Assessment of Capacities using SEA Region Benchmarks for Emergency Preparedness and Response
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BANGLADESH
Background and Vulnerability to Disasters

The geographical location and topographical features of Bangladesh make it a disaster-prone country. Over the past four decades, the country has been hit by seven of the 10 deadliest cyclones of the twentieth century.

Bangladesh is vulnerable to a large variety of natural disasters such as cyclones and tidal surges, floods, tornadoes, landslides, river erosion and drought. These disasters cause immense damage to life and property. In addition, they cause severe internal displacement.

The country’s population density is among the highest in the world. Some of the human-induced, biological and technical hazards the country faces include river traffic accidents, epidemics, fires, building collapse, gas field explosion, political conflict and terrorist attacks, among others. The country also hosts a large number of refugees, mainly from Myanmar.

The health hazards faced by the country include enteric infections, infectious diseases, malnutrition, pneumonias, and skin and eye diseases. Maternal and infant mortality is also high, compounded by poor access for the majority to reliable health services. Arsenic contamination of the water affects about two thirds of the population.

Climate change is predicted to cause inundation of 10% of the land mass due to rising sea levels. This will lead to further problems such as loss of agricultural land, loss of homes and resulting migration. Inadequate building practices, very high urban growth and overcrowding are factors that increase the population’s vulnerability to disasters.
Methodology
To assess country progress in implementing the benchmarks, four one-day workshops were organized at the subnational level and one three-day workshop at the national level. The workshops were carried out jointly by the Bangladesh Emergency Preparedness and Response (EPR) Programme of the Directorate General of Health Services (DGHS) and Emergency and Humanitarian Action (EHA) Programme of the World Health Organization (WHO). Handouts of relevant presentations, the 12 EHA SEARO benchmark monitoring tools, relevant published documents such as the National Plan for Disaster Management 2010–2015, Standing Orders on Disaster (SOD), standard operating procedures (SOPs) for management of health in emergencies, and other necessary materials were distributed to the participants beforehand for reviewing the benchmarks. Before organizing the national-level workshop, field-level findings were shared with all the participants.

Multisectoral representation was ensured at all the workshops. Professionals/representatives from different organizations/institutions/ nongovernmental organizations (NGOs), including from health facilities at various levels, participated in the workshops. Representatives were also present from the DGHS, Institute of Epidemiology, Disease Control and Research (IEDCR), National Institute of Preventive and Social Medicine (NIPSOM), Comprehensive Disaster Management Programme (CDMP), Fire Service and Civil Defense Office, District Relief and Rehabilitation Office (DRRO), medical college hospitals, District Education Office, District Police Office, and national and international NGOs such as Bangladesh Rural Advancement Committee (BRAC), Bangladesh Red Crescent Society (BDRCS), Save the Children, etc.

The Director, Disease Control Unit and Focal Point, WHO Bangladesh Emergency and Humanitarian Action (BAN EHA), DGHS along with the Deputy Director, Communicable Disease Control Unit and Programme Manager, BAN EHA supervised and coordinated all the activities for implementation. The National Professional Officer (CD) and Responsible Officer, BAN EHA provided technical guidance to the activities, while the National Consultant, BAN EHA was responsible for facilitating the activities.

The activity produced a comprehensive report with findings and recommendations, which will help to develop policy strategies and plans of action to strengthen the EPR programme of the health sector.

Findings: Achievements and Gaps
Assessment and review of benchmarks relating to legal framework, rules of engagement, national action plan and resources

**BENCHMARK 1:**
Legal framework and functioning coordination mechanisms and an organizational structure in place for health EPR at all levels involving all stakeholders.

Achievements
- A multisectoral disaster management coordination committee is in place at all levels.
- Bangladesh has a national plan for disaster management 2010–2015 and Standing Orders on Disaster, which describe the detailed roles and responsibilities of committees, ministries and other organizations in disaster risk reduction and emergency management.
- The cluster approach is activated in emergencies.

