16. Human resources

Professional staff and community-based volunteers are required for health-related aspects of disaster management. In each phase of the emergency-management cycle different skills are required for a range of activities, from monitoring and surveillance, through prevention and mitigation, to relief and recovery. Training is essential to ensure that professional staff and volunteers have the skills and awareness necessary for pre- and post-disaster activities.

16.1 Professional staff

The range of activities involved in the complete disaster-management cycle requires a corresponding range of expertise, as follows:

- **Monitoring and surveillance** require specialists in remote sensing, cartography, statistical analysis, and planning. Meteorologists, hydrologists, geologists, volcanologists, epidemiologists and other scientific specialists are also needed.
- **Prevention and mitigation** require staff with expertise similar to those needed for monitoring and surveillance, as well as engineers, architects, and specialists in agriculture, forestry, food storage, water supply and sanitation. Vulnerability reduction calls for the skills of sociologists, economists and experts in social welfare.
- **Relief work** requires staff trained in logistics, communications, administration, nutrition, health, and water supply and sanitation, as well as specialized teams for search and rescue, fire fighting, emergency medicine, and the disposal of toxic or radioactive materials.
- **Recovery**, like any economic and social development, requires experts in the fields of community development, finance, construction, microenterprise development, ecological restoration, etc.

Many of these professional staff are not involved in disaster management in their day-to-day work. This is true, for example, for many technical and managerial staff in the public sector. For such people to be able to contribute effectively in an emergency, it is important to include disaster management in their routine training programmes and academic curricula.

Overseeing the disaster-management cycle should be a national counter-disaster agency with a secretariat of specialists in systems analysis, planning, law and administration. Such a team should be skilled in coordinating and integrating inputs from many sources and should be able to formulate appropriate policies based on the information received about hazards and vulnerability. Coordinators are also necessary at lower levels of government, including municipalities and counties. In addition, trained coordinators, engineers, health specialists, etc., must be available in national and international nongovernmental organizations and intergovernmental agencies.

In conflict-prone areas of the world, the complex emergencies that have developed in recent years require particular skills at all levels. Although this area is outside the scope of this book, there is a growing need for training in the skills demanded of workers in complex emergencies (see Box 16.1).

Box 16.1 The challenge of complex emergencies[1]

All humanitarian practitioners, including those concerned with environmental health, must be trained to deal with the special operational environment created by complex emergencies. Experiences with Kurdish and Rwandan refugees, and humanitarian operations in Angola, Bosnia, Cambodia, Liberia, Mozambique, Somalia and Sudan all underscore the need for new skills. These include skills in: political analysis; negotiation; conflict analysis and resolution; management; propaganda monitoring and humanitarian broadcasting; human rights monitoring and reporting; military liaison; and managing personal and staff security. A broader view of vulnerability is also required that includes an understanding of the roles of politics, ethnicity, gender and class in vulnerability.

[1] Source: Slim (1995).

16.2 Volunteer staff and employed labour

Volunteers make a huge contribution to both vulnerability reduction and emergency response. For example, in the Armenian earthquake of 1988, 90% of people dug out of the rubble were saved by survivors, rather than by professional search-and-rescue teams. In Bangladesh, community-based cyclone warnings are provided by tens of thousands of Red Crescent volunteers.

Effective vulnerability reduction can be a highly social and labour-intensive activity. For example, community participation may be necessary to identify the most vulnerable people, such as disabled or homeless people, because they do not show up on censuses or come to meetings to articulate their needs. Hazard-mitigation programmes, such as reforestation or soil conservation, require a large workforce that has to be provided by the local community.

In an emergency, staff employed for construction, logistics, community outreach and health promotion activities may be recruited on short-term contracts, or seconded from the private or public sector for the period of the emergency. It is important that correct human resources procedures, including recruitment procedures, contracts, job descriptions, disciplinary procedures and benefits are correctly applied. These procedures should be established as far as possible before disaster strikes, so that they may be rapidly applied in an emergency.

Deciding whether to employ volunteers or paid staff for certain activities requires careful thought, as the management and motivation of paid staff and volunteers demand different approaches. Criteria for deciding whether people should be employed as staff or volunteers include the nature of the activity, the origins of the staff (are they from the community concerned?), the need for paid work in the area, the availability of management resources, and relevant policies on community development.

16.3 Training

16.3.1 Training professionals

Disaster training at institutions of higher education

Professional personnel involved in disaster management will have attended institutions of higher education and followed courses from law to engineering. These institutions should be encouraged to integrate modules on the management of emergencies and disasters into existing degree courses and training programmes.

Moreover, for many of these professionals, particularly planners and engineers, disaster prevention should form an important part of their day-to-day work. For this reason,

it is important for institutes of higher education to ensure that appropriate emphasis is placed on disaster management. It is recommended that national counter-disaster agencies review curricula, with a view to integrating disaster preparedness and risk reduction into the professional training of, for example, urban planners, sanitary engineers, medical students and nurses.

Municipal officials, emergency service workers, water-supply and sanitation workers, etc., need to attend short courses or refresher courses. The counter-disaster agency should ensure that these are provided at higher educational institutions.

