



# **NATIONAL DISASTER MANAGEMENT GUIDELINES**

Minimum Standards for Sanitation & Hygiene Promotion

**NATIONAL DISASTER MANAGEMENT AUTHORITY**



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# 1.

## Introduction

### 1.1 Background:

Disasters whether natural or man-made, often lead to increase in mortality rates. This could be due to: 1) the direct impact of the occurrence of hazard event which leaves many dead and a large number of people in immediate need of medical relief or 2) due to post disaster consequences where in a large number of displaced people take shelter in temporary settlements or relief camps and their access to basic facilities like water, food, shelter, sanitation etc gets highly compromised. The limited access to any one or more of these basic necessities adversely affects the health of people and if appropriate hygiene and sanitation response is not planned, it may lead to epidemic situations. At risk groups like women, pregnant women, lactating mothers, children, old aged, disabled and people living with HIV/AIDS are most vulnerable in such situations.

In such situations the State has a primary responsibility to ensure sufficient sanitation and hygiene promotion measures are in place at the relief camps. The **directive principles of the Indian constitution** include Article 47, which specifies the duty of the state in this regard, "*The State shall regard raising the levels of nutrition and the standard of living of its people and the improvement of public health as among its primary duties*". The right to life is recognised as a fundamental right in the constitution (Article 21) and this right has been quoted in various judgements as a basis for preventing avoidable disease producing conditions and to protect health and life. The right to health promotion facilities is also recognised internationally as a human right and India is a signatory to the International Covenant on Economic, Social and Cultural Rights which states in its Article 12 – "*The States Parties to the present Covenant recognise the right of everyone to the enjoyment of the highest attainable standard of physical and mental health... The steps to be taken... shall include those necessary for ... The creation of conditions which would assure to all medical service and medical attention in the event of sickness.*"

So the States and non-state actors shall coordinate and collaborate to meet the specific needs of the people affected with disaster. The provisions under section 12 of the National Disaster Management Act, 2005, mandate National Disaster Management Authority to define the minimum standards for Hygiene and Sanitation to be provided to people affected by disaster.

### 1.2 Aim

The aim of this document is to provide guideline about Hygiene and Sanitation requirements of people affected with disasters as minimum standards applicable to whole country and on the basis of this the State Governments shall lay down detailed guidelines for providing minimum standards of relief to persons affected by disaster in the state, which in no way should be lesser than the minimum standards prescribed in this document. (Section 12 and Section 19 of the National Disaster Management Act, 2005 refers)

### 1.3 The Importance and Purpose of Hygiene Promotion and Sanitation in Emergencies:

People displaced by disasters and living in temporary camp like situations, are more prone to illness and death from disease. These are related to inadequate excreta disposal, solid waste management, inadequate vector control measures, and improper hygiene – domestic, environmental and personal hygiene. Added risk is pollution of environment by medical waste. There is need to ensure minimum standards for hygiene promotion and sanitation while responding to disasters. This is especially important during the first 10 days to initiate the systems and in the next 40 days to continuously upgrade and monitor the conditions.

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Hygiene and sanitation are critical determinants for control of communicable diseases during disaster situations, especially diseases related to inadequate sanitation, inadequate water supplies and poor hygiene. The most significant of these diseases are diarrhoeal diseases and infectious diseases transmitted by the faeco-oral route. Other water- and sanitation-related diseases include those carried by vectors associated with solid waste and water. The main objective in disasters is to reduce the transmission of faeco-oral diseases and exposure to disease-bearing vectors through the promotion of good hygiene practices, the provision of safe drinking water and the reduction of environmental health risks and by establishing the conditions that allow people to live with good health, dignity, comfort and security. The term 'sanitation', throughout this guideline refers to excreta disposal, vector control, solid waste management, health care waste management and waste water management.

Simply providing sanitation facilities will not, on its own, ensure their optimal use or impact on public health. In order to achieve the maximum benefit from a response, it is imperative to ensure that disaster-affected people have the necessary information, knowledge and understanding to prevent water- and sanitation-related disease, and to mobilise their involvement in the design and maintenance of those facilities. Promotion of hygiene will be a specific component of the response.

## **1.4 Important Considerations for Sanitation and Hygiene Promotion during Emergencies:**

**1.4.1 Planning and Preparedness:** In spite of recent developments and advances in Sanitation facilities created through "Total Sanitation Campaign" in the country, there are wide gaps in outreach and behavioural acceptance of such measures by people in certain regions. If any disaster strikes in these parts of the country the situation becomes worst. Therefore, preventive measures must be integrated in disaster management plans at the district, state and national levels to ensure emergency sanitation facilities and hygiene promotion measures.

**1.4.2 Assessment:** The Sanitation and Hygiene promotion response in relief camps should be based on the sound Public and Environmental Health assessments as part of multi-sectoral assessments (in coordination with assessments for Food and Nutrition security; Water, Shelter and settlement planning and other sectoral assessments) as explained in the relevant chapters and annexure attached.

**1.4.3 Coordination:** During disasters the government and non government organizations need to work together along with the affected population. The planning and coordination at camp levels, NGO-NGO coordination and GO-NGO coordination shall be part of the incident response system and support designated authorities at all levels.

**1.4.4 Identifying vulnerable groups and addressing their special needs:** The groups most frequently at risk in disasters are women, children, older people, disabled people and people living with HIV/AIDS (PLWH/A). In certain contexts, people may also become vulnerable by reason of ethnic origin, religious or political affiliation, or displacement. The specific concerns and measures for the vulnerable groups along with some other important issues pertaining to gender, protection, social inclusion and environment are cross cutting issues that should be considered at all stages of the medical response in relief camps.

**1.4.5 Monitoring:** The post disaster situation changes very rapidly. With the progression of the sanitation and hygiene promotion response, there is generally an improvement in the living conditions, however, the situation shall be monitored continuously for having a better focus in the program interventions and addressing mid course corrections if any.

**1.4.6 Participation of Communities:** The participation of disaster-affected

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people in assessment, planning, decision-making and implementation, helps to ensure that programmes are equitable, effective and reinforce people's sense of dignity. Special effort should be made to ensure the participation of women and other vulnerable groups.

## 2.

## Assessment

Safe disposal of human excreta creates the first barrier to excreta related disease, helping to reduce transmission of diseases. Safe excreta disposal is therefore a major priority, and in most disaster situations should be addressed with as much speed and effort as the provision of safe water supply. The provision of appropriate facilities for defecation is an important response essential for ensuring people's dignity, safety, health and well-being.

Therefore, the respective SDMA/DDMA in collaboration and coordination with other non government actors should plan the rapid need assessment and the detailed need assessment as per the minimum standards and guidance given below. The assessment should be based on the risk-vulnerability assessment information as part of existing disaster management plan at state and district level respectively.

### 2.2 Minimum Standards and Guidance for Sanitation and Hygiene Assessment:

1. 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
2. It is essential to understand local context 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.
3. The assessment should investigate the community coping mechanisms in the post disaster situation. The sanitation aid response should preferably be designed and build on these practices or shall strengthen them to ensure long term sustainability. The information may be collected through participatory methods in the field or by doing some focus group discussion (FGD).
4. **Acceptable facilities:** successful excreta disposal programmes are based on an understanding of peoples' varied needs and on the participation of the users in the use of facilities as people may not be accustomed to or may not find it easy or attractive to use. Design, construction and location of toilets must consider the preferences of the intended users.
5. **Children's faeces:** particular attention should be given to children's faeces, which are commonly more dangerous than those of adults. Parents need to be involved, and facilities should be designed and installed with children in mind.
6. **Anal cleansing:** water should be provided for people who use it. For other people it may be necessary to provide some sort of paper or other material for anal cleansing.
7. **Hand washing:** users should have the means to wash their hands after defecation, and should be encouraged to do so if necessary. This provides an important barrier to the spread of disease.
8. **Menstruation:** women and girls of reproductive age should have access to suitable materials for the absorption and disposal of menstrual blood. If these materials are to be provided by the agency, women should be consulted on what is appropriate. Where cloths are washed, dried and re-used, women should have access to a private place to do this in a hygienic way.
9. **Hygienic toilets:** if toilets are not kept clean they may be a focus for disease transmission and people will prefer not to use them. Cleaning and maintenance of all types of toilet should be addressed. Toilets are more likely to be kept clean if users have a sense of ownership. This is encouraged by having them close to where people sleep, avoiding large blocks, and involving users, where possible, in decisions about their design and construction.