Gaps
- The draft national health policy is not yet approved. However, an EPR component is included in the policy.
The health sector EPR coordination mechanism, jointly led by WHO and the Government of Bangladesh (GoB) is in place at the national level but is very poor at the peripheral level. The coordination committee meets in an erratic manner and does not function if there is no disaster. Health EPR committees need to be developed and activated at the subnational level.

The SOD is not available to most of the concerned focal points at the national and subnational levels.

Financial and human resources are not always available.

There is a lack of a comprehensive constitutional law/act for EPR and mitigation.

**Gaps**

- A national comprehensive plan for the health sector needs to be developed.
- The national health sector contingency plan has been revised but not printed, and drills should be carried out during normal times at all levels on a regular basis.
- An action plan needs to be formulated at the subnational level.
- Hazard and vulnerability analysis and risk mapping has not been done at the subnational level.
- Guidelines and manuals are not available at the subnational level.
- Coordination between the health sector and other sectors should be better integrated during normal times.
- Logistics support and medical supplies are not adequate, especially at the district and upazilla levels.
- The SOP is not available at the district and upazilla levels and health managers are not aware of this.
- Logistics arrangements are not fully developed.

**Achievements**

The following guidelines have been published:

- Handbook on Health Sector Disaster Management (Bangla version), 2011.
- Guideline on Medical care for specialized populations in emergencies (Bangla version), 2011.
- Guideline on Hospital Safety, 2011.
- Guideline on Field Hospital Management in Emergencies for health workers, 2011.
- Contingency plan for hospitals (Bangla version), 2010.
- Training manual on Community-based first aid (Bangla version), 2010.
- Guidelines for Mass casualty management drill (Bangla version), 2010.
- Guideline on Psychosocial support for community health workers (Bangla version), 2008.
- Standing Orders on Disaster, April 2010.
• Drills and simulation exercises are done haphazardly and do not cover all the disaster-prone areas.
• Memoranda of understanding (MOUs) for a national EPR plan covering all essential sectors have not been signed with all the sectors.
• SOPs of other sectors are not circulated properly, and should be revised to include the subnational and community levels, and for different emergencies.

**BENCHMARK 4:**
Rules of engagement (including conduct) for external humanitarian agencies based on needs established.

**Achievements**
• Potential partners and key stakeholders have been identified and are included in the EPR planning process by the Ministry of Health and Family Welfare (MOHFW).
• A cluster-level approach has been activated at the national level.
• Disaster management and coordination committees have been established at different levels.

**Gaps**
• There is no specific code of conduct for international humanitarian organizations.
• Health managers in the government are not aware about the code of conduct for international humanitarian organizations.
• Adequate and timely allocation of resources and effective coordination are needed.
• A cluster-level approach is not active at the subnational level.
• A partnership approach has been identified but better collaboration is needed.
• Key public, private and civil society partners for EPR have been identified but their contribution is not up to the mark.
• MOUs have been signed and collaborative mechanisms developed and formalized with key sectors but the persons concerned are not aware of these.

**BENCHMARK 3:**
Emergency financial (including national budget), physical and regular human resource allocation and accountability procedures established.

**Achievements**
• Emergency focal points are designated at all levels.
• Disaster Management Committees have been formed at all levels.

**Gaps**
• Logistics, human resources and financial support are required for smooth implementation of disaster management activities.
• Imprest funds are lacking at the subnational level.
• There is no budget for EPR at the Upazilla Health Complex.
• Disaster-prone areas are not covered during planning.
• Funding gaps have been identified but not addressed properly.
• Funds provided by development partners are not mobilized in time.
• Strong government/NGO collaboration and coordination is needed at the subnational level.
BENCHMARK 5:
Community plan for mitigation, preparedness and response developed, based on risk identification and participatory vulnerability assessment and backed by a higher level of capacity.

Achievements
• Community risk identification and capacity for conducting vulnerability analysis have increased.
• A few tools and guidelines have been developed for assessment of risk and vulnerability.
• Analysis of the emergency risks/threats has been undertaken by local authorities in some areas.
• Hazard-prone areas have been identified in the community action plans in some areas.
• Community-level local action plans have been developed by the participatory approach in a few locations.
• Community-level focal points are aware of community support in the national and subnational operational plans.
• Roles and responsibilities for disaster preparedness activities are clearly defined for all organizations at the community level.
• A minimum budget has been allocated to conduct community-based activities during emergencies in some areas.
• Resources are provided to the community during an emergency for the past 2–3 years in some affected areas.

