

2. Assessment

CONSULTATION with the affected community is an ESSENTIAL part of the assessment process, even in an acute emergency. This is important to ensure that excreta disposal facilities are used and maintained.

2.1 Assessment principles

The importance of assessment should not be underestimated. Even in an acute emergency, assessment is the cornerstone of a successful excreta disposal response programme. Assessment involves the collection and analysis of a variety of information and data. The key points to remember when undertaking assessments are:

- Key information should be collected from as many different people and sources as possible to corroborate findings. Additional data may be collected after decisions have been made for confirmation.
- It is essential to understand local political and social structures and to be aware of conflicting interests and biases within communities when collecting information. It is also important to discuss the purpose of the assessment with communities to avoid raising expectations unrealistically.
- Communities' preferences regarding excreta disposal practices and facilities must be understood if facilities are to be used and have the desired impact on public health (see Box 2.1).
- Collect *enough* data to implement an effective response. Time spent collecting unnecessary information is time wasted. Focus on the most relevant factors (the checklist provided on page 11 can assist in this).

EXCRETA DISPOSAL IN EMERGENCIES

- Keep good records of any gathered information and store them in such a way that others can access them.
- Remember that in most situations things are constantly changing, it is important, therefore, to look at both the present situation and what is likely to happen in the near future.

Box 2.1.

The importance of consulting communities

Latrines provided in a refugee camp in Eastern Chad in 2004 were not used by the camp population as they were not happy with the design or location of facilities.

Simple dry pit latrines provided for Kosovan refugees in Albania in 1999 and for communities affected by the Asian tsunami in 2004, were not used by either population due to a common desire to use water-based (pour-flush) latrines only.

Such low levels of acceptability and non-use of latrines can be avoided through thorough consultation with communities, both to determine their existing practices and preferences, and to involve them in the planning and implementation process for excreta disposal and related hygiene promotion activities.

The rapid assessment and follow-up assessment stages must address a number of key issues, as outlined in the following sections. Twenty key questions to be applied when collecting baseline data in initial assessments are presented on page 11. These are generic and may not all be relevant in all emergency situations. The question 'so what?' is a useful test of relevance – ask it frequently (Davis and Lambert, 2002).

2. ASSESSMENT

Twenty Rapid Assessment Questions

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. How did people dispose of excreta before the emergency? 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. Will people who traditionally use water-seal latrines accept direct-drop dry systems in the short-term? Is there sufficient water available for water-seal latrines to be provided?
5. What material/water is used for anal-cleansing? Is it available? Is soap available?
6. Are there any existing facilities? If so, are they 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 public health risks?
9. Are there any public health promotion activities taking place? Who is involved in these activities?
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? Consult people with disabilities and those who are elderly.
12. Is there sufficient space for defecation fields, pit latrines etc.?
13. What are the topography and drainage patterns of the area?
14. What is the depth and permeability of the soil, and can it be dug easily?
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)?

Health and hygiene issues

The primary purpose of an excreta disposal programme in emergencies is to sustain or improve health by minimizing the transmission of disease-causing pathogens. Health and hygiene issues, therefore, have particular relevance when conducting any assessment. These are especially important in order to determine the key risks to the affected population and, consequently, to identify intervention priorities.

The current health status of the affected population and potential threats to health are key assessment indicators. Excreta-related diseases include, among others:

- diarrhoea
- bacillary dysentery (shigellosis)
- Hepatitis (A,C,E)
- cholera
- cryptosporidiosis
- roundworm

In an emergency situation Crude Mortality Rate (CMR), in deaths per 10,000 people per day, is the most practical indicator of the health status of a population. As long as the CMR remains above 1 death /10,000/day the situation is generally classed as an emergency (Sphere, 2004).

Morbidity rates for excreta-related disease can also be useful indicators. Although it is not possible to provide 'acceptable' incidence rates for different diseases (Rottier and Ince, 2003), it is recommended that figures should be lower than those presented in Table 2.1.

Where clinical data are available these should be assessed to determine the relative prevalence of diseases to help identify key risks and priorities. Consultation with medical staff early on is an important step to determine the most severe or unusual morbidity rates. An understanding of the local context is especially important as some diseases may be endemic and relatively high morbidity rates for these may not be unusual.