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10. The checklist, methodologies and reporting formats for rapid and detailed assessment are attached as annexures.

## 3. Minimum standards for Hygiene and Sanitation

The term 'sanitation', refers to excreta disposal, vector control, solid waste management, health care waste management and waste water management.

**3.1 Excreta Disposal:** Safe disposal of human excreta creates the first barrier to excreta related disease, helping to reduce transmission through direct and indirect routes. Safe excreta disposal is therefore a major priority, and in most disaster situations should be addressed with speed to ensure that peoples have adequate numbers of toilets, sufficiently close to their dwellings, to allow them rapid, safe and acceptable access at all times of the day and night..

### **3.1.1 Defecation areas and shallow trench latrines:**

In the initial phase of a disaster, before any toilets can be constructed, it may be necessary to mark off an area to be used for defecation purposes. To discourage open defecation the appropriate number of shallow trench latrines should be constructed as soon as possible for first 72 hours of the disaster response.

### **3.1.2 Number of toilets:**

- If there are no existing toilets for the displaced population, Plans and efforts should be made to provide it one toilet per 20 people. A figure of one toilet for fifty people may be used initially but it should be reduced to 20 within 7 days of the, notification of the camp, especially if the people are going to live in camps for a longer time.
- Disaggregated population data should be used to plan the ratio of women's cubicles to men's (of approximately 3:1). Where possible urinals should be provided for men.

### **3.1.3 Design and Construction of toilets:**

- Users (especially women) should be consulted for siting and design of toilet. Appropriate design should be planned for ease of use by all sections of population including children, aged and people with disability.
- The toilets should be sited in such a way to minimise the threat to users especially women and girls throughout the day and night. Where ever possible the community toilets should be provided with lighting for nights or families should be provided with torches. The inputs of the community should be sought with regard to ways of enhancing the safety of users
- The toilets should be easy to clean and do not pose any health hazard. They should provide the degree of privacy in line with norms of the users.
- The facilities for women's sanitary disposal or providing women with the necessary privacy for washing and drying sanitary protection clothes should be planned.
- The toilet design should minimise fly and mosquito breeding.
- The constructed toilets that use water for flushing and/or hygiene should have an adequate storage and supply of water.
- Pit latrines and soakaways should be atleast 30 m from any surface water source and the bottom of any latrine should be at least 1.5 m above the water table.
- Drainage and spillage from defecation systems must not run towards surface water source or shallow ground water source.
- The hand washing facilities should be planned with the toilets
- The tools and materials required for construction, maintenance and and cleaning of toilets should be planned and provided to communities.

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### **3.1.4 Access, use and maintenance of toilets:**

- Systems for the proper regular cleaning and maintenance of the Toilet facilities should be established.
- In situations where the population has not traditionally used toilets, it may be necessary to conduct a concerted education/promotion campaign to encourage their use and to create a demand for more toilets to be constructed.
- The families should be consulted about the siting, design, the responsibility and the means to clean and maintain the Toilets. It is generally observed where one toilet is shared by four or five families, it is better kept, cleaner and regularly used.

### **3.1.5 Children's faeces:**

Particular attention should be given to the disposal of children's faeces, which are commonly more dangerous than those of adults, as the level of excreta-related infection among children is frequently higher and children lack antibodies. Parents or care givers need to be involved, and facilities should be designed with children in mind. It may be necessary to provide parents or care givers with information about safe disposal of infant faeces and nappy (diaper) laundering practices.

### **3.1.6 In Urban settings:**

Disasters in urban areas where the sewerage system is damaged may require solutions such as isolating parts of the system that still work (and re-routing pipes), installing portable toilets and using septic tanks and containment tanks that can be regularly desludged.

**3.2 Vector Control:** A vector is a disease-carrying agent and vector-borne diseases are a major cause of sickness and death in many disaster situations. Mosquitoes are the vector responsible for malaria transmission, which is one of the leading causes of morbidity and mortality. Mosquitoes also transmit other diseases, such as yellow fever and dengue haemorrhagic fever. Non-biting or synanthropic flies, such as the house fly, the blow fly and the flesh fly, play an important role in the transmission of diarrhoeal disease. Biting flies, bed bugs and fleas are a painful nuisance and in some cases transmit significant diseases such as murine typhus and plague. Ticks transmit relapsing fever and human body lice transmit typhus and relapsing fever. Rats and mice can transmit diseases such as leptospirosis and salmonellosis and can be hosts for other vectors e.g. fleas, which may transmit Lassa fever, plague and other infections.

Vector-borne diseases can be controlled through a variety of initiatives, including appropriate site selection and shelter provision, appropriate water supply, excreta disposal, solid waste management and drainage, the provision of health services (including community mobilisation and health promotion), the use of chemical controls, family and individual protection and the effective protection of food stores. Although the nature of vector-borne disease is often complex and addressing vector-related problems may demand specialist attention, there is much that can be done to help prevent the spread of such diseases with simple and effective measures, once the disease, its vector and their interaction with the population have been identified.

**Family and Individual Protection:** All disaster-affected people should have (or have access to) the knowledge and the means to protect themselves from disease and nuisance vectors that are likely to represent a significant risk to health or well-being.

**3.2.1 Defining vector-borne disease risk:** Decisions about vector control interventions should be based on an assessment of potential disease risk, as well as on clinical evidence of a vector-borne disease problem. Factors influencing this risk may include:

- Immunity status of the population, including previous exposure,
- Nutritional stress and other stresses. Movement of people (e.g. IDPs) from a non-endemic to an endemic area is a common cause of epidemics;
- Pathogen type and prevalence, in both vectors and humans;
- Vector species, behaviours and ecology;
- Vector numbers (season, breeding sites, etc.);

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- Increased exposure to vectors: proximity, settlement pattern, shelter type, existing individual protection and avoidance measures.

**3.2.2 Awareness:** All populations at risk from vector-borne disease should understand the modes of transmission and possible methods of prevention. People should be informed of health risks and should avoid entering water bodies where there is a known risk of contracting diseases such as schistosomiasis, Guinea worm or leptospirosis (transmitted by exposure to mammalian urine, especially that of rats. Agencies may need to work with the community to find alternative sources of water or ensure that water for all uses is appropriately treated.

**3.2.3 Appropriate Shelter:** All populations at risk should have access to shelters that do not harbour or encourage the growth of vector populations and are protected by appropriate vector control measures.

**3.2.4 Individual Malaria Protection:** People avoid exposure to mosquitoes during peak biting times by using all non-harmful means available to them. Special attention is paid to protection of high-risk groups such as pregnant and feeding mothers, babies, infants, older people and the sick people with treated mosquito nets use them effectively.

**3.2.5 Individual protection measures for other vectors:** Control of human body lice should be carried out where louse-borne typhus or relapsing fever is a threat. Good personal hygiene and regular washing and airing of clothes and bedding is the most effective protection against body lice. Infestations can be controlled by personal treatment (powdering), mass laundering or delousing campaigns and by treatment protocols as newly displaced people arrive in a settlement.

**3.2.6 Protection of Food:** Food should be protected at all times from contamination by vectors such as flies, insects and rodents.

**3.2.7 Monitoring Vector borne diseases:** Vector-borne disease incidence rates (from epidemiological data, community-based data and proxy indicators, depending on the response) and parasite counts (using rapid diagnostic kits or microscopy) should be monitored.

**Vector Control: Physical, environmental and chemical protection measures:** The numbers of disease vectors that pose a risk to people's health and nuisance vectors that pose a risk to people's well-being are kept to an acceptable level.

**3.2.8 Site selection:** Camps should be located 1-2km upwind from large breeding sites, such as swamps or lakes, whenever an additional clean water source can be provided.

**3.2.9 Environmental and chemical vector control:** Basic environmental engineering measures should be taken to reduce the opportunities for vector breeding. These include the proper disposal of human and animal excreta, proper disposal of refuse to control flies and rodents and drainage of standing water to control mosquitoes. Such priority environmental health measures will have some impact on the population density of some vectors. However, it may not be possible to have sufficient impact on all the breeding, feeding and resting sites within a settlement or near it, even in the longer term, so the localised chemical control measures or individual protection measures should be used. For example, space spraying may reduce the numbers of adult flies and prevent a diarrhoea epidemic, or may help to minimise the disease burden if employed during an epidemic.

