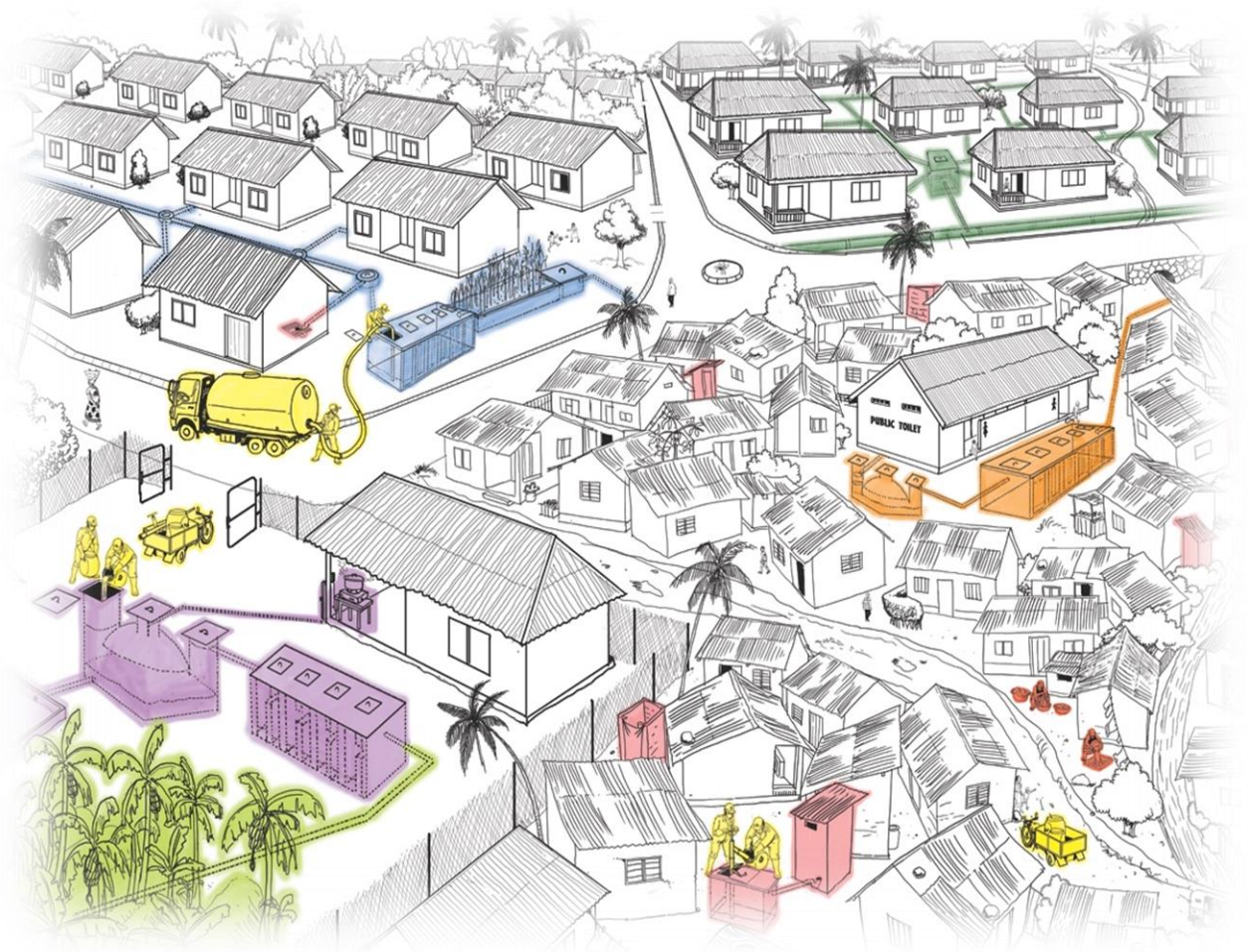
- Information related to Source
- Information related to Conveyance
- Information related to Project site
- Information related to Disposal
- Information related to Other data



# Data collection- Containment

Sources of faecal sludge:

- Households
- Institutions
- Commercial establishments
- Public and community toilets
- Industries



