



Planning for excreta disposal in emergencies

The pressure to help people immediately after a disaster often leads to actions starting before they have been properly planned. Experience shows that this results in a waste of resources and in poor service delivery; it seldom leaves long-term benefits for the affected community. Among other issues, this is the case for emergency disposal. This Technical Note is a guide to the *planning process* of excreta disposal during the first two phases of an emergency. Technical options are presented in Technical Note 14.



Phases in an emergency

There are three phases in an emergency:

- Immediate emergency
- Stabilization
- Recovery

Immediate emergency

In this phase, mortality rates can be high and there may be a risk of a major epidemic. The phase usually lasts for the emergency period and a few weeks beyond. The main objective for an excreta disposal programme is to minimize contamination related to high-risk practices and reduce exposure and faecal-oral disease transmission. Interventions are usually rapid and designed for the short term.

Stabilization

During this period more sustainable interventions can be implemented for longer-term use. Typically, community structures are re-established and death rates start to fall. However, the risk of epidemics may still be high. This phase can last from several months to many years, depending on the complexity of the emergency.

Stages in planning

Figure 13.1 shows the main stages for planning emergency excreta disposal. A common complaint about planning processes is that they take too long, but this is not necessarily the case as Figure 13.1 suggests. The figure shows the approximate time required for each stage for an affected population of about 10,000.

Rapid assessment

Interventions are only necessary if there is an expressed and measurable real need for them. This stage aims to rapidly collect and analyse key information to assess if an intervention is indeed necessary.

Data collection

The data required to assess the problems and needs of the affected population must be collected quickly but in sufficient detail to provide enough information for analysis. In Box 13.1 a checklist of twenty key questions is presented, to be answered in order to complete the assessment procedure. Information thus collected will support informed decision-making on the further course of action.

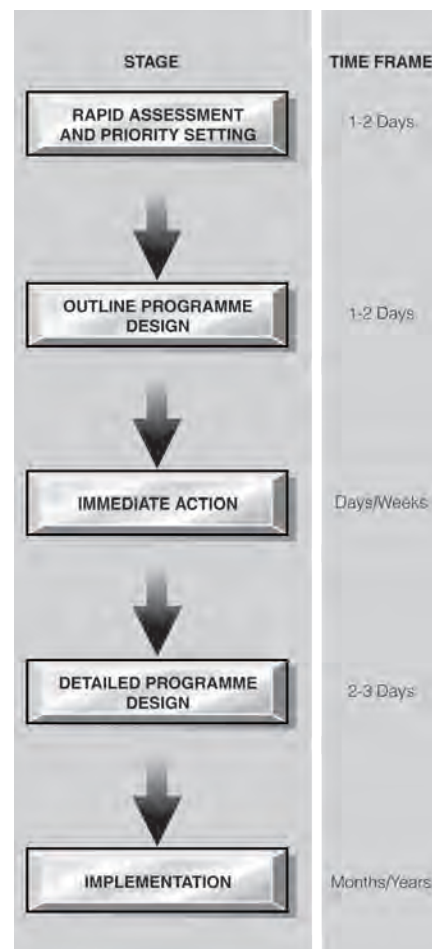


Figure 13.1. Stages in emergency sanitation programme design

The usefulness of the information collected will depend as much on how it is collected as on the quality of the questions asked. Even under normal circumstances, the information presented cannot always be trusted. In the chaotic circumstances of an emergency there is even more reason to doubt the validity of information provided.

Follow the principles listed in Box 13.2 to ensure that the data you produce are as accurate as possible.

Community participation

Like any other people, those affected by an emergency have views and opinions. There is no reason to treat them any differently than other communities – except to make allowances for the trauma they have experienced.