Gaps
• Local-level action plans are not available countrywide.
• No disaster-specific tools and guidelines have been developed except on earthquake.
• Standard tools and guidelines are not available at the local level in user-friendly languages.
• Legal support for implementation of emergency response activities is lacking.
• Community awareness is inadequate.
• Vulnerability maps have been prepared in very few locations.
• Integration among partners and with the community is lacking.
• Multisectoral collaboration and a participatory approach in implementing activities are lacking.
• The SOD and guidelines are available in only a few locations for communities and stakeholders.
• There is poor accountability and financial and logistic support for implementation of EPR programme activities.
• Community-level focal points have minimum access to the national and subnational levels.
• Community mobilization is poor during emergency periods.
• Mock drills and simulation exercises are not conducted often enough at the community level.

BENCHMARK 6:
Community-based response and preparedness capacity developed, supported with training and regular simulation/mock drills.

Achievements
• Assessment has been done of healthcare workers and community volunteers to determine their existing skills and training needs in some areas of the country.
• A training plan has been prepared in some areas for community volunteers.
• Some volunteers have been trained in first aid.
• First aid and search and rescue (SAR) training has been provided to volunteers in some disaster-prone areas.
• Simulation exercises and drills have been carried out for health workers and community volunteers in some disaster-prone areas.
• Some equipment has been provided to volunteers in a few disaster-prone areas of the country.
• Some trained volunteers are playing a vital role during simulation exercises at the community level.

Gaps
• Only a few volunteers have been trained for emergency activities.
• Processes to provide training to health workers and volunteers are lacking.
• There is a lack of legal support for implementation of activities.
• Financial and technical support to conduct training courses for community volunteers is insufficient.
• Financial and logistics support for programme implementation is lacking.
• Information about Sphere standards is lacking, and these standards are not maintained during activity implementation.
• Supervision and monitoring of community-based organizations (CBOs) is poor.
• Minimum equipment and logistics are supplied to stakeholders and the community.
• More frequent simulation exercises are needed to enhance the skills and competencies of volunteers.

BENCHMARK 7:
Local capacity for emergency provision of essential services and supplies (shelters, safe drinking water, food, communication) developed.

Achievements
• Some of the essential services are available, and supplies identified and pre-positioned strategically in a few locations.
• Some safe locations have been identified as shelters for the community.
• A budget has been provided for supporting essential supplies and equipment relating to health in communities in some areas of the country.
• A needs assessment has been done for quality of water, water quality testing and sanitation including latrines. Financial resources have been allocated in the relevant sectors in some areas of the country.

Gaps
• Financial, logistic and legal support for implementing training and programme activities is minimal.
• Stockpiling is very limited.
• Limited essential services are available compared to the need.
• There is a lack of integration among partners and the community.
• There is inadequate inventory preparation and maintenance at the national and subnational levels.
• Sphere standards are not maintained during emergencies.
• Supplies and equipment for water, sanitation and food safety are lacking in the country.
• The number of shelters is inadequate.
• There is a lack of accountability in programme implementation.
• Resources are not adequate for an emergency response.
Summary Report • BANGLADESH

• There are gaps in human and financial resources and logistics supplies, especially at the community level.

BENCHMARK 8:
Advocacy and awareness developed through education, information management and communication (pre-, during and post-event).

Achievements
• Information, education and communication (IEC) materials such as leaflets, posters, stickers, desk and wall calendars have been developed.
• Information regarding hazards, vulnerability, risks and health impacts of disaster has been disseminated at all levels.
• A list of key stakeholders has been prepared.
• Video clips have been prepared.