# Data collection- conveyance

## Data collection- conveyance

- Number of conveyance trucks operating in the area
- Capacity of the trucks
- Ownership of the trucks – municipal/ private
- Desludging frequency of the households
- Current fecal sludge disposal point
- Accessibility of the trucks in narrow streets
- Outlet diameter and outlet level of the truck
- Crucial for the hydraulic flow of the FSTP



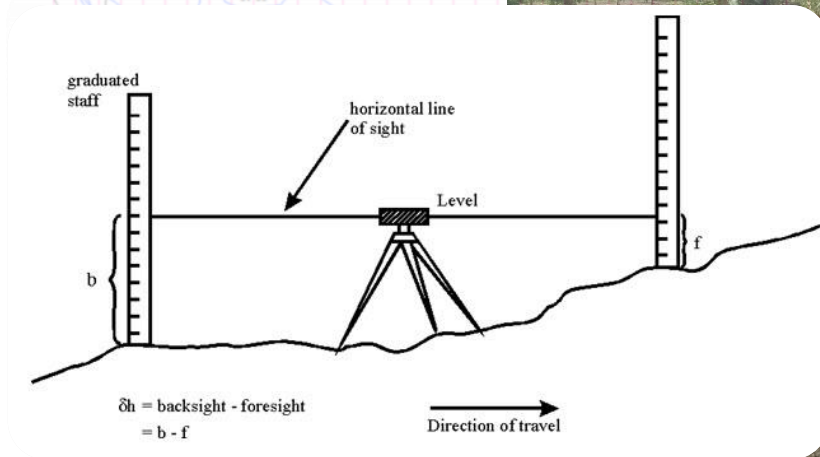
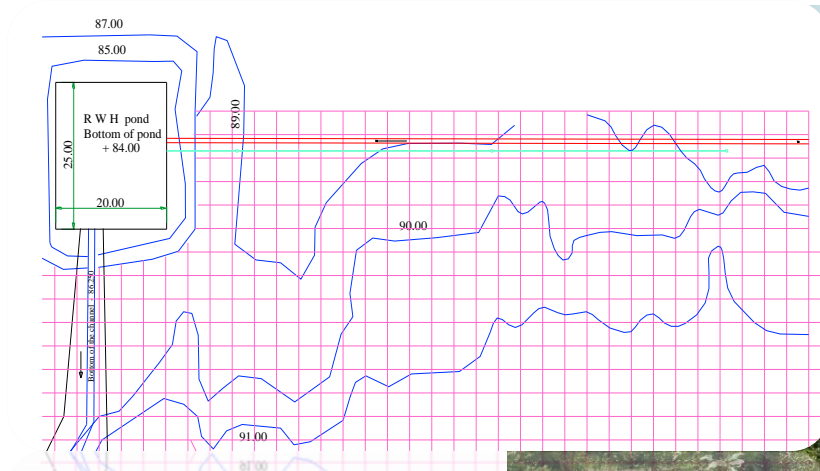


# Data collection : Treatment

- Area availability and boundaries
- Ownership of the land
- Land use pattern and integration of the treatment modules into the landscape
- Existing infrastructures in and around the project area
- Topography, ground slope and gravity flow
- Soil condition, ground water table and possibility of flooding
- Condition of the approach road leading to the site
- Width and type of the approach road
- Distance from the nearest human settlement
- Distance of the project site from the town center
- Min and max temperature
- Yearly average temperature
- Rainy seasons, rain fall data and flood possibility
- Local bye-laws



# Data collection : Treatment



# Data collection – Disposal & reuse

- Reuse requirements around the project area
- Reuse possibilities of fecal sludge for agriculture, gardening etc.
- Different sources for disposal like water body, UGD, natural drain, etc.
- Size of the disposal site.. Will it flood?
- Requirement of pump for disposal



# Data collection - Sustainability

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- Plan for operation and maintenance
- Existing solid waste management practices
- Availability of Portable water and water for construction
- Availability of finance for implementation
- Availability of Electricity
- Project area map showing the building footprints, contour, vacant land, water body, drains (if any)
- Soil test report
- Availability of local construction material, contractor

# Output..

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The data collected from the site will be mainly used for

Conceptualization of Treatment system

Selection and design of treatment modules

Construction design requirements

Framing the operation and maintenance guideline

Outputs of the feasibility study

- Preparation of project proposal
- Understanding the project area for preparation of Feacal sludge treatment concept



# Output of feasibility study



**Thank you !**