Involving communities in the planning and design process is beneficial to their recovery as it promotes self-respect and

Box 13.1. Twenty questions for rapid assessment

1. What is the estimated population and what is the population density?
2. What is the crude mortality rate (number of deaths per 10,000 people per day) and what are the main causes of mortality and morbidity?
3. What are the current beliefs and traditions concerning excreta disposal, especially regarding women and children's excreta? (Do men and women or all family members share latrines, can women be seen walking to a latrine, do children use potties, is children's excreta thought to be safe?)
4. What are the prevailing practices for anal cleansing? Are water or cleansing materials available?
5. Is soap available?
6. Are there any existing sanitation facilities? If so are they useable and used, are they sufficient and are they operating successfully? Can they be extended or adapted? Do all groups have equal access to these facilities?
7. Are the current defecation practices a threat to health? If so, how?
8. What is the current level of awareness of sanitation-related public health risks?
9. Are there any health promotion activities taking place?
10. What health promotion media are available/accessible to the affected population?
11. Are men, women and children prepared to use defecation fields, communal latrines or family latrines? Are disabled people and the elderly able to use these facilities?
12. Is there sufficient space for defecation fields or pit latrines?
13. What is the topography and drainage pattern of the area?
14. What is the depth and permeability of the soil, and can it be dug easily by hand?
15. What is the level of the groundwater table?
16. What local materials are available for constructing latrines?
17. Are there any people familiar with the construction of latrines?
18. How do women deal with menstruation? Are there materials or facilities they need for this?
19. When does the seasonal rainfall occur?
20. Whose role is it normally to construct, pay for, maintain and clean a latrine (men, women or both)?

Source: Adapted from Harvey et al., 2006

Box 13.2. Data collection principles

The main things to remember when collecting data about an emergency are:

- Collect data from as many sources as possible to reduce bias and inaccuracies.
- Be aware of local political and social structures so as not to raise unrealistic expectations.
- Consider the effects of the data you collect on your decisions.
- Keep good records of what you have learned and from whom.
- Remember that situations change rapidly in an emergency and things may not be the same tomorrow as they are today.
- Hire a good interpreter if you are working with people who speak a different language to your own.

continued self-reliance. The affected community should be involved as soon as the decision to intervene has been made.

Who should get involved?

External organizations should only get involved if the affected institutions and population are unable to deal with the situation themselves and if the health of the population is getting (or is likely to get) worse (Figure 13.2). Tables 13.1 and 13.2 present health data that will assist in deciding whether or not to intervene.

Sphere Guidelines

Once a decision has been made to intervene the next step is to decide what to do. In emergencies, the normal methods of making decisions about which facilities to provide do not apply. Instead, a

Table 13.1. Suggested maximum infection rates for displaced people

Disease	Incidence rate (in cases/10,000/week)
Diarrhoeal diseases total	60
Acute watery diarrhoea	50
Bloody diarrhoea	20
Cholera	Every suspected case must be acted upon

Source: After de Veer (1998)

Table 13.2. Crude mortality rates in emergencies

Crude mortality rate (CMR) Deaths/10,000/week	Severity of emergency
Up to 3.5	'Normal' or non-emergency rate
More than 3.5 and less than 7	Stable and under control
7 to 14	Serious situation
15 to 35	Emergency / Out of control
More than 35	Catastrophic

Source: After Davis & Lambert (2002)

Table 13.3. Indicators for minimum service levels for excreta disposal

Indicator	Immediate emergency	Stabilization phase
Coverage	50 people per latrine cubicle	20 people per cubicle
	The ratio of female to male cubicles should be 3:1	
Location	Less than 50m one way walking distance	Less than 25m one way walking distance
	At least 6m from a dwelling	At least 6m from a dwelling
Privacy and security	Doors should be lockable from the inside Latrines to be illuminated at night where necessary Provision made for the washing and drying of menstruation cloths where necessary	
Hygiene	Handwashing facilities with soap to be supplied near to all toilets Appropriate materials for anal cleansing to be provided	
Vulnerable groups	Adequate latrines should be accessible to disabled people, the elderly, the chronically sick and children	

Source: Based on Sphere (2004)

set of internationally-recognised standards are used to ensure that the services provided to people in distress are broadly the same around the world. Table 13.3 sets out indicators for emergency excreta disposal. A comparison of existing facilities with those presented in Table 13.3 will indicate whether any additional work needs to be done and whether it is urgent.

Outline design

This stage develops an outline plan for what should be done, when and how. The plan contains sufficient

information for senior officials to decide whether action should be taken and to allocate resources. The design should include the following sections:

- **Goal:** The ultimate aim of all the interventions in the emergency (i.e. sustaining life and protecting health). This will usually be stated in an organization's charter.
- **Purpose:** What will be achieved by the proposed intervention (e.g. access to and use of hygienic latrines by the whole population).