**3.2.10 Intensive Vector control in high-density vector conditions with potential epidemic risks:** In such situations, the vector control programmes should aim 1) to reduce the vector population density; 2) to reduce the human-vector contact; and 3) to reduce the vector breeding sites. Control programmes may have no impact on disease if they target the wrong vector, use ineffective methods, or target the right vector in the wrong place or at the wrong time.

**3.2.11 Environmental mosquito control:** Environmental control aims primarily at eliminating mosquito breeding sites. The three main species of mosquitoes responsible for transmitting disease are *Culex* (filariasis), *Anopheles* (malaria and filariasis) and *Aedes* (yellow fever and dengue). *Culex* mosquitoes breed in stagnant water loaded with organic matter such as latrines, *Anopheles* in relatively unpolluted surface water such as puddles, slow-flowing streams and wells, and *Aedes* in water receptacles such as bottles, buckets, tyres, etc. Examples of environmental mosquito control include good drainage, properly functioning latrines, keeping lids on the squatting hole of DISSEMINATOR

latrines and on water containers, and keeping wells covered and/or treating them with a larvicide (e.g. for areas where dengue fever is endemic).

**3.2.12 Malaria treatment:** Malaria control strategies should aim to reduce the mosquito population density by eliminating breeding sites, reducing the mosquito daily survival rate and restricting the human biting habit. These should be carried out simultaneously with early diagnosis and treatment with effective anti-malarials in a sustainable manner.

**Chemical control safety measures:** Chemical vector control measures should be carried out in a manner that ensures that staff, the people affected by the disaster and the local environment are adequately protected, and avoids creating resistance to the substances used.

**3.2.13 Protection of Personnel:** Personnel are protected by the provision of training, protective clothing, use of bathing facilities, supervision and a restriction on the number of hours spent on handling chemicals.

**3.2.14 National and International Protocols:** The choice, quality, transport and storage of chemicals used for vector control, the application equipment and the disposal of the substances should follow the National and/or International norms (published by WHO), and should be accounted for at all times.

**3.2.15 Community Awareness:** Communities should be informed about the potential risks of the substances used in chemical vector control and about the schedule for application. They are protected during and after the application of poisons or pesticides, according to national and/or internationally agreed procedures (specified by WHO).

**3.3 Solid waste Management:** If organic solid waste is not disposed of, major risks are incurred of fly and rat breeding and surface water pollution. Uncollected and accumulating solid waste and the debris left after a natural disaster or conflict may also create a depressing and ugly environment, discouraging efforts to improve other aspects of environmental health. Solid waste often blocks drainage channels and leads to environmental health problems associated with stagnant and polluted surface water.

The people should have the means to dispose of their domestic waste conveniently and effectively and an environment acceptably uncontaminated by solid waste should be sustained in the relief camps.

**3.3.1 Refuse type and quantity:**

- The refuse in settlements should be assessed for its composition and quantity, according to the amount and type of economic activity, the staple foods consumed and local practices of recycling and/or waste disposal. The extent to which solid waste has an impact on people's health should be assessed and appropriate actions should be planned.
- Recycling of solid waste within the community should be encouraged, provided it presents no significant health risk. Distribution of commodities that produce a large amount of solid waste from packaging or processing on-site should be avoided.

**3.3.2 Disposal of waste:**

- Household waste should be put in containers daily for regular collection, burnt or buried in a specified refuse pit.
- All households should have access to a refuse container and/or are no more than 100 metres from a communal refuse pit.
- At least one 100-litre refuse container should be available per 10 families, where domestic refuse is not buried on-site.
- Refuse should be removed from the settlement before it becomes a nuisance or a health risk.
- If waste is to be buried on-site in either household or communal pits, it should be covered at least weekly with a thin layer of soil to prevent it attracting vectors such as flies and rodents and becoming their breeding ground.
- If children's faeces/nappies are being disposed of they should be covered with earth directly afterwards.

- Disposal sites should be fenced off to prevent accidents and access by children and animals; care should be taken to prevent any leachate contaminating the ground water.
- The public places, such as markets and slaughtering areas should have clearly marked and appropriately fenced refuse pits, bins or specified areas with a regular collection system in place.
- Appropriate measures should be ensured for disposal of waste from any slaughterhouse, to butchery. Slaughterhouse waste may need special treatment and special facilities to deal with the liquid wastes produced, and to ensure that slaughtering is carried out in hygienic conditions and in compliance with local laws. Slaughter waste can be disposed of in a large pit with a hole cover next to the abattoir. Blood, etc. can be run from the abattoir into the pit through a slab-covered channel (reducing fly access to the pit).
- Water should be made available for cleaning purposes.
- Final disposal of solid waste is carried out in such a place and in such a way as to avoid creating health and environmental problems for the local and affected populations.

### ***3.3.3 Participation of communities and staff welfare:***

- People from the affected population should be involved in the design and implementation of the solid waste programme. They should be made aware of the importance of solid waste disposal through a proper household and community hygiene promotion programme.
- All solid waste management staff who collect, transport or dispose of waste should be provided with protective clothing, at minimum gloves and ideally overalls, boots and protective masks. Water and soap should be available for their hand and face washing. Staff who comes into contact with medical waste should be informed of the correct methods of storage, transport and disposal and the risks associated with improper management of the waste.

**3.4 Drainage:** Surface water in or near emergency settlements may come from household and water point wastewater, leaking toilets and sewers, rainwater or rising floodwater. The main health risks associated with surface water are contamination of water supplies and the living environment, damage to toilets and dwellings, vector breeding and drowning. Rainwater and rising floodwaters can worsen the drainage situation in a settlement and further increase the risk of contamination. A proper drainage plan, addressing storm water drainage through site planning and wastewater disposal using small-scale, on-site drainage, should be implemented to reduce potential health risks to the population.

The risks posed by water erosion and standing water, including stormwater, floodwater, domestic wastewater and wastewater from medical facilities, should be minimised and a healthy and risk free environment should be preserved.

**3.4.1 Site selection and Planning:** Camp sites should be selected and planned in a manner to minimise the drainage problems:

- Shelters, paths and water and sanitation facilities should not get flooded or eroded by water.
- Drainage waters do not pollute existing surface or groundwater sources or cause erosion

**3.4.2 Assessment and classification of waste water:** The assessment exercise should analyse the waste water origins, threats and risks and classify the domestic waste water, storm water and sullage/sewage waste points. The waste water mixed with human excreta is classified as sewage. As sewage is difficult and more expensive to treat and dispose off, it should not be allowed to mix with domestic or storm waste water.

### ***3.4.3 Domestic Wastewater Drainage:***

- The areas around dwellings and water points should be kept free of standing wastewater, and stormwater drains should be clear.
- The domestic waste water from water points, washing and bathing areas should be utilised by creation of small gardens or kitchen gardens if any.

- The water should be safely drained and special attention should be paid to prevent washing and bathing areas waste water from contaminating water sources.
- If favourable soil conditions exist, drainage should be on-site rather than via open channels, which are difficult to maintain and often clog. Simple and cheap techniques such as soak pits can be used for on-site disposal of wastewater.
- Where off-site disposal is the only possibility, channels are preferable to pipes. Channels should be designed both to provide flow velocity to carry stormwater and other wastes. Where the slope is more than 5%, engineering techniques must be applied to prevent excessive erosion.

#### **3.4.4 Sewage Drainage:**

- Special care is needed to protect toilets and sewers from flooding in order to avoid structural damage and leakage.
- If there is an existing sewage system near the camp/settlement, attempt should be made to connect the toilets and sewage drainage with the system.
- Otherwise the sewage pits with design appropriate to the soil conditions should be planned.

#### **3.4.5 Participation of communities and Promotion:**

- The communities should essentially be involved in design, planning, construction and maintenance of the drainage systems. If they understand the potential health and physical risks involved and have participated in construction of drainage system, they are more likely to maintain it.
- The technical tools and support should be extended to communities for construction and maintenance purposes.

**3.5 Hygiene Promotion:** In the post disaster situation, the hygiene promotion is defined as the mix between the population's knowledge, practice and resources and the response program management or camp management's knowledge and resources, which together enable risky hygiene behaviours to be avoided. The three key factors important in achieving a good community hygiene in a post disaster situation are: 1) a mutual sharing of information and knowledge, 2) the mobilisation of communities and 3) the provision of essential materials and facilities.

