



Emergency sanitation in refugee camps

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WHEN REFUGEES FLEE their homes due to civil strife or natural disasters, they face an uncertain future in refugee camps. Their condition on arrival can vary dramatically, depending on their state before they left home and the distance travelled. Their initial experiences of the camp's life are confusing and bewildering. At the same time they are exposed to lots of problems such as malnutrition, illness, inadequate shelters, poor water supply, health care and frequently, non-existent sanitation facilities.

The problem of poor sanitation in refugee camps starts at the beginning. This is mainly due to the fact that it is not given as high a priority as other emergency interventions such as health care, food and water supply. This is despite the fact that many of the diseases common amongst refugees are caused by inadequate sanitary facilities such as excrete disposal, solid waste management, domestic wastewater management, vectors and pest control and a poor understanding of hygiene practices. However, there are other causes of poor sanitation, lack of expertise and trained people, lack of time, and a low level of interest in the subject by camp managers and refugees. The result is that a proper sanitation assessment does not take place leading to poor choice of technology. Furthermore, poor communication between agencies and the affected population, fails to establish a strategy that will encourage the community to participate in environmental sanitation activities. Providing sanitation facilities alone does not, in itself, guarantee

health improvements, they must also be used effectively. This paper will discuss these problems, their causes, and work being done to improve provision of facilities in future camps.

What is sanitation in emergency situation?

There are several definitions of sanitation, but in this paper, it is taken to mean safe excrete disposal, solid waste management, medical waste management, domestic wastewater management, vector and pest control, site drainage, and hygiene facilities such as hand washing, bathroom, laundry areas, slaughtering facilities, and cemeteries. This definition allows facilities to be provided at different phases of an emergency, whenever they become necessary. These activities are closely linked and often overlap, for example proper solid waste management and domestic wastewater disposal will improve the control of insects and vermin.

Problems of poor sanitation

Poor sanitation provision in refugee camps creates three main problems:

- Spread of disease
- Polluted environment
- Demoralisation

Table 1. Sanitary related diseases

Type of disease	Measures to control						
	Safe excreta disposal	Hygiene facilities	Domestic wastewater management	Solid waste management	Vectors and pest control	Medical waste management	Site drainage
Diarrhoeal*	•	•			•	•	
Skin/eye infection, lice		•			•		
Malaria			•	•	•		•
Soil based	•	•					

Reference: Engineering in emergencies

* It includes amoebic and bacillary dysentery, gastro-enteritis, infectious hepatitis, cholera and typhoid

Spread of disease

From an epidemiological point of view, sanitation is the first barrier to many faecally transmitted diseases. However, its effectiveness improves when integrated with an adequate water supply and hygiene promotion. By providing adequate sanitary facilities and ensuring their proper use, we can control the environment in which many diseases thrive and minimise the opportunities for infection. The most common disease controlled by these measures are those related to excreta and insects. Table 1 lists these diseases and the sanitary interventions which can be used to control them.

One of major cause of mortality and morbidity in emergencies is diarrhoea. Studies have shown that they contribute 25-50 per cent of all deaths (Table 2).

Furthermore, if we consider mortality rates for malaria (Table 3), then the importance of sanitation in emergencies becomes more apparent .

Polluted environment

Lack of sanitary facilities and unhygienic practices in crowded camps will cause environmental pollution in a very short period of time. Excreta from man and animals and decomposing organic wastes will attract animals, vermin and flies, as well as being unsightly and odorous. Poor drainage will provide a breeding ground for mosquitoes and pollute water sources.

Demoralisation

Sanitation is not only about the health, it is also about dignity and the moral of the affected people. By providing sanitary facilities we are helping to create a clean environment where people are able to live with dignity which will assist their return to a normal existence.

The causes of poor sanitation in emergency

The problem of poor sanitation in emergency situations starts at the initial stages. It is not given as high a priority as other activities such as health care, food, and water supply. They are many reasons for this but they can be summarised as follows:

- **Low priority**
Specially at the initial assessment stage of an emergency. The sanitation programme usually an add-on to the provision of water supply and not seen as a priority in its own right.
- **Lack of resources**
The funding and resource allocation to sanitation programmes are not at the same level as for other services such health care and water supply.
- **Lack of trained personnel**
The personnel recruited for field work often lacks

Table 2. Percentage of death rate caused by diarrhoea

Date	Location of refugee camp	Death rate % of total mortalities
1980	Somalia	40
1985	Eastern Sudan	25-50
1989	Ethiopia	28
1988	Malawi	28-40
1991	Kenya	35

Reference: Morbidity and Mortality Weekly Reports, CDC.