Figure 13.2. The worsening health of the population is a reason for external organizations to get involved

- **Outputs:** What the actions will actually produce, such as a number of latrines constructed, the maintenance system established, or the changes in hygiene practices brought about.
- **Activities:** The actions carried out to achieve the outputs, such as purchasing materials, training staff, discussions with the community etc., with a timetable.
- **Inputs:** The resources needed to complete the work, namely: money, tools, equipment, materials and labour.

Immediate action

At times, the health threat is so great that something must be done immediately to prevent widespread disease and death. Immediate actions will be targeted at providing a quick response to an urgent situation (Figure 13.3), while time is dedicated to consider, design and approve a more sustainable solution (the outline design).

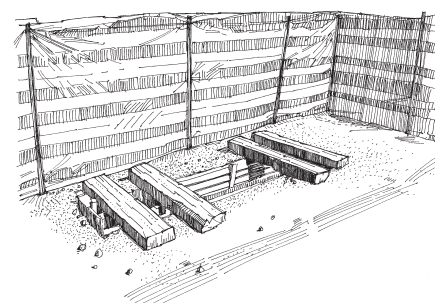


Figure 13.3. A simple trench latrine: an immediate action to an urgent situation

▶ Planning for excreta disposal in emergencies

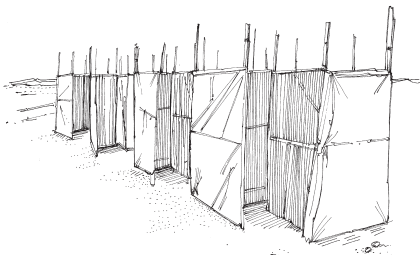
Detailed plan

Once the outline design has been approved, a detailed activity plan must be drawn up prior to implementation. This process is the same as for any other sanitation project except that it must remain flexible in case the emergency situation changes or worsens. Figure 13.4 shows an example of an action plan for waste management improvements at a medical centre.

Implementation

Following detailed design, the implementation of the longer-term programme can commence. This should include specifications, implementation and management for:

- construction;
- hygiene promotion;
- operation and maintenance;
- contingency planning (what to do if a major change happens); and
- monitoring and evaluation.



Area/time frame	Action	Facilitator
Waste management at medical centres		
Immediate	<ul style="list-style-type: none"> ■ Provide uniform and labelled plastic containers with lids for medical waste. ■ Provide uniform and labelled plastic bins for general waste. ■ Collect small plastic medicine containers, glue lids on, make slots, and label for disposal of sharps. ■ Provide uniform and labelled plastic bins for disposal of glassware. ■ Fill existing pit near health post and dig new pit with cover approx. 50m from health post and OPD. ■ Construct sealed sharps pit with restrictive entrance for disposal of sharps containers and glassware only. ■ Dispose of existing sharps containers in pit. ■ Locate burner next to general pit and use for medical waste (excluding sharps) only. ■ Train all health staff in new procedures ■ Train cleaning staff in importance of collection, transportation and disposal procedures. 	<ul style="list-style-type: none"> ■ MSF Sanitation and Health teams
Long term	<ul style="list-style-type: none"> ■ Monitor use and seal and replace pit for general waste and pit for sharps when required. ■ Monitor and manage use of placenta burial ground to ensure adequate burial and systematic use of area. ■ Monitor consistency of and advise on waste management procedures at all medical facilities (IPD, OPD and CTC). 	<ul style="list-style-type: none"> ■ MSF Sanitation team

Activity	Week starting							
	26/3	2/4	9/4	16/4	23/4	30/4	7/5	14/5
Excavate general waste pit		MSF Sanitation						
Construct sharps pit		MSF Sanitation						
Install burner		MSF Sanitation						
Fill and cover old pit		MSF Sanitation						
Train staff in final disposal			MSF Sanitation					
Provide bins and containers				MSF Logistics/Health				
Train health and cleaning staff					MSF Health			
Monitor systems			MSF Sanitation					

Figure 13.4. Action plan for waste management improvements at a medical centre undertaken by Médecins Sans Frontières (MSF)

Further information

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[80FA-4708-8486-5F6935246FD1/0/Apr10PH06012WaterHaulerInspectionProgram.pdf](http://www.hamilton.ca/NR/rdonlyres/3C2443DF-80FA-4708-8486-5F6935246FD1/0/Apr10PH06012WaterHaulerInspectionProgram.pdf)



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