Effective hygiene promotion relies on an exchange of information between the camp management and the affected community in order to identify key hygiene problems and to design, implement and monitor a programme to promote hygiene practices that will ensure the optimal use of facilities and the greatest impact on public health. Community mobilisation is especially pertinent during disasters as the emphasis must be on encouraging people to take action to protect their health and make good use of facilities and services provided, rather than on the dissemination of messages. It must be stressed that hygiene promotion should never be a substitute for good sanitation and water supplies, which are fundamental to good hygiene. Hygiene promotion is integral to all other essential services.

So, the Hygiene promotion should be based on the vulnerabilities, needs and preferences of the affected communities and the users should be involved in the management and maintenance of hygiene facilities wherever possible and appropriate.

#### **3.5.1 Assessment:**

- An initial assessment should be carried out to identify the key hygiene risks of public health importance and the hygiene behaviours to be addressed.
- Generally the key risks centres on excreta disposal, the use and maintenance of toilets, the lack of hand washing with soap or an alternative, the unhygienic collection and storage of water, and unhygienic food storage and preparation.
- The assessment should look at resources available to the population as well as local behaviours, knowledge and practices so that relevant and practical could be developed.

- It should pay special attention to the needs of vulnerable groups. If consultation with any group is not possible, this should be clearly stated in the assessment report and addressed as quickly as possible.

### **3.5.2 Sharing Responsibility:**

- The responsibility for hygiene practice lies primarily with all members of the affected population. The camp management should ensure that all actors responding to the disaster should share responsibilities and work to ensure that both knowledge and facilities for hygiene promotion are accessible to all sections of the affected communities.
- Hygiene Promotion programme should aim at the users taking responsibility for the management and maintenance of facilities as appropriate, and different groups contribute equitably.

### **3.5.3 Reaching all sections of the population:**

- All groups within the population should have equitable access to the resources or facilities needed to continue or achieve the hygiene practices that are promoted.
- Hygiene promotion messages and activities address key behaviours and misconceptions and are targeted for all user groups. Representatives from these groups participate in planning, training, implementation, monitoring and evaluation.
- Materials should be designed so that messages reach members of the population who are illiterate.
- As a rough guide, in a camp scenario there should be two hygiene promoters/community mobilisers per 1,000 members of the target population.
- For information on hygiene items, see Non-food items standard 2 on page 232.

### **3.5.4. Targeting priority hygiene risks and behaviours:**

- The objectives of hygiene promotion and communication strategies should be clearly defined and prioritised.
- The understanding gained through assessing hygiene risks, tasks and responsibilities of different groups should be used to plan and prioritise assistance, so that misconceptions (for example, how HIV/AIDS is transmitted) are addressed and information flow between camp management and the affected population is appropriate and targeted.

### **3.5.5. Management of Facilities:**

- Where possible, the committees made up of representatives from the various user groups (half of whose members are women) should be formed in a participatory way. The functions of these committees are to manage the communal facilities such as water points, public toilets and washing areas, be involved in hygiene promotion activities and also act as a mechanism for ensuring representation and promoting sustainability.

## Annexure – I

### **Assessment Checklist**

#### **Assessment Methodology Checklist**

**1. Should include the clear description of**

- The Goal and objectives
- Background and number of assessors
- Selection of key informants /sample population
- Composition of focus or other discussion groups
- Criteria for selection of informants / sample population
- Methodologies Tools and techniques: including PRA.
- Framework for analysis and
- Timeframe of the assessment

2. Be based on a qualitative approach, including review of secondary sources of quantitative information;

3. Involve local NGOs and community institutions as partners in the assessment process, unless inappropriate.

4. Employ an appropriate range of PRA tools and techniques which are applied in sequence to analyse and triangulate findings;

6. Involve a representative range of affected population groups;

7. Describe the limitations or practical constraints of the assessment;

8. Describe the coverage of the assessment, including its geographic spread, the range of water sources, supply mechanisms included and other relevant stratification of the population (e.g. gender, ethnicity, tribal group, etc.);

9. Include interviews with representatives of relevant government ministries and public services, traditional leaders, representatives of key civil society organisations (religious groups, local NGOs, advocacy or pressure groups, women's groups) and representatives of each of the groups under consideration.

#### **Assessment      Reporting Checklist**

**The assessment report findings should cover:**

1. The recent history of Hygiene and Sanitation and the relevant policies prior to the disaster situation;

2. A description of the different vulnerable groups and their situation prior to the disaster;

3. The impact of the disaster on the Hygiene and Sanitation system and access to different groups;

4. Suggested interventions.

5. Advocacy, awareness building and additional measures required;

7. The precise nature, purpose and duration of Hygiene and Sanitation Response if a response is considered appropriate.

### **Suggested questions for Hygiene and Sanitation Initial Assessment**

#### **1. Excreta disposal**

- What is the current defecation practice? If it is open defecation, is there a designated area? Is the area secure?
- What are current beliefs and practices, including gender-specific practices, concerning excreta disposal?

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- Are there any existing facilities? If so, are they used, are they sufficient and are they operating successfully? Can they be extended or adapted?
- Is the current defecation practice a threat to water supplies (surface or ground water) or living areas?
- Do people wash their hands after defecation and before food preparation and eating? Are soap or other cleansing materials available?
- Are people familiar with the construction and use of toilets?
- What local materials are available for constructing toilets?
- Are people prepared to use pit latrines, defecation fields, trenches, etc.?
- Is there sufficient space for defecation fields, pit latrines, toilets, etc.?
- What is the slope of the terrain?
- What is the level of the groundwater table?
- Are soil conditions suitable for on-site excreta disposal?
- Do current excreta disposal arrangements encourage vectors?
- Are there materials or water available for anal cleansing? How do people normally dispose of these materials?
- How do women manage issues related to menstruation? Are there appropriate materials or facilities available for this?

#### **4. Vector-borne disease**

- What are the vector-borne disease risks and how serious are these risks?
- What traditional beliefs and practices relate to vectors and vectorborne disease? Are any of these either useful or harmful?
- If vector-borne disease risks are high, do people at risk have access to individual protection?
- Is it possible to make changes to the local environment (by drainage, scrub clearance, excreta disposal, refuse disposal, etc.) to discourage vector breeding?
- Is it necessary to control vectors by chemical means? What programmes, regulations and resources exist for vector control and the use of chemicals?
- What information and safety precautions need to be provided to households?

#### **5 Solid waste disposal**

- Is solid waste a problem?
- How do people dispose of their waste? What type and quantity of solid waste is produced?
- Can solid waste be disposed of on-site, or does it need to be collected and disposed of off-site?
- What is the normal practice of solid waste disposal for the affected population? (compost/refuse pits? collection system? bins?)
- Are there medical facilities and activities producing waste? How is this being disposed of? Who is responsible?

#### **6 Drainage**

- Is there a drainage problem (e.g. flooding of dwellings or toilets, vector breeding sites, polluted water contaminating living areas or water supplies)?
- Is the soil prone to waterlogging?
- Do people have the means to protect their dwellings and toilets from local flooding?

**Planning Guidelines for Minimum Numbers of Toilets at Public Places and Institutions in Disaster Situations**

| Institution               | Short term                                       | Long term                                        |
|---------------------------|--------------------------------------------------|--------------------------------------------------|
| Market areas              | 1 toilet to 50 stalls                            | 1 toilet to 20 stalls                            |
| Hospitals/medical centres | 1 toilet to 20 beds or 50 out-patients           | 1 toilet to 10 beds or 20 out-patients           |
| Feeding centres           | 1 toilet to 50 adults<br>1 toilet to 20 children | 1 toilet to 20 adults<br>1 toilet to 10 children |
| Reception/transit centres | 1 toilet per 50 people<br>3:1 female to male     |                                                  |
| Schools                   | 1 toilet to 30 girls<br>1 toilet to 60 boys      | 1 toilet to 30 girls<br>1 toilet to 60 boys      |
| Offices                   |                                                  | 1 toilet to 20 staff                             |

Source: adapted from Harvey, Bagbri and Reed (2002)

### **Scenario of a relief camp on embankments**

Approximately 12,000 poor and backward families took shelter on a road cum embankment, cramped in less than 13km stretch with over 4000 livestock animals. They are from surrounding villages that were inundated by floodwater and from the villages washed away by erosion & embankment breach. People are living in makeshift huts made out of sticks and plastic sheeting on both sides of the road leaving a meter width of narrow alley in the middle. Local govt declared this as a relief camp. According to meteorological department, another spell of rain is imminent within next two weeks, which will only prolong peoples suffering. During the daytime men return to their village to secure assets and property and also to collect fodder for cows, while the women and children stay at the displaced camp, spending most of the time in queues for relief and water distribution. A number of local groups and civil societies are providing dry foods and district authority provided a health camp and 3 days food ration. More than 50 people died by drowning and snake bites. Diarrhoea incidents are increasing among children. Local government prioritizes relief needs around food, shelter, medical and water.

