Compendium of Sanitation Technologies in Emergencies

Stockholm World Water Week 2017  I  August 30, 2017
Agenda

09:00  **Existing Sanitation Challenges: Reflections from Recent Emergencies**  
Franck Bouvet, Global WASH Cluster

09:10  **The Compendium of Sanitation Technologies in Emergencies**  
Robert Gensch, German WASH Network

09:30  **Round Table Discussion**

**Structure:** How to best reflect the complex and multifaceted nature of disasters (different phases, contexts etc.) in a simple, systematic and comprehensible document structure

**Dissemination:** How to create a constant learning platform and living document via a Compendium online platform, corresponding trainings etc. The dissemination pathway from information provision to learning.

**Synergies:** Potential synergies and compatibility with other ongoing activities like Sphere, HIF, SSWM etc.

10:15  **Summary from the Tables**

10:30  **End of the Session**
Multi Agency Publication

Financially supported by:

[Logos of various organizations]
Why?

- Currently no up-to-date compilation of sanitation technologies for emergency settings available
- Lots of recent developments in the sector particularly on FSM
- Existing EmerSan publications with limited/no focus on entire sanitation service chain
- In recent years humanitarians had to deal increasingly with LRRD issues, longer-term protracted crisis and urban contexts with an increased need to also take sustainability aspects into account
What it is

Compendium of Sanitation Technologies in Emergencies

- Expert peer-reviewed systematic emergency sanitation hardware overview that covers entire sanitation service chain
- Disaggregation of existing technologies into their functional components
- Providing clarity on terms and vocabulary used for technologies and involved products
- Mainly capacity development tool
- Partly a decision support tool referring to key decision criteria and cross cutting issues that need to be considered
- Linked to online version (living document)
## Introduction

<table>
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<tr>
<th>Background and Target Audience</th>
<th>Emergency Scenarios/Phases and Implication for Sanitation Infrastructure</th>
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<tr>
<td>Structure and Use of the Publication</td>
<td>Sphere Excreta Disposal Standards and Indicators</td>
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<tr>
<td>Compendium Terminology, System Template and Technology Selection</td>
<td>Key Decision Criteria</td>
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## Cross-Cutting Issues

| 1 | Inclusive, Equitable and Gender-Sensitive Design |
| 2 | Handwashing Facilities |
| 3 | Child Excreta Management |
| 4 | Hygiene Promotion and Community Mobilisation |
| 5 | Rehabilitation of Existing Infrastructure |
| 6 | Robustness and Durability |
| 7 | Dry and Water-Based Systems |
| 8 | Exit Strategy, Hand-Over and Decommissioning of Infrastructure |
| 9 | Institutional and Regulatory Environment |
| 10 | Urban Settings and Protracted Scenarios |
| 11 | Resilience and Preparedness |
| 12 | Market-Based Programming |
| 13 | Basic Assessment Requirements |

## Technology Information Sheets

### On-Site

- **Input Products**
- **User Interface**
- **Collection/Storage (on-site)**
  - Collection / Storage
  - (Pre-) Treatment
- **Input/Output Products**

### Transport

- **Input Products**
- **Conveyance**
  - Emptying
  - Transport
- **Intermediate Storage**

### Off-Site

- **Input Products**
- **Treatment (off-site)**
- **Use and/or Disposal**
Currently covering 62 technology options along the entire sanitation service chain
Technology Sheet

Borehole Latrine

- **Emergency Phase**
- **Application Level**
- **Management Level**
- **Killer Criteria**
- **Simple Drawing**
- **Space required**
- **Technical complexity**
- **Inputs/Outputs**

**Borehole Latrine**

A Borehole Latrine is a technology that is used mainly in the acute response phase, when a large number of latrines has to be constructed rapidly and the site conditions do not allow for excavation of a pit. Borehole Latrines are usually temporary solutions but depending on duration, deaths and number of users it is also considered a longer-term solution that can potentially last for several years. The hole is bored using either a mechanical or manual auger or a drilling machine.