Hygiene promoters working in emergency situations have an important role in assessing social indicators as well as clinical data. Social indicators include hygiene behaviour and cultural practices, as well as aspects of vulnerability such as age, gender, disability and pre-existing ill health.

Transmission of excreta-related diseases is exacerbated by lack of appropriate hygiene practices, such as handwashing after defecation, disposal of children's faeces, and regular cleaning of latrines.

2. ASSESSMENT

Table 2.1. Indicative acceptable incidence rates in camps for displaced persons or refugees (after de Veer, 1998)

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

A lack of baseline information on hygiene behaviour can lead to project failure. While it is difficult to assess whether all sections of the population are aware of priority hygiene practices, it is always useful to conduct a small study on issues such as handwashing and disposal of children's faeces (see Box 2.2).

HIV/AIDS is also of particular relevance to excreta disposal in emergency situations. Poor sanitation raises particular risks for people living with AIDS as their weakened immune systems are less resistant to opportunistic infections. The HIV/AIDS epidemic is, therefore, increasing the need to provide sanitation and improve hygiene practices because diarrhoea and skin diseases are among the most common opportunistic infections. Poor hygiene and sanitation is one of the leading causes of the progression of asymptomatic HIV to AIDS. For some patients, diarrhoea can become chronic, weakening them and often resulting in death.

Particularly in countries where HIV prevalence is high, assessments should be conducted taking into account the extreme vulnerability of adults living with HIV/AIDS. Emergencies occurring against a backdrop of high HIV prevalence challenge all response groups to revise their hitherto accepted mode of response. However, any attempt to collect information about known HIV-positive people, or target assistance specifically for them, should be approached with caution to avoid stigmatizing them. Even in communities where prevalence rates are known to be high, it is often unacceptable to discuss this openly. Asking about the chronically sick may be more acceptable and contacting them through local HIV/AIDS organizations should be considered where possible.

Box 2.2.

The importance of incorporating baseline information on hygiene behaviour in Eritrea

In Eritrea, the Ministry of Health did some research on health behaviours in the IDP camps (Deda, Mai Haber and Adi Keshi) in September 2000. The results showed that the residents knew a great deal about health problems in their camps and knew about the causes of health problems. However, based on formative research on the health behaviours in selected IDP camps, it was concluded that 'there exists a great gap between what people know and what they do.' Research identified problems with using latrines, 'in spite of the efforts made to provide latrines in the camps.' The potties that had been distributed by the agency were not being used and children's defecation was observed everywhere.

Following on from this research an Information, Education and Communication (IEC) strategy was drafted for the IDP camps by the Ministry of Health. This was presented in a tabulated form, with the problem behaviour matched to factors promoting problem behaviour and factors supporting behaviour change. This information was used to help guide the excreta disposal programme, particularly concerning health behaviour.

Socio-cultural issues

Excreta disposal provision is essentially people-centred and the importance of socio-cultural issues is paramount if programmes are to be successful. Relevant socio-cultural issues to consider in assessments include:

- population and demography – numbers of men, women and children, breakdown by age, ethnic and religious groups, population density;

2. ASSESSMENT

- vulnerability and disability – numbers of people with physical and mental disabilities or sickness, most vulnerable groups;
- cultural beliefs, practices and preferences relating to excreta disposal and hygiene (e.g. menstruation);
- existing knowledge relating to health and hygiene;
- anatomical considerations (e.g. how people squat); and
- anal-cleansing materials.

Such information is essential to set up a baseline for an effective excreta disposal programme.

Women are potential agents of change in hygiene education, and children are the most vulnerable victims, but men usually make the decisions about whether to tackle the problem, and how. Women often need privacy and security in sanitation more than men, yet they are unable to express those needs effectively in many societies.

Plans for designing and locating sanitation facilities must consider cultural issues, particularly as excreta disposal is usually focused on the household. Excreta disposal may be a difficult subject for a community to discuss: it may be taboo, or people may not like to discuss issues they regard as personal and unclean. In some cases, people may feel that facilities are not appropriate for children, or that children's faeces are not harmful. Such issues need to be addressed with sensitivity at an early stage. This is essential to ensure that interventions are appropriate, facilities will be used and people affected by emergencies maintain their dignity.

