Workshop on

Excreta Flow Diagram: A Sanitation Planning Tool

21st September, 2017

Centre for Science and Environment, New Delhi

in partnership with -
Water Research Commission, South Africa

Chhavi Sharda
Programme Officer, CSE
CSE is a public interest research organization set up in 1980s. It works towards environmental policy advocacy.

Late Anil Agarwal (Engineer-Journalist) was the Founder Director of CSE.

Now headed by Ms. Sunita Narain, Environmentalist, also Stockholm Water Prize Winner 2005

CSE bridges the gap between information and knowledge; between knowledge and public awareness; to influence public policies and practices for sustainable development

The centre promotes sustainable development with equity, participation and democracy.
<table>
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<tr>
<th>Policy research &amp; advocacy</th>
<th>Documenting to build knowledge</th>
<th>Disseminating knowledge</th>
<th>Training &amp; education</th>
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<tr>
<td>Sustainable mobility &amp; Clean Air</td>
<td>Knowledge portal</td>
<td>Down To Earth</td>
<td>Green School Programme</td>
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<td>Sustainable habitat</td>
<td>Climate change Resource Centre</td>
<td>Gobar Times</td>
<td>Media Resource Centre</td>
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<td>Sustainable industrialization</td>
<td></td>
<td>CSE Websites</td>
<td>Anil Agarwal Green College/Environment Training Institute</td>
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<td>Sustainable Water - Waste water management</td>
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<td>Books</td>
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<td>Climate change</td>
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<td>Films</td>
<td>South-South Learning, training and capacity building</td>
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<td>Renewable energy</td>
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<td>Food safety &amp; toxins</td>
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Regulating Small-Scale Mining of Minor Minerals
A Comprehensive Framework Beyond Environmental Clearances

Download PDF

A CSE Media Briefing: Will the Ganga ever run clean?

Date: 2016-2017

International Training Programme on Water Sensitive Urban Design and Planning at Cape Town, South Africa

Date: January 23 - 26, 2017

Press Releases
Turtle turnaround

An initiative driven by fishing communities in Odisha has not only given the endangered Olive Ridley turtles a new lease of life, but has also halted the construction of ports in the nesting areas.
CSE Africa Water Programme Partners

**Deep Dive Engagement:**
- **Rwanda** – Ministry of Infrastructure & Rwanda Natural Resources Authority
- **Ghana** – Ministry of Local Govt. and Rural Development

**Pan Africa engagement:**
- **Kenya** – Kenya Water Institute & Jomo Kenyetta University of Engg. & Tech.
- **Egypt** – National Water Research Commission
- **South Africa** – Water Research Commission & University of Kwa Zulu Natal

- Project on ‘The last 100 metres UK Inception and Methods Harmonising' on 'safe guarding potable water provisioning to urban informal settlements (http://www.rcuk.ac.uk/funding/gcrf/challenges/) started with global sector players: Bangladesh - India - Tanzania - UK.
The Global Spread
Forging partnerships and building capacity across the world

Indian Institute of Management – Kashipur: Development of India’s first green MBA course, supported by the World Bank.

Ministry of Environment and Forests and Climate Change, Central Pollution Control Board: Training of pollution control board officers, including induction programmes for new recruits.

Ministry of Urban Development: Capacity building and policy support as Centre of Excellence in sustainable urban water and waste management, transport and green buildings.

Ministry of Drinking Water and Sanitation: Nominated as a “National Key Resource Centre” on sustainable water management and rural sanitation.

Central Environment Authority, Sri Lanka: Capacity building and policy support on EIA, industrial pollution and waste management.

Ministry of Water Supply and Drainage, Sri Lanka: Capacity building and model projects on decentralized water and waste management.


Indian Institute of Management – Kashipur: Development of India’s first green MBA course, supported by the World Bank.

Partnerships in South Asia

Chittagong Municipal Corporation, Bangladesh: Capacity development and model projects on water harvesting and decentralized waste management.

National Environment Commission, Bhutan: EIA guidelines, waste management and training of regulators.

Druk Green Power Corporation, Bhutan: Capacity building on EIA and environmental management of hydropower sector.

Partnerships in Africa

Ministry of Environment and Forests, Federal Democratic Republic of Ethiopia: Research and capacity building on air quality and transport management.


Partnerships in Africa

Kenya Water Institute, Nairobi: Research and training partnership on sustainable water management.

Rwanda Ministry of Infrastructure: Technical cooperation in integrated water resources management.

University of KwaZulu-Natal, Pollution Research Group, Durban, South Africa: Research and capacity building on wastewater and fecal sludge management.

Partnerships in Africa

Ministry of local government and rural development, Ghana: Research and capacity building to strengthen environmental health, sanitation and sustainable water management.

Bill & Melinda Gates Foundation: Technology development, testing laboratory, capacity building and demonstration of best practices on sewage management.

Swedish Environmental Protection Agency and Norwegian Environmental Protection Agency: Training and development of best practices in environmental regulations.

World Bank: Research and capacity building on waste management, environmental assessment, social and environmental due diligence in the financial sector.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ): Research and capacity building on e-waste and hazardous waste and city sanitation programs.
Urban India: Excreta Flows
(Sewage & Septage)

Source: WSB World Bank

Containment → Collection → Transport → Treatment → Reuse/disposal

- 50% WC to sewer
- 41% On-site facility
  - Septic tanks, covered pits, VIPs etc.
- 9% Open defecation (including open pits)

33% Not treated to standard
17% Leakage

19% Treated
41% Not treated but unknown where it goes
17% Receiving Waters
14% Local area and beyond, via drains

Source: Census 2011

Sewer coverage

<table>
<thead>
<tr>
<th>% of population</th>
<th>No of Cities</th>
<th>% of population</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10%</td>
<td>191</td>
<td>16.45%</td>
</tr>
<tr>
<td>10 - 30%</td>
<td>158</td>
<td>20.10%</td>
</tr>
<tr>
<td>30 - 60%</td>
<td>75</td>
<td>24.22%</td>
</tr>
<tr>
<td>&gt;60%</td>
<td>78</td>
<td>39.23%</td>
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LEARNINGS

SFD turns out to be a good advocacy tool, as the excreta management can be understood at a glance through the diagram.

It helps in identifying problems in the service delivery.

If SFD is developed and shared at the initial stages of planning, the focus area is clear.
Objectives of the Workshop
Excreta Flow Diagram: A Sanitation Planning Tool

On completion of the training the participants would:

• Understand SFD (Shit Flow Diagrams)
• Understand the need for a standardized methodology
• Understand the tools developed
• Learn how to make an SFD through an example
Partners for SFD initiative
Thank you!