Gaps
• Inadequate advocacy materials are available at the community level.
• Vulnerable communities have not yet been educated to recognize simple geophysical and hydro-meteorological signals to respond immediately.
• The community is not well informed about emergency preparedness and the different types of hazards resulting from different types of disasters.
• Messages on awareness in some vulnerable localities have been tried but not documented or practised.
• Behaviour change communication (BCC) activities should be strengthened.

• Key messages are not sufficiently used in the electronic, print and folk media at the national and subnational levels.
• Information-sharing and gathering mechanisms are inadequate at the subnational and community levels.

BENCHMARK 9:
Capacity to identify risks and assess vulnerability at all levels established

Achievements
• A conceptual framework for overall disaster risk management is in place.
• A few participatory tools have been developed and are being tested.

Gaps
• There is a lack of expertise, especially at the subnational levels, in handling these tools, which have not been tried in the community.
• In the conceptual framework, the definition of terms, analysis of models, and a community-based approach are very limited.
• There is a communication gap between different sectors.
• Mass awareness and community participation are poor.
• Risk reduction measures have not been assessed completely.
• The processes of risk analysis and impact assessment are not understood by national operators.
• A repository of information from vulnerability assessments and risk mapping has not been prepared at all levels.
• Participatory tools for community-level risk and vulnerability assessment and risk mapping, and information and communications technology (ICT) have been developed but are not in use.
• There is limited ICT support for collecting passive surveillance data.

**BENCHMARK 10:**
Human resource capabilities continuously updated and maintained.

**Achievements**
- The health sector national disaster management institute should soon be operational.
- The training needs of programme managers, and healthcare providers responsible for clinical services and public health interventions have been identified.
- Training guidelines and modules have been developed to address the different training needs relating to EPR.
- Health sector emergency preparedness training programmes have been conducted and institutionalized in the public health, paramedical and medical curricula.
- Training is conducted for health staff in the public health system.
- Terms of reference (TORs) have been developed for all key health-related functions.

**Gaps**
- Policies and rules are not applied.
- Training centres are not available at the subnational level.
- There is a lack of skilled trainers and equipment.
- Training courses are not conducted on a regular basis.
- EPR topics are not fully integrated in the curricula of healthcare workers and paramedical staff.
- The roster of experts has not been updated since 2007.

**BENCHMARK 11:**
Health facilities built/modified to withstand the forces of expected events

**Achievements**
- Guidelines for building codes have been prepared.

**Gaps**
- Hospitals should set up modern fire equipment such as auto sprinklers, smoke detectors and heat-resistant doors at points such as the OT, ICU, CCU and post-operative room.
- The Bangladesh National Building Code (BNBC 2006) does not have a specific chapter on health facilities.
- Monitoring of lifeline infrastructure by an expert authority is lacking.
- Key sectors other than health have not been addressed in the building code.
- Vulnerability assessments of existing health institutions to impending hazards have been undertaken, but all have not been covered.
- The staff in the hospitals and health centres has not been trained to mitigate risks relating to non-structural damage.
- An emergency response plan is operational at the medical college hospital level but not in other facilities.
Assessment and review of benchmark: Early warning and surveillance systems for identifying health concerns established

**BENCHMARK 12:**
Early warning and surveillance systems for identifying health concerns established.

**Achievements**
- Rapid response teams have been developed at both the national and subnational levels. They are trained at regular intervals.
- An effective communication system has been developed to inform the community about health risks in an emergency situation.

**Gaps**
- An integrated disease surveillance system has not yet been developed.
- The disease surveillance system at the DGHS and IEDCR needs to be strengthened with logistics.
- Laboratory capacity and laboratory surveillance need to improve at the subnational level and for non-health sectors.
- Regular needs assessment is not done, and gaps and needs at the subnational level have not been addressed properly.
- Information-sharing and networking should be developed between the public health surveillance system and other related hazard surveillance systems.
- A feedback mechanism is not yet functioning.
- Private sector health facilities and academic institutes have not been integrated with the disease surveillance system.
- Early warning systems for all hazards and specific hazards in sectors other than health have not been established.
- A surveillance system for water quality, food safety and security, sanitation and waste disposal, etc. has not been established at the national and subnational levels in high-risk areas.
- Measures to address identified gaps in emergency surveillance and response needs have not been taken.
- SOPs to address the needs and gaps in surveillance have not been developed.
- Training of healthcare workers on risk communication has not covered all the upazillas.