Specialized training courses

Specialized courses for disaster-management professionals are now provided in many countries by universities, regional organizations, nongovernmental organizations and international organizations. A summary of available courses may be found on the Humanitarian Training Inventory (HATI), provided by the United Nations Office for the Coordination of Humanitarian Affairs[1].

16.3.2 Training volunteers

Community-based training for volunteers should take place within the locality, using training materials that are relevant to the specific hazards, vulnerability patterns and resources of the particular area.

Volunteers can be trained, and appropriate training materials produced, in the following ways:

- When using participatory planning techniques to assess local risks, it may be possible simultaneously to create materials concerning local hazards, vulnerabilities, and capacities that can later be used in training.
- Make use of prior experiences with innovative models in large-scale community training. Such models include health-education activities; social mobilization for expanded immunization programmes; and mass adult literacy campaigns and post-literacy follow-up.
- Experience can be drawn from area-based agricultural improvement programmes that use on-farm experiments and demonstrations, master farmers from the community, and group extension. Successful models can provide examples of how community-based risk assessment can be tied to the actual conditions of specific people and places.

Selected community leaders also require training. On-the-job training by supervisors should be combined with regular, short training sessions, using modules for different job functions. These modules should contain learning objectives, and recommend methods and materials for effective learning and teaching.

16.3.3 Integrated training exercises

The functioning of the emergency-response system needs to be tested and evaluated periodically. It is necessary to identify people normally employed in nonemergency-related occupations (e.g. doctors and nurses, police officers, municipal officials) and encourage them to meet from time to time for role-playing exercises designed to test preparedness plans. In this way, they become familiar with each other and understand their individual roles. Such exercises also ensure that plans are appropriate and up-to-date, and that systems are in place.

[1] www.reliefweb.int/training/.

The best way to achieve this is through integrated training exercises (ITEs), which bring all the relevant personnel together in realistic test situations. Naturally, rehearsals or drills cannot possibly portray the full reality of a disaster-relief operation. However, rehearsals do re-emphasize points made in training programmes and may reveal weaknesses that would otherwise be overlooked.

When organizing ITEs, the following should be borne in mind:

- Training and exercises should be carried out in a way that not only communicates information, but also builds trust and cooperation among personnel.
- If possible, training activities should simultaneously generate *new* information about hazards, vulnerability and disaster mitigation.
- Large-scale exercises should be carefully planned and explained, so as not to create fear or confusion among the public.
- Training exercises should provide concrete benefits, such as improved sanitation or strengthened infrastructure, so that they are not seen simply as games.

Integrated training for health workers

Hospitals and health-care facilities that are likely to receive casualties during disasters should periodically carry out training exercises. On such occasions, environmental health personnel should be involved as well, in particular to discuss with regular staff what water-supply, sanitation and other hygiene problems are likely to arise under emergency conditions. They should also take the opportunity to inspect the site and buildings, to identify their own vulnerability to environmental hazards.

Primary health-care workers and other community-development workers should meet periodically at a regional centre to practise emergency first aid and review possible measures to reduce risks and improve preparedness in their area.

Integrated training in the community

Training exercises at community level should be organized, involving both the local population and community workers. Because participants may be short of time, such exercises should focus on one element of preparedness at a time. Each exercise should also introduce some practical improvement and aim to achieve an incremental reduction in vulnerability. For example, participants might act out the difficulties to be expected in boiling water in an emergency (shortage of fuel, lack of adequate containers, etc.). On another occasion, the topic might be protecting water supplies from flood waters contaminated by sewage, or the control of mosquito breeding in standing water. In each case, solutions to the problems should be sought and concrete actions taken. In this way, such training does triple duty as environmental health education, community problem-solving, and preparedness training.

Integrated training at national and international levels

Professional support staff from all relevant fields should be called together periodically to enact their roles in an emergency. This can be arranged by the permanent staff of the counter-disaster agency. In the health sector, this would involve forming field teams of environmental health personnel; accessing and testing stored equipment and supplies; and rehearsing damage assessment, emergency health care, and health surveillance. An important part of such exercises should be an evaluation of performance, to reveal weak spots in communication and coordination.

Members of the national counter-disaster agency also need to test their ability to work together efficiently, and to communicate nationally and internationally. For example,

test shipments of spare parts could be made to an outlying province, and these tests subjected to critical appraisal.

Early-warning systems should be tested. Those that involve sharing data internationally (e.g. for food security, tropical storms, or tsunamis) tend to be fully automated. Staff should therefore be trained to deal with a breakdown in automatic communication.

Integrated training for the public

Complex problems surround the questions of whether and how to organize large-scale emergency preparedness exercises that involve the public at large. The economic cost of the resulting disruption is often large and the chance of creating confusion and ill-will is high. The evacuation of a major city is a hazard in its own right and should never be "practised", although public education on evacuation routes and warnings is appropriate.

Instead, a more efficient and positive use of people's time and energy may be to conduct periodic safety-awareness events. For example, competitions sponsored by the news media may be held, in which features, such as bad drainage or structurally weak buildings, are sought out and documented by citizens.

16.4 Further information

For further information on human resources, see: Werner & Bower (1982), International Federation of Red Cross and Red Crescent Societies (1997a), Overseas Development Institute/People in Aid (1998), United Nations High Commissioner for Refugees (1999), Davis & Lambert (2002).