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## Emergency sanitation: rapid assessment and priority setting

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## Emergency sanitation: rapid assessment and priority setting

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SANITATION IN EMERGENCIES is often given less attention than other humanitarian interventions such as health care, food and water supply. This is despite the fact that many of the most prevalent diseases in emergency situations are caused by inadequate sanitation facilities or poor hygiene practice.

The problems associated with sanitation are diverse in nature and a wide breadth of knowledge and skills is required to overcome them. In addition, many returning relief workers stress the importance of taking time to assess carefully what needs to be done and of resisting the temptation of rushing into poorly thought-out actions (Davis and Lambert, 1995). However, in the past there have been few resources available to help staff responsible for emergency sanitation programmes.

For the past three years WEDC has been working on a DFID-funded project to produce practical guidelines to assist field workers in assessment and programme design for emergency sanitation.

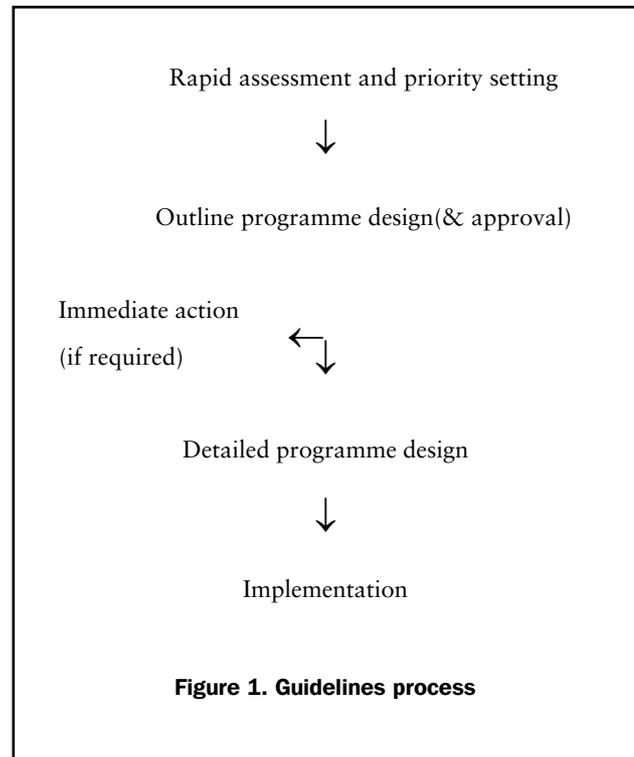
These guidelines cover identification and evaluation of sanitation and hygiene promotion needs; prioritisation between different sanitation sectors; and the selection and implementation of appropriate interventions. They are designed to be applied to any humanitarian emergency situation and cover both short-term and long-term scenarios. The guidelines are accompanied by a manual giving supporting information on the process.

### Process

The process developed for the guidelines is outlined in Figure 1 opposite

The process begins with a rapid assessment of the overall sanitation situation. This involves the collection of key information regarding existing facilities and practices such as potential health hazards, technical quality, number and distribution of facilities, and how these are used and maintained. From this assessment it is decided whether intervention is necessary, and priority sectors or areas are identified.

As well as data collected through observation in the field, demographic and health data are also gathered and recorded wherever available. Morbidity rates for sanitation-related diseases and crude mortality rates are useful indicators in determining the degree of urgency for programme intervention, and in identifying key problems related to sanitation.



**Figure 1. Guidelines process**

Once the priority sectors have been determined, appropriate actions are selected and an outline programme design is produced. At this stage consultation with the affected community is kept to a minimum in order to avoid raising false expectations. Technical options are also provided for immediate action should this be necessary.

Once the outline design has been produced and approved, active consultation with the key stakeholders commences in order to produce a detailed programme design. Here the affected population and other stakeholders can be involved in the design process. Once this is complete and donor approval is granted, implementation can begin. The guidelines also incorporate monitoring and evaluation within the implementation process.

The guidelines are accompanied by a manual containing detailed information on relevant technical, social, institutional and managerial issues. This also includes details of the recommended minimum objectives developed for the project, and explanation of the key terms used. In addition to the manual and guidelines there are a series of case studies describing how the guidelines have been practically

applied in the field and the results achieved in several different situations.

A training pack has also been produced to train field workers and key agency staff in the use of the guidelines and associated resources.

The following sections of this paper focus on the tools developed for use in rapid assessment and priority setting, with examples from field testing in a refugee camp in Zambia. The purpose of these tools is to facilitate a systematic approach to rapid assessment and prioritisation through objective comparison between different sanitation sectors.

## Assessment

The assessment of the overall sanitation situation is divided into the following sanitation sectors:

- Excreta disposal
- Solid waste management
- Waste management at medical centres
- Disposal of dead bodies
- Wastewater management
- Hygiene promotion

Other sanitation sectors have been excluded due to lack of project resources.

Checklists have been produced for each sector to be used to collect key data relating to the current standard of sanitation provision in the affected area. The information requested is designed to be specific but relatively easy and quick to collect.

Each checklist incorporates a general description and a series of questions concerning quality, quantity and usage of current sanitation facilities or practices. These questions are intended to be answered rapidly through observation and informal interview. The collected data can simply be recorded in a notebook whilst in the field.

Explanations of all terms used in the checklists are provided in the manual. The assessment checklist for excreta disposal is reproduced in Table 1.

## Sector analysis

The collected checklist data is then used to complete sector analysis tables. Each table has a range of scores which corresponds to the recommended minimum objectives for that sector. These objectives have been developed from the Sphere Project (1999).