Table 3. Percentage of death rate caused by malaria

Date	Location of refugee camp	Death rate % of total mortalities
1990	Malawi	18
1979	Thailand	39
1989	Ethiopia	16
1985	Sudan	7
1980	Somali	2

Reference: Morbidity and Mortality Weekly Reports, CDC.

proper training and experience in sanitary activities. In some cases they are sent to the field without receiving any training at all, because they were the only people who were available to go to the field immediately.

- **Lack of universal guidelines and checklist**

There are no universal guidelines for improved sanitary practises in emergencies amongst the international and local agencies. Some agencies have no guidelines for their own use.

- **Lack of expertise and techniques for dealing with difficult physical conditions**

The techniques for emergency sanitation have not developed for the past three decades, specially for dealing with difficult conditions. This has caused a lot of problems for field staff and the affected population.

- **Lack of kits or packages for emergency sanitation work**

The kits or packages of sanitation equipment have not yet been developed for rapid deployment in emergencies.

- **Lack of co-ordination among implementing agencies**

Due to competition among aid agencies, they do not co-ordinate their activities and the flow of information is not as free as it should be. In the past this has caused some work to be duplicated.

- **Socio-cultural factors not being considered**

Existing perceptions, beliefs and practices have not been taken into consideration when selecting technology. This has resulted in the affected populations being reluctant to use and maintain the facilities.

- **Lack of community participation**

The success of any sanitation programme depends on how far each community participates in sanitation activities. This rule also applies in emergencies as well as development. In the past, sanitation implementation was considered more difficult than water supply because the affected people are more closely involved in sanitation development and maintenance. It is important to involve the affected community in decisions that will affect their lives from the very beginning. In most emergency sanitation projects community participation is completely ignored, mainly due to a lack of understanding of issues by field staff and proper guidelines from agencies.

- **Lack of hygiene promotion activities**

In an emergency situation it is not sufficient just to provide the facilities. They must be properly utilised to provide the maximum benefits. This can only be achieved by giving hygiene promotion a high priority. Unfortunately, in the majority of projects, the implementing agencies are more interested in the hardware of sanitation than the software of it.

Current activities to improve emergency sanitation

In January 1998, a research project began at the Water Engineering and Development Centre(WEDC) of Loughborough University technology, UK. The project entitled "Assessment and Programme Design for Emergency Sanitation" aims to prepare guidelines, check lists, resource pack and training modules on sanitation and hygiene promotion activities, to help those involved in emergency sanitation in a systematic way. It is hoped that this support will improve the skills and confidence of field staff, thus improving the sanitary provision to the affected population. The project will look at various scenarios, both natural and man made, where the sanitation facilities have been effected or new sanitation facilities are needed. This will include the following:

- Refugee Camps
- New exodus to urban areas due to natural distress or civil strife.
- Hard shelters and public buildings.
- Enclosed centres (prisons, hospitals, etc.) .
- Flooding
- Communities remaining in their homes after a disaster
- Medical epidemics
- Transits camps

The guidelines will cover all low and middle income countries world wide.

Research objectives

The research aims to achieve the following objectives:

1. To produce guidelines, checklists and a resource pack to assist field workers to:
 - Assess the sanitation and hygiene promotion needs of affected populations.
 - Select the most appropriate sanitation and hygiene promotion interventions.
 - Develop a plan for implementing a sanitation and hygiene promotion programme.
2. To investigate the options for providing excrete disposal facilities for sites where traditional excreta disposal methods are inappropriate such as when the water table is very high or there is rock close to the surface or where the population density is very high.
3. To produce of a set of training modules for field staff to teach them how to use the guidelines and interprets the outputs.
4. To train of trainers in the use of the guidelines and training modules.

Project activities

An advisory panel of experts involved in emergency sanitation and hygiene promotion has been established which will meet twice a year to guide the project team and ensure that the outputs are appropriate to their needs. The panel includes members from WHO, UNHCR, ICRC, IFRC, OXFAM, DROP, MSF(H), MSF(B), RedR and Merlin.

The project will be completed by year 2000, during this period there will be two field visits to test the output of project. After each field visit, the necessary review would be made to the output and final version would be published and distributed to all agencies that are involved in emergency sanitation.

If you have any enquiries, or would like to make suggestions or comments about the project please contact the authors at:

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