Assessment Checklists

The following assessment checklists are intended to assist the Assessment Team in planning, formatting, and conducting a complete initial assessment. The answers to the checklist questions will provide the information needed to complete the disaster cable formats outlined in unit II of this chapter. These assessment checklists are divided into major sectoral areas. They are meant to be as inclusive as possible of the types of questions that need to be answered in initial assessments of various disasters. To be answered completely, some of the questions would require extensive survey work, which the team may or may not have the capacity to perform. However, the information may already exist, and the task of the team may be only to gather assessment information assembled by others and evaluate the information for accuracy, timeliness, and completeness. An Assessment Team may also find it necessary to develop new or expanded questions to gather the required information for specific disasters.

A. Victims/Displaced Population Profile

- Determine the approximate number of displaced people.
- Determine their locations. Are they moving? To where? How many?
- Determine how many are arriving per week. How many more could come?
- Determine how they are arriving. Are they scattered individuals or families, clans, tribal, ethnic, or village groups, and by what means are they travelling? How did those already there arrive? What is the average family size?
- Determine the approximate numbers and ages of men, women, children (ages 0–5, 6–14, 15 and over).
- Identify ethnic/geographic origin (urban or rural):
  - Sedentary or nomadic background?
  - What is the average family/household size?
  - What are their customary skills?
  - What is the language(s) used?
  - What is the customary basic diet?
  - What is the customary shelter?
  - What are the customary sanitation practices?
- Determine how many there have been deaths in the past week.
- Determine how may children under 5 died in the same period.
- Determine the main cause of death for each group.

- Determine the crude mortality rate.
- Determine whether measles vaccinations have been or will be provided. If provided, give dates of vaccinations.
- Determine percentage of children vaccinated.
- Incidence of diarrhea among adults and children.
- Determine the most common diseases among children and adults.
- Determine what the displaced population has as personal property and what they lost as a result of the disaster.
- Estimate the number and types of blankets needed (according to climatic conditions).
- Identify what blankets are available within the country from personal, commercial, PVO/NGO/IO, or government stocks.
- Determine what is needed from external sources for blankets.
- Describe the clothing traditionally worn, by season and area.
- If clothing is needed, estimate the amount by age group and sex.
- If clothing is needed, determine if used clothing is acceptable and if so, for which groups.
- Describe normal heating/cooking practices.
- Determine whether heating equipment and/or fuel are required.
- Estimate types and quantities of heating equipment and fuel needed over a specific time period.
- Determine appropriate fuel storage and distribution mechanisms.
- Identify what fuel is available locally.
- Identify what is needed from external sources.
- Determine if other personal effects, such as cooking utensils, soap, and small storage containers, are needed.
- Determine if the DP's have brought any financial assets. Would those assets be convertible to local currency?
- Determine if livestock was brought along.
- Determine if shelter materials were brought along.
- Determine if other possessions, such as cars, bicycles, or boats were brought along

B. Health and Nutrition

1. Health

- Ascertain demographic information:
  - Total number affected
  - Age-sex breakdown (under 5, 5–14, 15 and over).

  - Identification of at-risk population (e.g., children under 5 years of age, pregnant and lactating women, disabled and wounded persons, and unaccompanied minor).
  - Average family or household size.
  - Rate of new arrivals and departures.
- Determine background health information:
  - Main health problems in home area.
  - Previous sources of health care (e.g., traditional healers).
  - Important health beliefs and traditions (e.g., food taboos during pregnancy).
  - Social structure (e.g., whether the displaced are grouped in their traditional villages and what type of social or political organization exists).
  - Strength and coverage of public health programs in home area (immunization).
- Mortality rate:
  - Determine the crude age-, sex-, and cause-specific mortality rates.
- Morbidity rate:
  - Determine the age- and sex-specific incidence rates of diseases that have public health importance (see Disease Annex at the end of this chapter). Document the method of diagnosis (clinical judgment, laboratory test, or rumors).
- Immunization programs:
  - Determine the need for immunization programs or the effectiveness and coverage (percent of children under 5, 5–14) of those in place, especially measles vaccinations.
  - Dates of vaccinations.
  - Determine the capability of relief officials to begin or sustain a program (e.g., logistics infrastructure and cold chain availability).
- Determine or estimate number of major injuries and rate for each type of injury. Specify traumatic injuries requiring surgery or hospitalization (e.g., fractures, head injury, internal injuries).
- Determine number and locations of health facilities that existed prior to the disaster.
- Determine number of facilities that are still functioning and the total number of usable beds.
- Determine number of indigenous health personnel who are available.
- Determine amount and type of medical supplies and drugs that are available on-site or in country.
- Determine additional amount and type of medical supplies and drugs needed immediately from sources outside the stricken area.

- Determine what additional medical equipment is needed and can be readily obtained to deal with major injuries. Suggested data sources:
  - National/provincial health officers.
  - Hospitals.
  - Clinics.
  - Traditional healers.
  - Local leaders.
  - Fly-over.
  - Walk-through surveys.
- Environmental conditions:
  - Determine climatic conditions.
  - Identify geographic features and influences.
  - Identify water sources.
  - Ascertain the local disease epidemiology.
  - Identify local disease vector.
  - Assess local availability of materials for shelter and fuel.
  - Assess existing shelters and sanitation arrangements.
- Determine if a health information system is in place to monitor affected population and provide surveillance and intermittent population-based sample surveys which should:
  - Follow trends in the health status of the population and establish health care priorities.
  - Detect and respond to epidemics.
  - Evaluate program effectiveness and coverage.
  - Ensure that resources go to the areas of greatest need.
  - Evaluate the quality of care delivered.
- Determine if the affected country has in place or plans to begin programs in:
  - Health information system.
  - Diarrheal disease control.
  - Expanded programs on immunization (EPI).
  - Control of endemic diseases.
  - Nutrition programs.
  - Continuing education programs for health workers.
  - Vector control.