### **Water**

Panchayet/PHED installed 4 nos of very shallow (<20') temporary tube-wells along the road a km apart, people complains of water from these TW's are smelly and its quality is questioned as it draws water very close to the surface. Families those who have small boat/canoe travel far to get water from a raised tube-well or the one accentuated from flood water in village. It was clear that people are aware of risks associated with poor drinking water and try to collect from a safe source but unhygienic conditions and some risky health behaviour means there are concerns about water quality at household level. People are using floodwater for other than drinking water purposes. PHED/Panchayet also distributed halogen tablets (chlorine base), it has been observed that people are not using it.

### **Sanitation & solid waste**

Sanitation situation is worsening as cow-dung and human faces are strewn all over the place. The standing floodwater adjacent to the road embankment is covered by a blanket of floating excreta and rubbish, making the camp environment extremely unhygienic. Women defecate by dipping in to water or use behind hut in dark, as there is no privacy in the over crowded space. Some minorities arranged privacy screen by using cloths and bed-sheets behind or beside their huts and used as open latrine. From a FGD, women expressed their severe mental and physical discomfort and dignity problem around privacy related to defecation and other private acts. It was also revealed that some women and elderly persons defecate inside the hut to dispose later in to water. Children defecate indiscriminately. Digging hole on the road/embankment is not permitted, therefore pre-cast ring slabs brought by a local NGOs are not being used.

### **Personal Hygiene**

The struggle for getting drinking water and finding appropriate places to defecate took preference over personal hygiene. Many had fled without any personal belongings and household items including water container and utensils. Some had fled with only the clothes they wore and hence refrained from bathing for several days for lack of a change of clothes. Women in menstruation experienced great difficulty. Food was kept uncovered due to non-availability of required utensils. Food once cooked was eaten over extended periods by members of the family from the same utensil throughout the day until the food lasted. Flood water used to prepare food and cleaning purpose. Open defecation is commonly seen, as agricultural land and orchards (normal place for adult defecation) are still flooded. Minor skin diseases have also been observed in children, however children seem to be well animated, alert and no signs of acute malnutrition has been noted. Many of the children look to be on the small side for their age, hinting stunting resulting from chronic malnutrition.

## **Flood scenario West Bengal; Access to potable Water**

In response to the floods a task force has been set up at sub national level led by Government, with representatives of Public health engineering department, the department of health, NGOs, and the national Red Cross Society. The urgency of the situation this year and the scale of the situation which is much worse than in many years in living memory is calling for a collective approach to deal with the situation. As a group of engineers, health specialists and hygiene experts you are asked to develop an action plan and report back to the overall Government coordination mechanisms.

This task force has been asked to **focus on 12,000** or so **people** displaced into shelters /relief camps (out of 400,000 in shelters). Specifically you are tasked with dealing with the populations displaced to the relief camps/centres/areas and by 15.30 you must present a plan to a coordination meeting which chooses **just one** method, that all agencies will adopt, of enabling potable water to be made available to the affected families, i.e. HWTS (as opposed to bulk water supply and delivery by truck).

The options that are available to you in this situation are;

- Candle/ceramic filters
- Locally purchased chlorine bleach products and alum
- Pre packed imported sachets of combined coagulant and disinfectant, e.g. PUR
- Fuelwood supply for boiling options
- Bottled/pouched water

Your task is to rank the major common Household water treatment options according to the following criteria

Criteria

- Cost of treatment technology purchase
  - Treatment effectiveness (reduction pathogens)
  - Ease of use
  - Transportation costs and feasibility
  - Community familiarity/acceptance
  - Availability in local market place
  - Sustainability over 1 year
- 
- Provide approximate costs for this solution per person per day for the 12,000 people affected.

## **Flood scenario West Bengal;**

### **Excreta disposal**

In response to the floods a task force has been set up at sub national level led by Government, with representatives of Public health engineering department, the department of health, NGOs, and the national Red Cross Society. The urgency of the situation this year and the scale of the situation which is much worse than in many years in living memory is calling for a collective approach to deal with the situation. As a group of engineers, health specialists and hygiene experts you are asked to develop an action plan and report back to the overall Government coordination mechanisms.

This task force has been asked to **focus on 12,000** or so **people** displaced into shelters /relief camps (out of 400,000 in shelters). Specifically you are tasked with dealing with the populations displaced to the relief camps/centres/areas and by 16.45 you must present a plan to a coordination meeting which;

- Provide an overview analysis of the **excreta disposal** situation
- Build an understanding of the community profile
- Choice of intervention/ design of **excreta disposal** facilities
- Design with sketches showing choice of materials, prepare budget.
- Establish plan for purchase and transportation of materials

In your solutions you must demonstrate how you can address needs of all 12,000 people.

## Flood scenario West Bengal;

### Excreta disposal group work

Each participant to rank each of the group work options presented – do this on your own, i.e. not as groups. Scores for each option will be added up and a total calculated to determine which option is considered to be the best all round choice.

|                                                                    |                                           |
|--------------------------------------------------------------------|-------------------------------------------|
| <b>Group 1 Disposal system chosen:</b>                             | <b>1=poor<br/>2=acceptable<br/>3=good</b> |
| <b>Selection criteria</b>                                          |                                           |
| cost to construct and operate the excreta system                   |                                           |
| feasibility to construct in a timely manner and operate the system |                                           |
| whether excreta is safely disposed of/contained                    |                                           |
| whether permission will be granted to build it                     |                                           |
| whether it provides privacy and dignity, especially for women      |                                           |
| <b>Total score</b>                                                 |                                           |

|                                                                    |                                           |
|--------------------------------------------------------------------|-------------------------------------------|
| <b>Group 2 Disposal system chosen:</b>                             | <b>1=poor<br/>2=acceptable<br/>3=good</b> |
| <b>Selection criteria</b>                                          |                                           |
| cost to construct and operate the excreta system                   |                                           |
| feasibility to construct in a timely manner and operate the system |                                           |
| whether excreta is safely disposed of/contained                    |                                           |
| whether permission will be granted to build it                     |                                           |
| whether it provides privacy and dignity, especially for women      |                                           |
| <b>Total score</b>                                                 |                                           |

|                                                                    |                                           |
|--------------------------------------------------------------------|-------------------------------------------|
| <b>Group 3 Disposal system chosen:</b>                             | <b>1=poor<br/>2=acceptable<br/>3=good</b> |
| <b>Selection criteria</b>                                          |                                           |
| cost to construct and operate the excreta system                   |                                           |
| feasibility to construct in a timely manner and operate the system |                                           |
| whether excreta is safely disposed of/contained                    |                                           |
| whether permission will be granted to build it                     |                                           |
| whether it provides privacy and dignity, especially for women      |                                           |
| <b>Total score</b>                                                 |                                           |

|                                                                    |                                           |
|--------------------------------------------------------------------|-------------------------------------------|
| <b>Group 4 Disposal system chosen:</b>                             | <b>1=poor<br/>2=acceptable<br/>3=good</b> |
| <b>Selection criteria</b>                                          |                                           |
| cost to construct and operate the excreta system                   |                                           |
| feasibility to construct in a timely manner and operate the system |                                           |
| whether excreta is safely disposed of/contained                    |                                           |
| whether permission will be granted to build it                     |                                           |
| whether it provides privacy and dignity, especially for women      |                                           |
| <b>Total score</b>                                                 |                                           |

|                                                                    |                                           |
|--------------------------------------------------------------------|-------------------------------------------|
| <b>Group 5 Disposal system chosen:</b>                             | <b>1=poor<br/>2=acceptable<br/>3=good</b> |
| <b>Selection criteria</b>                                          |                                           |
| cost to construct and operate the excreta system                   |                                           |
| feasibility to construct in a timely manner and operate the system |                                           |
| whether excreta is safely disposed of/contained                    |                                           |
| whether permission will be granted to build it                     |                                           |
| whether it provides privacy and dignity, especially for women      |                                           |

# BUJUMBURA CASE STUDY

Oxfam GB implemented an emergency public health project for displaced people in Bujumbura Rural Province in northwestern Burundi. The project sought a reduction in diarrhoeal and vector-borne diseases through two integrated components: technical improvement such as water point rehabilitation, production of portable latrines slabs ("san-plats"), and residual spraying; and health promotion activities organised and carried out through volunteer committees.