**Summary of Results**

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<thead>
<tr>
<th>Benchmark group</th>
<th>No. of indicators</th>
<th>National</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Cumulative score of indicators</td>
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<tr>
<td>Legal</td>
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<tr>
<td>Community</td>
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<td>33/66</td>
</tr>
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<td>Capacity building</td>
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<td>EWARS</td>
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<td>11/24</td>
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Conclusion
The participants have critically reviewed all the 12 EHA benchmarks along with all indicators and tried to identify gaps for better preparedness and future interventions. Though Bangladesh achieved remarkable progress especially in legal work, early warning, alert and response system and capacity building activities especially at the community level need to be strengthened.

Overall recommendations to make the EPR and disaster management programmes more effective and beneficial

• A health sector National Institute for Disaster Management should be established.
• A legislative framework should be developed on unique disaster risk and emergency management in Bangladesh and include the activities of all sectors including health. Bangladesh has a national plan for disaster management 2010–2015 and Standing Orders on Disaster. A disaster management act has to be enacted and a national disaster management policy formulated.
• A national updated database for disaster risk and emergency management must be developed and its accessibility should be ensured at all levels. It is planned to develop a special software for this. The database should be used to analyse data and should be updated periodically.
• More research and scientific studies should be conducted for innovative approaches to EPR.
• Multisectoral coordination should be ensured at all levels and stages of activities.
• Needs assessment must be done for rational allocation of scarce resources to the victims of disasters.
• The capacity of local and national health systems should be need-based.
• Resource gaps should be filled by allocation of an adequate financial budget and human resources.
• The IEC system must be strengthened by using modern technologies.
• Periodic mock drills and simulation exercises must be conducted to improve the skills and competencies of health workers and community volunteers.
• An efficient supervision and monitoring system must be established.
• The scoring scale may be modified considering a standard measuring scale (e.g. APGAR score) to aid in clarity. Parameters should be developed for all indicators to aid in scoring where the questions do not run parallel to the score.
• To formulate the scale and include parameters that are easy to understand, experts from relevant disciplines/sectors (e.g. hospital safety, risk and vulnerability, IEC and communication, shelters, safe drinking water, food, etc.) may be consulted.
• The team for assessing the benchmarks should comprise multidisciplinary experts.
• To assess the achievements, diversified information should be supplied with respect to community-level EPR activities, resource allocation, advocacy materials and training activities.
• To identify gaps, the relevant literature and national statistics should be available.

Benchmark-wise recommendations

**BENCHMARK 1:**
Legal framework and functioning coordination mechanisms and an organizational structure in place for health EPR at all levels involving all stakeholders.

• The draft health sector policy should be approved soon.
• Subnational coordination committees need to be activated in case of occurrence of any emergency at any place.
• A comprehensive constitutional law/act should be formulated.

**BENCHMARK 2:**
Regularly updated disaster preparedness and emergency management plan for health sector and SOPs (emergency directory, national coordination focal point) in place.

• A national comprehensive health sector plan should be developed.
• Revised SOPs should be printed and made available to EPR focal points at all levels.
• Health sector guidelines/manuals should be available at the subnational levels.

**BENCHMARK 3:**
Emergency financial (including national budget), physical and regular human resource allocation and accountability procedures established.

• Need-based human resources should be deployed at different levels of the health and other relevant sectors.
• Adequate funds should be allocated and made available at subnational levels for emergency management (hiring of transport for distribution and the medical team, emergency procurement, etc.).
• An adequate number of quality physical facilities such as infrastructure, accommodation, utilities and logistics should be available at all subnational levels.
• A positive attitude as well as organizational and personal commitment should be developed.

