

Status of Faecal Sludge Management (FSM) in Dhangadi Sub-Metropolitan City

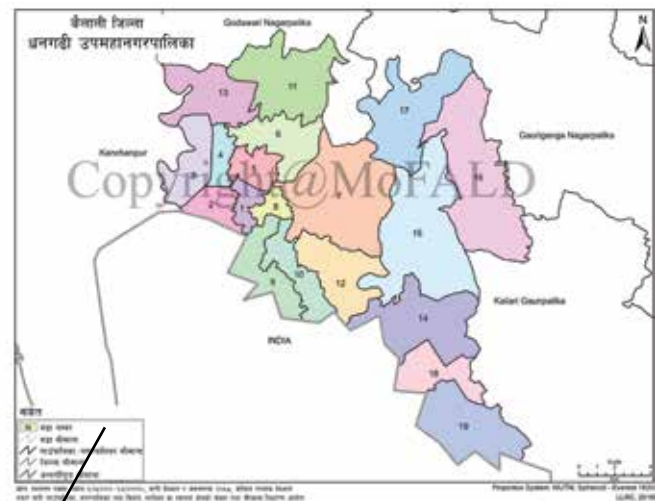
Introduction

Dhangadi Sub-Metropolitan City is located in Kailali District of Seti Zone in the Far-Western Development Region of Nepal. Dhangadi is the main business centre and also the major provider of health, education and employment opportunities in this region. There are 153,071 people with 29,468 households according to the latest data obtained from the municipality at the time of survey.

FSM Status

Majority (29,259) of the households (HHs) have a toilet within their premises. Out of the HHs having toilets, 18,287 HHs have lined containments including biogas containers (3842 HHs), 10,884 HHs have unlined containments and 88 HHs have no containment. Considering the volume of these containments, volume of faecal sludge (FS) generated in the municipality is estimated to be 1151 cum per year. Generated FS are being emptied by the private desludging service providers- manually (151 cum/year) and mechanically (102 cum/year).

There are three private desludging vehicles, which provide the desludging services charging Rs.3000 per trip (on an average), and no desludging services from the municipality. Though 22% of the containments are being emptied, there is no treatment plant or proper disposal site in the municipality; however 3.11% of HHs primarily apply the emptied sludge into the farmland indicating unsafe use. Also, those containments which are not emptied, do not necessarily represent to be safe as majority of them are unlined, so could be a threat to ground water pollution.



Source: MoFALD



Map of Dhangadi Sub-Metropolitan City

Recommendations

The data shows that Dhangadi Sub-Metropolitan City has no full sanitation coverage. In addition, the existing containments are not properly designed, which are collectively polluting the ambient environment and ground water. So, standard toilet and containment construction should be prioritized.

Furthermore, in this municipality, 13% of the FS generated are being emptied manually which are either being unsafely used or disposed haphazardly. This reflects the need of sufficient mechanical desludging service providers and proper treatment facility.

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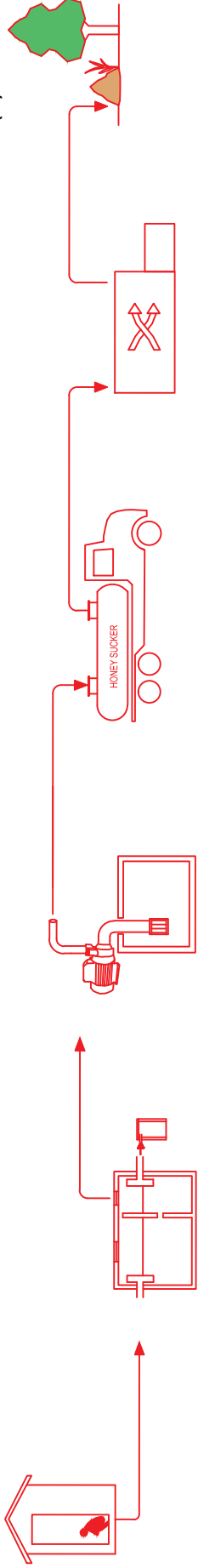
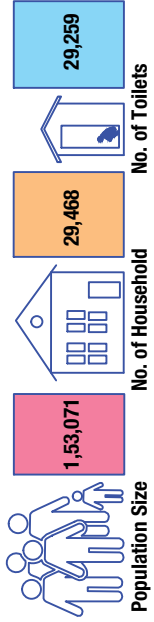


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Dhangadi Sub-Metropolitan City



USER INTERFACE

- HYGIENIC SEPARATION OF HUMAN EXCRETA PREVENTING EXPOSURE TO FAECAL MATTERS.
- THE COLLECTION OF FAECAL MATTERS IS DONE UNDER USER INTERFACE VIA DIFFERENT KINDS OF TOILETS.