## **Establishing The Committees**

The process of setting up committees followed several steps:

- meetings with commune administrators to present the project;
- meetings with the administrator's representatives and community elders in each site to present the idea of the committees;
- meetings with prospective committee members to discuss the kind of work they would be doing, the voluntary nature of the work, and the issues we would be addressing.

In recruiting committee members, we aimed to have each site represented by at least one man and one woman; we also hoped to find people who were dynamic, respected by the community, and interested in public health issues. A capacity inventory was carried out to learn about skills and preferences among committee members regarding different aspects of health promotion.

Additionally one man and one woman for every 100 households was identified and trained to be community animator. These were energetic men and women who could organise action to address public health issues and who would support the committee volunteers in implementing health promotion and community mobilisation activities.

Originally, the animators were conceived of as a group separate from the more management-orientated committee members. As time went by however, the distinction between committee members and animators became irrelevant: everyone participated in decision making as well as promotion activities.

The idea behind Oxfam's work with committee members and animators was that:

- working with natural helpers, i.e., community members whom others consult for advice and who are already involved in helping their community develop as apart of their everyday life, would be more effective than working on our own;
- focusing on action that the community could take to improve public health would be more effective than increasing knowledge about public health risks.

This led to a standard way of operating: first to discuss and analyse a public health problem, such as diarrhoea, where all participants, including the Oxfam Public Health promotion staff, could share knowledge and correct misconceptions. Then to plan what action(s) could address the problem, such as digging latrine pits and installing sanplats, as well as planning the promotion of these activities that would have to take place in the community. Finally to review the activities carried out by the committee and the community, resolving problems, and celebrating successes. Thus learning took place through doing, and discussions always had a practical objective in mind.

This approach seemed to work well: the committee members and the animators felt respected and included in the process. One valuable aspect of the approach was respecting the voluntary nature of their time and work: I felt that we did not overburden them with demands, and they responded by working hard in the small amount of time they did have. The group dynamics within the committees was frequently monitored and adjustments when needed. The Oxfam office staff found ways to recognise their accomplishments by giving committee members gifts such as t-shirts (with the phrase "Working Together for Hygiene" on them), cooking pots, hoes, and seeds. The voluntary nature of the committees proved to be sustainable over the ten months of the project. However, the gifts given by Oxfam were crucial to maintaining their commitment, so it could be seen that we were paying the committees in some way.

The Ministry of Health (MOH) has a theoretical structure of health promoters and community health workers in each commune, and the committees should have been linked to that structure. However, we discovered that the structure did not exist to any great extent, and it was more important to establish the committees and begin addressing urgent public health issues in the camps.

### **Activities:**

Diarrhoeal diseases were the most prevalent health problem in the camps, and there were a fairly wide range of conditions that could foster their transmission; thus, action to prevent and treat diarrhoea made up most of our promotion efforts. Over the course of the project the committee members and animators:

- Developed and presented a marionette show, sketches, songs, and dances related to general hygiene issues. Everyone involved quickly embraced the use of creative promotion techniques, which made the whole project much more interesting and fun. However, we did not do a very good job of documenting the use of these techniques.
- Created lists of all the households in the camp to organise distributions. Doing this and carrying out the distributions proved to be a relatively easy and empowering task that helped establish trust and credibility. However there was a danger that it would create a parallel bureaucracy in the committees.
- Introduced and distributed 2,000 sanplats, and promoted their correct installation and use. In most sites, the sanplats were properly installed and maintained, and all were

carried back and reinstalled when people went home. The weakest point was the use of lids, which appeared spotty at best.

- Organized varied health promotion activities at primary schools. Used a set of drawings showing different hygiene conditions and asked students to sort them into safe or dangerous categories and then discussed the results. Songs and sketches were created and performed by the students.
- Female committee members volunteered for an oral rehydration project, where they received training at their closest health centre and distributed ORS donated by NGOs on an emergency basis. The ORS activity was an exciting initiative as it created direct links between the committees and the existing health care structure, but it will require a lot of attention to make sure that the health centres continue giving the donated ORS to the women.

Distributed Hygiene-related non-food items including water containers, soap and chamber pots. Overall, the water containers were appropriate, but the extent to which they were properly used is not clear. The soap was a very welcome item, although we had to specifically ask people to reserve one piece per household for hand washing as most was used for washing clothes. The chamber pots were not appropriate at all: most seemed to have been sold or were not being used

**Situation Report No. 1**  
**Flood Update –West Bengal; 09:00 hrs; 23<sup>rd</sup> June 2008**

**Highlights**

|                                  |                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>District –</b>                | West & East Medinipur                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Number of Block affected</b>  | – 17 out of total 29 blocks of West Medinipur and 15 out of total 25 blocks of East Medinipur                                                                                                                                                                                                                                                                                          |
| <b>Municipalities affected:</b>  | Eight                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Total villages affected:</b>  | 7810                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Gram Panchayats affected</b>  | – 243 GPs (80% of the 304 GPs) of the affected 32 blocks                                                                                                                                                                                                                                                                                                                               |
| <b>Severely affected blocks:</b> | Pingla, Sabang, Narayangarh (WM) and Mugberia, Bhagawanpur-I and II , Patashpur I-& II, Egra (EM)                                                                                                                                                                                                                                                                                      |
| <b>Total Affected Population</b> | – 2.70 million (approx)                                                                                                                                                                                                                                                                                                                                                                |
| <b>Deaths:</b>                   | 27 persons                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Relief camps:</b>             | 1136, approximately 400,000 persons are in relief camps shelters                                                                                                                                                                                                                                                                                                                       |
| <b>Rescue operation:</b>         | 47 boats in operation to rescue and provide relief material                                                                                                                                                                                                                                                                                                                            |
| <b>Funds allocation:</b>         | Rs. 17 crores (\$3.97 million) by GoWB                                                                                                                                                                                                                                                                                                                                                 |
| <b>Crop damage:</b>              | 93,400 hectares of agriculture land under water, 60-70% crops damaged                                                                                                                                                                                                                                                                                                                  |
| <b>House damage:</b>             | 16,000 houses fully collapsed, over 22,000 partly collapsed                                                                                                                                                                                                                                                                                                                            |
| <b>Government supplies:</b>      | Safe water pouch 155,000, Halogen tablets 1 million, ORS packets 40,000 and 123 bags of bleaching powder. 225 medical teams are deployed, 5 MT food packets. Supplies in pipeline are 500 MT of rice, 55 thousand Tarpaulin and 100,000 safe water pouch everyday                                                                                                                      |
| <b>Other support:</b>            | Through RKM network, 50,000 halogen tablets, 12,000 ORS packets, 5 MT bleaching powder, 2000 Jeri canes for water storage, 1500 family hygiene kits and 30,000 water purifiers were provided. Around 300 volunteers from 14 cluster organizations are working in relief operations. Multi sectoral team to undertake rapid assessment from 23-25 June 08 to facilitate future response |

**Current situation and assessment**

**Overall**

Due to incessant rains wherein the total precipitation was 750-1000 mm in three days that was more than half the annual rainfall (i.e. 1500 mm) of the region followed by heavy release of water from dams resulted in severe flooding in large parts of West and East Medinipur. There has been severe flooding in both districts affecting more than 2.7 million people (by 21.06.08; numbers may increase) and severely limiting transport (rail and road). Even NH 7 considered to be all weather roads was over flowing. The rivers having water above danger level are Chandika, Suwarnrekha and Keleghai. Last 24 hours rains has stopped and water has started receding. The summary of the response from the government is as under:

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- Rescue operation was very well organized in time by state Government where local community also actively contributed. Army and air force were deployed that actively supported civil administration in relief and rescue operation including dropping of food. This has saved many lives in affected areas.
- The quantity of food, water and tarpaulin is reaching to people however it is inadequate. This may result in resentment among people.
- After the recent elections PRIs are in transition phase, the response from PRI is not to its full potential. RKMLP is actively engaged in the relief operation through their strong cluster organization and field volunteers. While over 42 boats are in operation, communication and movement is restricted and require additional boats for timely relief and medical team to reach the inaccessible pockets. These boats would also be helpful for inaccessible communities to access markets.