Environmental and technical issues

The range of technical options that can be applied in any particular situation will depend both on the human environment and the physical environment in which the emergency occurs. Environmental and technical issues to consider in assessments include:

- ground conditions – soil types and infiltration rates (see Appendix 1), groundwater levels, bearing capacity of soil, ease of excavation;
- location and risk of contamination of water sources;

- topography and drainage patterns;
- climate and rainfall patterns;
- natural, physical and human resources (and skills) available locally or that can be procured rapidly; and
- possible environmental constraints or impacts.

2.2 Assessment tools and techniques

Field assessments can incorporate a variety of techniques, including:

- observation;
- measurement and testing;
- surveys;
- interviews; and
- participatory techniques.

Observation

Perhaps the simplest way of gathering information is through observation. This method allows the assessor to record non-verbal behaviour among the affected population, the physical condition of the affected area and the characteristics of the surrounding landscape. It can also explore interactions among the affected population and local residents or other stakeholders.

On arrival in the field the first step in assessment is to conduct a rapid reconnaissance of the affected area. This is best done on foot and may be a useful starting point in producing a simple sketch map. Transect walks can be made through the site to take notes on any existing excreta disposal facilities and practices and associated indicators. A huge amount of information can be gathered in this way but care should be taken not to make sweeping assumptions based on limited observation.

It should be noted that observation methods based on people's behaviour are subjective and time consuming. They cannot detect what members of the affected population are thinking, and the presence of an outsider can change the behaviour of those being observed.

2. ASSESSMENT

Measurement and testing

Measurements can be used to determine quantities such as:

- available area;
- geographical position;
- elevation and slopes;
- level of water-table;
- latrine superstructure dimensions for existing facilities or materials;
- quantity of water available for handwashing / anal-cleansing;
- ease of excavation for pits; and
- soil infiltration rates.

Measurements are likely to require the data collector to have some skill and experience in using appropriate instruments. Assessment teams can be trained reasonably quickly for most measurements, but should be carefully supervised throughout data collection.

Surveys

Surveys can be used to examine opinions or behaviour by asking people set questions. Surveys can be used to collect both quantitative and qualitative information. This may be quantitative statistical data concerning demography, health and geography, or qualitative social data such as community opinions and behaviour. There is a broad range of survey techniques which can be used for emergency sanitation programmes, including random and selective methods. The use of surveys should be balanced against available time, human resources, logistical support, and the need for statistical analysis and interpretation of results. In the 1st phase emergency it may only be possible to collect information that is representative of the situation rather than statistically valid. Comprehensive surveys may be more appropriate for detailed follow-up assessments than for rapid assessments.

Interviews

Since excreta disposal is essentially a people-centred sector, not all information can be gathered through observation. Even in the initial rapid assessment it will be necessary to interview some groups and individuals.

There are various interview techniques ranging from open-ended discussion with randomly selected members of the affected population to more directed interviews with key informants or personnel from NGOs. Care should be taken in conducting interviews; the assessor should avoid asking leading questions (where the desired answer is obvious) or restrictive questions (with yes or no answers only). Interviewees can include:

- key informants (engineers, teachers, health staff etc.);
- men, women and children from the affected population;
- formal leaders; and
- representatives of minority or vulnerable groups.

Women and children, as well as men, should be questioned. Where translators are needed, female translators should be used where possible in interviewing women, especially in cultures where women's contact with men is restricted. Appropriate local staff should be used wherever possible.

It is important to remember that in some situations, interviewers and observers may pose a threat to the people, interpreters and authorities concerned. Rapid assessment teams can compromise these groups by asking the wrong questions or quoting their answers to the wrong person (Gosling and Edwards, 1995).

To obtain in-depth information about practices and beliefs it may be useful to undertake participatory techniques, such as a community mapping session, with separate male and female groups. Community members will then be able to give you important information about where there are problems with excreta disposal, what sort of toilets most people have, where people dispose of children's faeces and what possible solutions people would like to see.