**BENCHMARK 4:**
Rules of engagement (including conduct) for external humanitarian agencies based on needs established.

• Health managers in the government should be aware about the codes of conduct for international humanitarian organizations.
• A legislative framework including rules, responsibilities and TORs should be developed for engagement of external humanitarian agencies based on needs.
• Adequate resources should be allocated to the disaster management committee.
• A budget should be allocated and made available for emergency response at all levels.

**BENCHMARK 5:**
Community plan for mitigation, preparedness and response developed, based on risk identification and participatory vulnerability assessment and backed by a higher level of capacity.

• Policies and strategies should be developed for implementation of the EPR plan at community level.
• Local-level action plans should be developed countrywide.
• Disaster-specific tools and guidelines should be developed and supplied countrywide.
• A vulnerability map should be made available countrywide.
• Community participation should be ensured in the formulation, upgradation and implementation of community plans for mitigation, preparedness and response.
**BENCHMARK 6:** Community-based response and preparedness capacity developed, supported with training and regular simulation/mock drills.

- All volunteers should be trained to build their capacity for emergency activities.
- Sphere standards should be maintained in all emergency activities.
- Adequate simulation exercises should be conducted to improve skills and competencies.

**BENCHMARK 7:** Local capacity for emergency provision of essential services and supplies (Shelters, safe drinking water, food, communication) developed.

- Financial and logistics support should be available at the local levels to carry out emergency activities.
- Adequate pre-positioning of emergency supplies should be ensured as per need at all levels.
- Supplies and equipment for water, sanitation and food safety should be ensured countrywide.
- Both an information communication and a physical communication system should be developed at the local level countrywide.

**BENCHMARK 8:** Advocacy and awareness developed through education, information management and communication (pre-, during and post-event).

- Expertise in information management and communication should be developed at the subnational level.
- IEC materials need to be disseminated throughout the country.
- Different awareness programmes should be organized for building community capacity to combat emergencies.
- More advocacy should be conducted and awareness built up.

**BENCHMARK 9:** Capacity to identify risks and assess vulnerability at all levels established.

- Geographical information systems (GIS) and ICT should be available countrywide.
- Expertise in risk identification and vulnerability assessment should be developed at all levels.
- Periodic training should be provided to various personnel and communities to improve their capacities.
- Proper planning is needed at every level.
BENCHMARK 10:
Human resource capabilities continuously updated and maintained.

- Training modules should be disaster-specific.
- Training institutes should be built at the national and subnational levels.
- Training institutes should have adequate human resources and equipment.
- Expert trainers should be developed and employed to conduct effective training.

BENCHMARK 11:
Health facilities built/modified to withstand the forces of expected events.

- Training is needed for engineers on assessment of the structural aspects of health facilities and retrofitting activities.
- Sufficient fire/emergency escapes should be available for reducing hazards during earthquake.
- Hospitals should have an EPR plan and conduct drills according to the plan.

BENCHMARK 12:
Early warning and surveillance systems for identifying health concerns established.

- All health workers should be trained in early warning and surveillance systems for identifying health concerns countrywide.
- Human, financial and logistical support should be increased for disease surveillance and early warning and response.
- The surveillance system should be reorganized on the basis of the nature of disease.
- To achieve the benchmark, existing gaps in the early warning and surveillance system should be filled.
The WHO South-East Asia Region Benchmarks for Emergency Preparedness and Response Framework with its standards and indicators, are used to assess the existing capacities of countries in emergency risk management with a focus in the public health area. Grouped into four categories (legal, community, capacity building, early warning), the benchmarks provide a comprehensive view of emergency risk management in the area of health in the country. This summary report reflects at a glance the status of the country against the standards and indicators under corresponding benchmarks. Assessments are held in the national context with some adaptation and translation of the tools. This assessment in Bangladesh was led by WHO Country Office with the support of Emergency and Humanitarian Action unit of WHO’s Regional Office for South East Asia in partnership with the Bangladesh Emergency Preparedness and Response (EPR) Programme of the Directorate General of Health Services (DGHS) with participation of other stakeholders such as national and international NGOs, medical college hospitals and civil society working in the relevant sectors. The identified gaps in the assessment become the key priority areas for WHO and Ministries of Health and partners to address.