### **Food and Nutrition**

Acute demand of food visible and people are very vocal about it. Immediate requirement is of dry food but many families had facilities to cook food. Block and Panchayat official stated requirement of cooked food, RKM is providing cooked food and also from some local clubs. People have been found engaged in fishing and most of the households are cooking fish. Food or especially livelihood (poor, vulnerable families) would be a need in near future, as people could not carry adequate food stocks with them. Some families do not have fuel for cooking. For them ready to eat food will be very helpful.

### **Water Supply**

Government is providing water pouch however availability of safe water is inadequate. People are using flood water in some places for cooking, with time this situation may become worse. Few TW were raised earlier and these are being used now for drinking. People are carrying water using temporary boats. Presently people are traveling 2-3 km on temporary raft or foot to carry water limiting the per capita quantity to 5-10 liter. In terms of water the following interventions required:

- TW disinfection needs to be initiated , the best part is that panchayat is aware of it and knows the technical aspect, however bleaching powder supply is limited. RKM network has initiated disinfection with UNICEF support in their operational areas.
- People lack water storage containers; closed lid water storage containers would be helpful. In the present context where people have to carry water long distances, improper water handling can contaminate the water.
- Household water treatment is a need in immediate effect, the good part is panchayat and many people are aware of Halogen use, some people were even given Halogen tablets but numbers inadequate.
- Some households are also using floodwater for cooking in such instance they should also be provided with ferric Alum and Halogen. Ferric alum will help to coagulate before disinfection by Halogen tablet; disinfection doesn't work well in turbid water. Some message dissemination also needs to be done. UNICEF supplied PUR is working well in RKM supported areas and the block authorities have demanded for more sachets.

### **Sanitation & Hygiene**

The affected areas have some latrine coverage, thereby those women and girls have practice of latrine usage and finding open defecation very difficult. The number of latrine available in school

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is grossly inadequate 2 toilets for 400 people (it will take 20 hrs if each member defecates once a day for 3 min). Some people have constructed temporary hanging toilets in camps. While temporary toilets are highly required with adequate water supply for hygiene, the safe excreta disposal requires attention. Other aspects of sanitation are:

- More toilets would be required especially in camps with adequate water supply and sanitary protection to avoid contamination of water sources.
- People have practice of hand washing after defecation; soap supply would be helpful. Some message dissemination of hand washing before eating and cooking would be beneficial.
- Once the water recedes, reviving or reconstruction of the broken toilets in their household would be a uphill task and would need immediate attention of planning and simultaneous resource mobilization. **This is critical at this juncture when district has claimed for Nirmal District award under TSC. Who pays for the BPL families that has already contributed their share for the household toilet and the TSC programme has also paid the subsidy.**
- Due to change in environmental situation there is an increased instance of mosquito bites, impregnated bed nets would be helpful.

### **Shelter**

There has been widespread damage in terms of houses especially the katcha houses. Most houses have CGI sheet, straw, clay tiles as roof and mud walls and mud floor; the roof is still intact for some houses with the walls and floors damaged. Government is providing tarpaulin for shelter however in view of the requirement, the following intervention would be required:

- Tarpaulin sheet would be helpful in situation of future flooding. It would also be useful for households who have to prolong their stay in camps, as return to houses would be difficult especially in cases of crumpled houses.
- The biggest challenge is house reconstruction especially the wet floor (muddy floor) that would take considerable time to dry. This is a major health risk for children. Muddy floor also raises various issues related to hygiene.
- Impregnated bed net with some bedding material (bed sheet, blanket and mattress) would be helpful for household who have lost their bedding material
- For families who have an extended stay in camps proper camp orientation needs to be organized, like facilitation of toilets, solid waste, access to health care and drainage. Households are in fear of being evicted from camps and nowhere to go, as their houses are broken; this needs advocacy with local government institutions.
- Some community malaria control intervention would be helpful, especially keeping in note, prolonged water logging in low lands.

**Summary:** Where water is receding that will improve access to the difficult areas. The ongoing multi sector assessment will facilitate assessment of situation and developing response plan. More resources may need to be mobilized to respond the emergency. District administration is willing and open for external support however, state has reservation in formally requesting for supplies. An organisation has prepared the ready to print artwork in Bangla to facilitate developing IEC material for community awareness on floods. After replication, it will be used through RKMLP network.

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## **Situation Report No. 2 Flood Update –West Bengal**

### **Highlights**

|                                              |                                                                                                         |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>District –</b>                            | West & East Medinipur                                                                                   |
| <b>Number of Block affected</b><br>15 out of | – 17 out of total 29 blocks of West Medinipur and<br>total 25 blocks of East Medinipur                  |
| <b>Municipalities affected:</b>              | ten                                                                                                     |
| <b>Total villages affected:</b>              | 1132                                                                                                    |
| <b>Severely affected blocks:</b>             | Pingla, Sabang, Narayangarh (WM) and Mugberia,<br>Bhagawanpur-I and II , Patashpur I-& II,<br>Egra (EM) |
| <b>Total Affected Population</b>             | – 2.90 million (approx)                                                                                 |
| <b>Deaths:</b>                               | 36 persons                                                                                              |
| <b>Relief camps:</b>                         | 1070, approximately 375,000 persons are in<br>shelters                                                  |

### **Current situation and assessment**

Relief camps have been in existence for some time now and interventions to improve conditions have been limited and ad hoc. Many areas remain inaccessible due to flood water. The met department has reported further heavy rain in the next two weeks and water levels of rivers upstream are now above critical level. The state government has called for analysis of the situation over the coming few weeks based upon the available information. There is agreement that the situation will remain critical for several more weeks and that most of the population currently in relief camps will remain in shelters for perhaps another 4-6 weeks, if not more.

### **Situation Report No. 3 Flood Update –West Bengal**

#### **Highlights**

|                                              |                                                                                                         |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>District –</b>                            | West & East Medinipur                                                                                   |
| <b>Number of Block affected</b><br>15 out of | – 17 out of total 29 blocks of West Medinipur and<br>total 25 blocks of East Medinipur                  |
| <b>Municipalities affected:</b>              | ten                                                                                                     |
| <b>Total villages affected:</b>              | 1132                                                                                                    |
| <b>Severely affected blocks:</b>             | Pingla, Sabang, Narayangarh (WM) and Mugberia,<br>Bhagawanpur-I and II , Patashpur I-& II,<br>Egra (EM) |
| <b>Total Affected Population</b>             | – 2.90 million (approx)                                                                                 |
| <b>Deaths:</b>                               | 36 persons                                                                                              |
| <b>Relief camps:</b>                         | 1070, approximately 375,000 persons are in<br>shelters                                                  |

#### **Current situation and assessment**

The health department are now reporting break out of watery diarrhoea in many locations in the relief camps. Data collected from health outposts/centres across the area reveal a pattern of diarrhoea. There are reports of bloody diarrhoea in a few locations, though this has not yet been confirmed. Public health inspectors have been reporting that relief camps are in very poor condition this year, in their analysis due to the high floods levels and extent of displacement. This has yet many more people than normal to be displaced into relief camps and has led to overcrowding. Of course the absence of anything other than make shift shelters for latrines is not encouraging a sanitary environment. Large numbers of animals living adjacent and within the camps has also contributed to the in sanitary situations. The chief medical officer is demanding urgent action to address the problem, forecasting that "deaths from diarrhoea will start to occur unless urgent action is taken"