CONTAINMENT

- COLLECTION AND STORAGE OF HUMAN EXCRETA INTO THE CONTAINER.
- FAECAL SLUDGE IS SETTLED AT THE BOTTOM OF THE CONTAINER WHILE THE EFFLUENT FLOWS AWAY FROM THE CONTAINER

EMPTYING

- REMOVING OF FAECAL SLUDGE FROM THE CONTAINER.
- HYGIENIC REMOVAL OF THE SLUDGE IS THE MAJOR CONCERN.

TRANSPORT

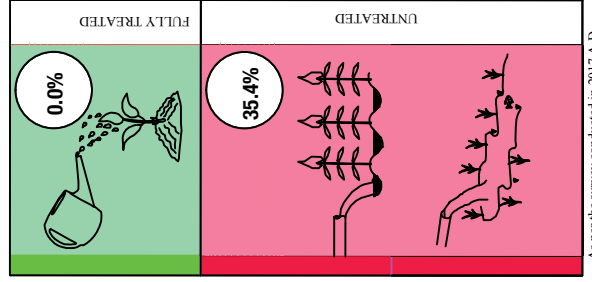
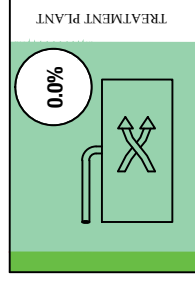
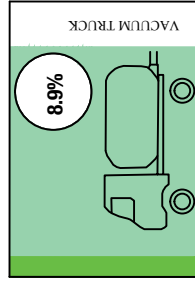
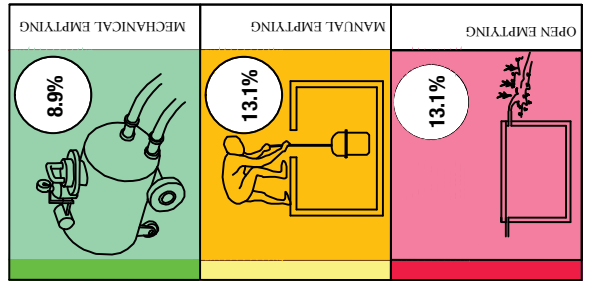
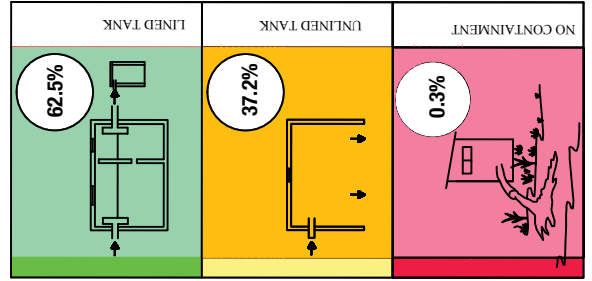
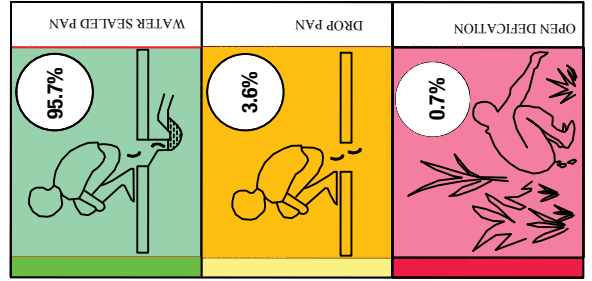
- CONVEYANCE OF FAECAL SLUDGE FROM THE CONTAINER TO THE TREATMENT PLANT
- VACUUM TRUCK ARE THE MAIN MEANS FOR THE TRANSPORTATION OF THE FAECAL SLUDGE.

TREATMENT

- REDUCTION OF POLLUTANTS FROM THE FAECAL SLUDGE TO THE SET STANDARD BY USING DIFFERENT KIND OF TREATMENT TECHNOLOGIES

DISPOSAL/REUSE

- DISCHARGE OF FAECAL SLUDGE INTO THE ENVIRONMENT FOR DRAINING OR REUSE PURPOSE



LEGEND:

- Acceptable (Green)
- Need improvements (Yellow)
- Unacceptable (Red)

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