Participatory techniques

There are many participatory techniques that can be used in assessment, although experienced staff are needed to conduct most of these. The most common at the rapid assessment stage are group discussion and community mapping. Group discussions may be opportunistic with whichever people are encountered during the assessment, or may involve focus groups. Focus group discussions need to be pre-planned

2. ASSESSMENT

and usually involve a more homogenous group of people who are guided by the assessor through a detailed discussion on specific issues. These groups generally work better where participants are of the same sex and similar in age. Single-sex focus groups may promote greater freedom of expression by participants who may not want to express their opinion in a mixed group.

Discussions are semi-structured and the assessor will introduce a list of topics to encourage wider discussion among the group's members. This will enable the facilitator to learn about their concerns, opinions, problems, and what they consider to be priorities.

Mapping is a useful exercise which can be used to gain an overview of the situation and to identify excreta disposal problems which are causing a risk to people's health. A mapping exercise should also allow people themselves to appreciate possible risks and can often be a catalyst for community planned action. This can build on the observation process during the initial reconnaissance by sketching site plans or schematic maps. This may be used to record locations of:

- existing sanitation facilities and practices;
- key public services and institutions;
- open defecation;
- standing water;
- water sources, storage and distribution points; and
- slopes, drainage and geological features.

Mapping can be carried out relatively quickly by community members in conjunction with local staff. This is another way of stimulating discussion and obtaining information on a wide range of issues from those present. Maps (no matter how rough) can be very useful in co-ordination and planning meetings with other individuals, organizations and agencies.

Whatever technique is adopted, care must be taken during the initial rapid assessment that the expectations of the affected community are not raised unduly prior to programme approval.

A guide explaining how to conduct a mapping exercise is presented in the box on page 20.

How to conduct a mapping exercise

A mapping exercise can be initiated simply by approaching a small group of people or by organizing groups of people in advance. It is useful to conduct separate mapping exercises with women and men to ascertain their different views.

- Have a clear idea in your mind of the possible things that might be identified on a map such as church, market place, schools, areas of open defecation, houses or shelters without latrines, areas of fly breeding etc.
- Identify possible resources that might be used for the map such as stones, leaves etc. but allow people to make their suggestions as you go along.
- Explain who you are and that you would like their help in conducting the exercise.
- Explain what you hope to find out and how the participants might go about making a map.
- Allow plenty of time for discussion of the idea of making a map - many people may be sceptical that they cannot do this because they have never been to school.
- If necessary begin the process yourself with a central landmark using a stick to draw on the ground. Try to 'hand over the stick' as much as possible to other participants.
- Listen carefully to what people say and allow free discussion and debate amongst participants.
- Keep a record of who took part and when and where.
- When the map is finished, offer to transcribe it or get one of the participants to transcribe it onto paper. Ask the participants to decide where they would like the map to be kept, or who will keep it.

It might also be useful to compile quantifiable data from the mapping exercise. A table showing the quantities of each thing that has been drawn on the map (i.e. numbers of latrines in different locations) can then provide a baseline for subsequent quantifiable evaluation or for the triangulation of results from questionnaire surveys. This can also be displayed with the map for those who can read.

2.3 Follow-up assessment and consultation

Assessment is not simply a one-stage process. The initial rapid assessment is designed to collect key information quickly in order to prioritize intervention activities and produce an outline programme design. The assessment tools and techniques described above can be applied at any stage of an excreta disposal programme, and techniques used in the initial assessment can be revisited and repeated in the follow-up assessment.

Once the outline programme design has been produced and immediate actions are implemented to stabilize the initial situation, a follow-up assessment and consultation process should begin in order to gather more comprehensive information and produce a detailed programme design.

This more in-depth consultation phase takes time but is essential to ensure that interventions and facilities are socio-culturally acceptable, and that they will be operated and maintained effectively. Participative tools are very useful to find out more about the 'why' rather than just the 'what' people do. Triangulation of information collected with different tools and approaches is important in order to obtain a more in-depth understanding of the situation for baseline data to be used to set benchmarks for monitoring.

More detailed information on different assessment techniques that can be employed can be found in Ferron, Morgan & O'Reilly (2006) *Hygiene Promotion: From relief to development*. Intermediate Technology Development Group Publishing: UK.