**Design Considerations**

Depending on the soil type and drilling equipment, the borehole should be between 3-6m deep with a diameter of usually between 0.3-0.5m. A pipe lining is required at the top 0.5m and may be greater in length in more unstable soil formations. The superstructure can either be simple screens around the hole (only temporary solution) or more firm cubicles. As ventilation through the borehole is not possible, the superstructure should allow for air circulation to reduce potential odour problems. The hole should be covered with a slab.

**Materials**

In order to construct a Borehole Latrine a manual or mechanical auger or a drilling machine is the key prerequisite. The cover slab can be made out of wood, bamboo, concrete or by using prefabricated plastic slabs. For the superstructure, materials should be used that are readily available and that can be supplied rapidly (e.g. bamboo, grass matting, cloth, wood, plastic or metal sheeting). For the borehole lining pipes should be used, with a minimum length of 0.5m and the corresponding borehole diameter. Some agencies have rapid response kits for slabs and superstructure which can be used where there are few resources locally.

**Applicability**

A borehole latrine can be considered a viable solution in the acute response phase as it can be implemented very fast and provided the technology is acceptable for the users, the ground conditions allow the drilling deeper holes and that there are sufficient tools, materials and human resources available. The soil needs to be stable and free of rock, gravel and boulders.

**Operation and Maintenance**

General O&M measures include routine operational tasks like checking of water availability for soil cleaning, soap and dry cleaning material and the monitoring of the condition and filing level of the hole. Draining is usually not viable option (the latrine should be decommissioned when filled up to the top 0.5m of the hole. When decommissioning the Borehole Latrine, the top 0.5m should be filled with soil and rubble which should be mounded up.
Timelime

Development of First Draft

Review Round 1

Processing of Comments & Development of 2. Draft

Review Round 2

Processing of Comments & Development of Final Version

Layout & Production

Launch (GWC Annual Meeting)
How to Become Involved

• Review process about to start right after the Water Week (September 2017)

• We are still looking for organisations/individuals with experience/expertise on specific technologies to become involved in the reviewing process

• Become involved in the later dissemination

• Provide your input as part of this session particularly on the document structure, dissemination options and synergies with other initiatives

• Contact: robert.gensch@germantoilet.org (or approach us after the session)
Thank You
**Round Table Discussion**

**Structure:** How to best reflect the complex and multifaceted nature of disasters (different phases, contexts etc.) in a simple, systematic and comprehensible document structure?

[Table 1]

**Dissemination:** Dissemination options and how to create a constant learning platform and living document via a Compendium online platform, corresponding trainings etc.

[Table 2]

**Synergies:** Potential synergies and compatibility with other ongoing activities like Sphere Revision, Humanitarian Innovation Fund Initiatives, SSWM Toolbox etc.

[Table 3]
SuSanA WG8 Meeting (Emergency Sanitation)

Venue: Hotel Scandic Klara, Slöjdgatan 7, 111 57 Stockholm

Time: 11:00 – 13:00

Aims of the meeting:
1. Overview of WG activities
2. Sharing of activities by WG8 members
3. Share an update on the HIF emergency FSM project
4. Explore the technical options for faecal sludge management in rapid onset emergencies

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<tr>
<th>When?</th>
<th>What?</th>
<th>Who?</th>
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<tr>
<td>11:00 - 11:10</td>
<td>Welcome and overview of current WG 8 activities</td>
<td>TBC</td>
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<tr>
<td>11:10 - 11:40</td>
<td>WG8 Strategic discussions – sharing activities, synergies and contributions to WG8</td>
<td>Amy Jennings, BORDA, WG8 members</td>
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<td>11:40 - 11:55</td>
<td>Further discussions on the ‘The Compendium of Sanitation Technologies in Emergencies’</td>
<td>Robert Gensch, German WASH Network</td>
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<td>11:55 - 12:10</td>
<td>Overview of the HIF emergency FSM project</td>
<td>Amy Jennings, BORDA, Alberto Acquistapace, Solidarities International</td>
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<tr>
<td>12:10 - 12:55</td>
<td>Faecal sludge management in rapid onset emergencies – your technical review!</td>
<td>Amy Jennings, BORDA, Alberto Acquistapace, Solidarities International</td>
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<tr>
<td>12:55 - 13:00</td>
<td>Summary of next steps - Thanks and close</td>
<td>TBC</td>
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