Planning and implementation of FSSM by using Excreta Flow Diagram (SFD) as a tool for mapping sanitation situation in Uttarakhand State, India

Location: Uttarakhand state is located at the foothills of the Himalayan mountain ranges. It lies in the northern part of India between latitudes 28°43' N and 31°27' N and longitudes 77°34' E and 81°12' E.

Border: The state shares international borders with China in the north & Nepal in the east and inter-state boundaries with Himachal Pradesh in the west & northwest and Uttar Pradesh in the south.

Elevation: covering an area of 53,483 km². The elevation ranges from 210 to 7817 m.

No. of ULBs: There are a total of 91 urban local bodies (ULBs) in the Uttarakhand State out of which 8 are Municipal corporations, 41 are Municipalities & 48 are Municipal councils.

SFD has been widely used as an advocacy tool worldwide till date. For the urban sanitation programme of the state, SFDs is used as a planning and monitoring tool for faecal sludge and sewage management interventions for selected cities in the state of Uttarakhand. These towns were selected based on the various factors like type of containment system, desludging frequency, topography, accessibility, availability of existing treatment infrastructure, size of the municipality, scope for sufficient funds in the city. A mix of small, medium and large cities was selected to get an overall representation of urban sanitation programming of the state.

Methodology for data collection

For developing SFDs included collection of information (secondary data), structured observations & direct measurements, key informant interviews (KII) & focus group discussions (FGDs) with:

- Municipality
- NGOS
- Residential Welfare Association
- Mason
- Sanitary Inspector
- Vacuum Tanker Operator
- Treatment Plant Operator
- Farmer

The key factors covered in this study are:

- Status of containment, conveyance, treatment systems and disposal in each city;
- Analyse the strength of the office staff within municipal as well as parastatal departments;
- Annual budget and expenditure.

Conclusion and implications

The findings and outcomes of the study are being used to identify the potential of implementing an appropriate approach for faecal sludge and sewage management in these 13 cities of Uttarakhand state. The FSSM approach includes treatment options like co-treatment of septage with sewage, establishing faecal sludge treatment plant and deep root enforcement (DER), particularly in smaller towns with very low septage generation.

The action plans prepared are strengthening and effective implementation of by-laws, training and other capacity building activities to the stakeholders, and adopting low cost, natural based decentralized approaches for citywide inclusive sanitation.

Action plan

References


WWAC (2007), "URBAN Fecal Sludge & Sewage Management in India: Challenges – a City-Level Scan & Synthesis Report".


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SFDs are proving to be good evaluation, advocacy and planning tool. The city stakeholders get a better idea of critical points of failure in the provision of urban sanitation services in a green city or town. Thus, decision-makers will be in a better position to decide and prioritise the interventions.