| Team task                                                                                                                                                                                    | Session materials to be prepared                                                                                                                   | Point at which information will be provided (in mins from start sessions) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 1) Read sitrep/scenario brief                                                                                                                                                                | Sitrep 1 scenario brief                                                                                                                            | 0 (at start)                                                              |
| 2) Read specific scenario briefing paper. Gain an overview analysis of the sanitary situation                                                                                                | Scenarios for displaced to embankments and to schools                                                                                              | 0                                                                         |
| 3) Get shared understanding of the task                                                                                                                                                      | Task brief                                                                                                                                         | 0                                                                         |
| 4) Gain an understanding of the profile of the community (to establish what preferences and needs they may have)                                                                             | A paper briefing of the community and its profile will be provided. A member of the training team will play the part of a community representative | 15                                                                        |
| 5) Location survey (to inspect physical area to see what solutions maybe feasible)                                                                                                           | Either this will be a walk around a marked area or diagrams will be provided                                                                       | 15                                                                        |
| 6) Choice of intervention/ design of sanitary facilities (to make outline choice about excreta disposal/containment system to be adopted)                                                    | Sitrep 2. Provide an update on the sitrep which shows flooding situation worsened and some people likely to remain displaced for longer            | 30                                                                        |
| 7) Design with sketches showing choice of materials, prepare budget. Explain how facilities would be provided, e.g. by distribution materials to communities, contractors to build, NGOs etc | Provide either samples of materials, pictures and sheet with typical material costs.                                                               | 30                                                                        |
| 8) Establish plan for purchase and transportation of materials                                                                                                                               | Provide message from Gov/UNICEF/NRCS procurement depts about lead time and transport costs materials                                               | 45                                                                        |
| 9) Develop plan for maintenance and closure (if appropriate of facilities)                                                                                                                   | Environment memo; Provide lessons learnt from previous floods about toilets                                                                        | 60                                                                        |
| 10) Respond to changed circumstance                                                                                                                                                          | Sit rep 3 with information about diarrhoea outbreak                                                                                                | 75                                                                        |

The community leader says (prior to floods), "We are a large growing population. About 41% pf the population is Muslim while Hindus are 55% & others 4%. We face widespread poverty, political instability, poor governance, and frequent natural disasters like floods. These very often affect the livelihoods of the millions of poor and marginal people. Many people are landless and forced to live on and cultivate flood-prone land. Associated problems include water-borne diseases, water pollution (especially of fishing areas resulting from use of commercial pesticides), ground water contaminated by naturally occurring arsenic, intermittent water shortages due to falling water tables, soil degradation and erosion, deforestation, and severe overpopulation.

We normally access water through open wells, only about 15% of which are fitted with hand pumps. Latrine usage in normal times is low with only about 25% of people cwning a latrine in rural areas. The remaining 75% simply resort to open defecation. In most communities, people tend to use leaves for anal cleansing. Young children do not usually use latrines as they find them too dark and usually defecate in the open even if the family has a latrine."

(After the floods) the community leader says:

- There are around 30% adult males, 25% females and remaining are children in the groups of displaced people who are presently in this relief camp.
- The wells are now flooded and contaminated. Reports of bodies and livestock being found in wells are increasing.
- Now there are very few dry areas for either defecation or construction of latrines, so people are simply defecating in the floodwaters.
- We have nothing. We fled with some food initially, but we have eaten everything we had.
- There is no security here. Two of our women were attacked when they went to the toilet at night.
- Worst-off group are the women without men or older children. They have to do everything for themselves.
- We cannot get help at the hospital as we cannot pay the charges.

## **1.6 Implementation; Coordinating our response, the cluster approach- Case study**

### **Part 1**

The Asian country of DIANICH has significant numbers of people that live in flood prone river basin areas. Each year hundreds of thousands, sometimes millions of people are affected by floods.

The country has a fairly strong government at central level, though the sheer size of the country means the reach of government services to the sub national level (district) is limited. Civil society is active in the country with many NGOs, CBOs and other organisations working at sub national level. All civil society agencies are registered with the Government either centrally or at the next government administration level down. However while the broad activities of these organisations are sometimes known to Gov officials working at the sub national level, all too often the details of what these organisations do where and when is simply not available. On the other hand the working of the government, the relationship between key Government ministries, the extent of their resources and activities is unknown to the civil society organisations. There is a national disaster management plan at the national level, which gives power to central government to take over leadership during major crisis. Within this, the military is understood to be given a role in coordination during major crisis or events which are deemed to threaten national stability or security. There are a good number of major international organisations present in the country and operating right across the country in different districts. At times of major crisis in the recent past (major floods 5 years ago and major earthquake 8 years ago) these agencies have been active in bringing in significant assistance, both material and human resources and welcomed both by central Government and by affected populations at the district level.

This year flooding is significant as it has been raining steadily since the start of the monsoon season, 2 months ago. However in the last 9 days torrential rain has meant that rivers that had been running very full, have now burst their banks and rapid surges of water and inundation is now occurring. The metrological organisation predicts that rain will continue heavily for some more weeks, so is predicting continued flooding and standing water over large areas of land. Some cities are flooding around the edges, as well as large areas of rural land. The Government has called a national emergency and asked the army to play a role in rescue operations. It is reported that the army is also supplying water to some locations where people are displaced and setting up facilities for those people who may be displaced for some time. The health ministry is reporting diarrhoea outbreaks in some locations and as part of its response is mobilising its health outreach workers to deliver chlorine tablets and ORS so affected people can treat their own water. For those towns affected the water supply companies and municipality are reportedly trucking water supplies to those that have had their wells flooded and have no access to water supply. The water resources ministry, which is responsible for provision of water and sanitation to rural areas, is now working with ministry of roads and transport to provide assistance to the tens of thousands of people now displaced to road embankments and higher areas of ground. National NGOs, with support from their international NGO funding partners are now mounting assessments in the affected areas. Proposals have been submitted with a range of different solutions for different groups. Some are proposing distribution of candle/ceramic water filters. One international organisation has an ongoing partnership with a company that provides sachets of combined coagulant and disinfectant and is now embarking upon a major distribution, along with water containers.

## **Part 2**

The military has now set up a coordination cell in the most seriously affected area. It is now taking control of many. Government inputs to assist the affected flood populations. Its focus is on food, shelter material, water supplies and search and rescue operations. Those people on high areas of ground and embankments are now being provided facilities in camps. Army helicopter flights, with journalists on board over the affected reveal that there are many small groups of population that are receiving no assistance what so ever, while groups on embankments are getting assistance from Gov, the UN and NGOs. The journalist is reporting an absence of any overall picture/pattern of assessments, but rather a series of disconnected interventions based upon isolated assessment. Some NGOs are working to coordinate their activities with Gov public health and engineering departments in rural areas. However in towns and areas of major concentrations of people it seems as if the military or the town authority and/or the water supply authority are the ones in charge. One NGO is reported as saying that the ministry of health is in charge of sanitation programmes for the affected population, but this is unclear and unconfirmed. What is clear is that there is little activity on sanitation for those displaced with the only latrines being provided by people's own initiatives.

## **Part 3**

Some three weeks after the major surge of water, movements of people appear to have stopped and many thousands of people are facing the prospect of some more weeks remaining in schools, on road embankments and on other high areas of ground. Some WASH coordination meetings have occurred and there appears to be a chair for these meetings. In one location the chair is from the army, in a major town location it is the deputy engineer, a third location someone from UNICEF is leading efforts, while in another location with a strong ministry of health, a local doctor with a strong interest in public health is overseeing/coordinating distributions of chlorine tablets and organising the construction of latrines. Journalists in the affected areas have been reporting that organisations have been active in putting up signs indicating they are undertaking activities but have not done very much. Interviews with affected people report numerous visits from organisations, without knowing who they are, all of which say they will do something but most don't. The coordinators in the affected areas are reporting similar things, promises being made but being unfulfilled. Some areas are still reportedly not receiving any assistance and in the last days Department of health officials have limited data to suggest that diarrhoea is 5-7 times higher than others areas. The UNICEF coordinator in one area is being asked to provide information to report back on activities of all organisations involved in any WASH activities. However she is facing enormous problems in doing so and has explained to her superior the reason for this; assessment and activity reports are not shared unless there is a funding obligation to do so, agencies have not set up monitoring and reporting mechanisms, agencies who do not work as partners of UNICEF will not share information with anyone else. Information from Gov is simply not made available. Her superior asked if she is aware of whether there is sufficient capacity and particularly funding resources to cover all the needs but she is unable to answer that question. It appears as if major funding has come from international sources to the Gov of DIANICH and major international organisations have brought in many new resources which are being made available to national NGOs. The IFRC has an active national Red Cross/Crescent Society working in country and with major appeals successfully raising money they are undertaking many activities but these are unknown to the UNICEF WASH lead. Her conclusion is that while there are many unmet needs, most organisation work fairly independently, it is very hard to get an overall funding picture and many promises are made but without the follow up.