Objectives are divided into immediate, short-term and long-term, and are designed as the recommended minimum goals to be achieved at the respective stages of an emergency sanitation programme.

In addition, the recommended objectives are sub-divided into quality, quantity and usage to facilitate easy cross-reference to the checklists.

A base score (B) is allocated through comparison of the collected data with the range in the table. This score is then

multiplied by the multiplication factor (M) to obtain the weighted common score (C). This weighting is necessary to give equal importance to quality, quantity and usage of facilities or practices. All common scores are then added to obtain the total sector score.

This process is completed for each relevant sanitation sector and affected area. Separate tables may be completed for communal and domestic facilities.

Table 2 shows a completed example of a sector analysis table for domestic excreta disposal at Kala refugee camp in Luapula province, Zambia

## Priority setting

Once each sector analysis table has been completed the total score for each can be used to prioritise between different sanitation sectors and different physical areas affected.

Where separate tables have been completed for domestic and communal areas, the average of the respective totals may be used as the sector total.

Each final score will lie between 3 and 30, 3 being ideal and 30 being the worst case. Table 3 indicates the relevant level for each score range.

Final scores must be viewed with respect to the current stage of the emergency and the relevant level of service required. If the immediate acceptable level has not been achieved at any stage then immediate action is required. The collected health data is used in conjunction with the sector scores to assist in determining priorities and degree of urgency.

By using a scoring system each sanitation sector can be compared with other sectors in an objective manner. The final decision as to the sectors in which to intervene will also be influenced by the mandate of the agency and the collated health data.

At the time of assessment, Kala refugee camp had been in existence for approximately six months and was likely to remain for at least a year, scores were therefore compared to the long-term acceptable level. In this case the agency concerned decided to intervene in solid waste management, waste management at medical centres and hygiene promotion. In addition, a vector control programme was initiated in response to the high malaria morbidity rate recorded, although this is not one of the sectors covered by the guidelines.

## Summary

The rapid assessment and priority setting tools developed have proved to be effective field techniques in a number of emergency situations. The assessment process can be completed rapidly by most field workers following a short training session on the use of the guidelines. In most situations it will be possible to assess all sanitation sectors for a population of 10,000 within one day.

Details of the complete assessment and programme design process will be contained within the forthcoming

**Table 1. Assessment checklist for Excreta disposal**

**General Description**

Write a full description of the current facilities and how they were constructed, operated and maintained with general comments on quantities and qualities.

**Quality**

1. Are existing facilities technically appropriate?
2. Are existing facilities socio-culturally acceptable to all users?
3. What are the potential hazards for disease transmission?
  - 3a. Is there any potential contamination of food and water sources
  - 3b. Are any excreta disposal facilities breeding sites for vectors or pests?
  - 3c. Are appropriate anal cleansing and hand washing materials available?
  - 3d. Is there any indiscriminate defecation or potential for direct human contact with excreta?
4. For how long are current facilities and practices sustainable?

**Quantity**

1. What is the ratio of domestic facilities (cubicle or space) to population?
  - 1a. If required, what is the ratio of population to facilities for children, disabled or elderly?
  - 1b. If there is a need for facilities in public places or institutions, what is the ratio of facilities to unit of measure?
2. What is the maximum one way walking distance for users?

**Usage**

1. What proportion of the affected population has access to appropriate facilities?
2. What proportion of the affected population is using the appropriate facilities correctly on a regular basis? Are facilities maintained hygienically?

**Table 2. Sector analysis for domestic excreta disposal, Kala refugee camp**

Data	Collected data	B	Range				M	C
			10	7	4	1		
Technical appropriateness	Gen. Appropriate	5	inappropriate	Technically basic	appropriate	very appropriate	0.25	1.25
Social and cultural acceptability	Shared by 4 households	5	very unacceptable	unacceptable	acceptable	very acceptable	0.25	1.25
Potential hazard to health	Some open defecation	5	major hazard	basic protection	minimal hazard	no hazard	0.25	1.25
Sustainability of facilities	>1 year	1	None	1 month	6 months	> 1 year	0.25	0.25
Ratio of latrine spaces to population	1/16	1	None	1/100	1/50	1/20	0.5	0.5
Maximum one way walking distance	30m	2	>100m	75m	50m	<25m	0.5	1.0
% of population with access to appropriate facilities	80%	3	None	50%	75%	>95%	0.5	1.5
% of population using appropriate facilities correctly	80%	3	None	50%	75%	>95%	0.5	1.5
							<b>TOTAL</b>	<b>8.5</b>

**Table 3. Priority setting levels**

Score	Level	Priority
> 24	Unacceptable	Very high
17 – 24	Immediate acceptable level (< 1 month)	High
10 - 17	Short-term acceptable level (< 6 months)	Medium
< 10	Long-term acceptable level (> 1 year)	Low

**Table 4. Priority setting results, Kala camp, Zambia**

Sector	Score	Priority
Excreta disposal	7.4	-
Solid waste management	19.4	High
Waste management at medical centres	18.5	High
Disposal of dead bodies	5.4	-
Wastewater management	9.3	-
Hygiene promotion	-	Very high
AVERAGE site score	12.2	Short-term acceptable level

WEDC publication *Emergency Sanitation: Assessment and Programme Design*. This will consist of guidelines and a manual containing supporting information. An accompanying training pack will also be available. Anyone interested in receiving a copy should contact the authors.

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