2. Nutrition

- Determine the prevalence of PEM in population less than 5 years of age.
- Ascertain prior nutritional status.
- Determine prevalence of micronutrient deficiencies in the population less than 5 years of age (e.g., scurvy, anemia, pellagra).
- Determine percentage of children under 5 years of age with:
  - Either moderate or severe acute malnutrition.

  - Either moderate or severe chronic malnutrition.
  - Determine the average daily ration (food basket and calories/person/day) and method and intervals of distribution (e.g., wet/dry on a daily/weekly/monthly basis).
- Determine length of time this ration level has been available.
- Determine the attendance and effectiveness of supplementary and therapeutic feeding programs.
- Determine incidence of low birth weight.
- Determine rate of weight gain or loss of children registered in MCH clinics.
- Determine ORS needs and distribution system.

C. Water

1. Displaced Population Situation

- Determine the amount of water available per person per day.
- Determine the source and quality of the water.
- Determine how long the daily amount has been available.
- Determine evidence of water-related diseases.
- Determine length of time users wait for water.
- Determine types of wells, transportation, and/or storage systems used.
- Determine if there are problems with well repair/rehabilitation.
- Determine if there is equipment/expertise on site, on order, available if needed.
- Determine availability of additional sources of safe water if required.
- Determine the need for water engineers to assist with evaluating requirements.

2. Functioning Water System Disruption

- Describe the types of systems and sources that existed prior to the disaster in affected areas.
- Specify how many people have been deprived of functional water supply.
- Determine who is in charge of local water system(s) (community group, committee, national authority).
- Determine whether the system is still functional or what the requirements for repair are.

- Determine the need for an engineering specialist to assist with evaluating requirements.

D. FOOD AND AGRICULTURE

1. Food

Baseline Data

- Describe the normal consumption pattern (food basket) of the affected population, any taboos, and acceptable substitutes.
- Describe the normal food marketing system (including government involvement, imports, subsistence).
- Indicate what food aid programs, if any, exist and describe them.
- Outline the indigenous food processing capacity.

Effect of the Event on Food

- Ascertain the disaster's effect on actual food stocks and standing crops (damaged/destroyed).
- Determine if access to food (e.g., roads, milling facilities) has been disrupted and, if so, how long it is likely to remain disrupted.
- Check market indicators of food shortages, such as:
  - Absence or shortage of staple grains and other foods on the market.
  - Price differential.
  - Change in supplies on the market (e.g., an increase in meat supplies may indicate people are selling animals to get money).
  - Change in wholesale grain availability.
  - Unusual public assembly at a warehouse or dockside when grain is being unloaded.
  - Changes in warehouse stocks.
  - Black market price changes or increase in black market activities.
  - Commercial import changes or proposed changes.
  - Sale of land, tools, draft animals, etc.
- Check nutritional indicators of food shortages, such as:
  - Signs of marasmus, kwashiorkor, or other signs of malnutrition.
  - Increased illness among children.
  - Change in diet (i.e., quantity, quality, and type).
- Check social indicators of food shortages, such as:
  - Increased begging/fighting.
  - Migration from rural to urban areas.

Food Availability

- Determine how much food can be expected from future and/or specially planted, quick-maturing crops. Where in the production cycle was the affected area when the disaster struck?
- Estimate local government stocks on hand and those scheduled to arrive. Is borrowing of stocks on hand a possibility?
- Estimate the local commercial stocks on hand and scheduled to arrive.
- Estimate the local PVO/NGO/IO stocks on hand and scheduled to arrive. Is borrowing a possibility?
- Estimate local personal stocks on hand and scheduled to arrive.
- Determine regional availabilities.
- Canvass other donors to find out what they expect to contribute.
- Estimate how much food aid would be required during specific time periods.

Distribution Systems

- Describe existing food aid distribution systems (e.g., government rationing, PVO/NGO/IO).
- Describe the effectiveness of the distribution system.
- Describe government marketing mechanisms.
- Judge the capacity of the above to expand/begin emergency aid. What is their record of accountability?
- Describe potential alternatives.
- Explain the country's (agency's) previous experience with mass feeding.
- Determine the availability of facilities and materials, including fuel.
- Determine whether repackaging facilities exist.

Social and Market Impact of Food Aid

- Analyze the likely price impact on normal food suppliers. Describe the suppliers.
- Decide whether food aid would free cash and labor for other aspects of relief, or would divert labor and create a dependent attitude.

Other

- Research any legal impediments to importation of certain foods.

2. Agriculture

Baseline Data

- Describe crops grown in the affected area following the points listed below:
  - Crop name.
  - Average area planted (per data available).
  - Average production (per data available).
  - Planting season(s) (dates) and time to maturity.
  - Are crops climate-specific? If so identify the climatic requirements.
  - Are hybrid seeds being used in the area? If so, identify them.
  - Are they cash or subsistence crops?
- Describe domestic animals present in each affected area following the points listed below:
  - Approximate number of animals in the area.
  - Value of individual animals.
  - Use of animals for food.
  - Use of animals for work.
  - Use of animals for cash production.
  - Are bred stocks used in the area?
- Describe the agricultural system, including the following:
  - Land use systems.
  - Agricultural labor system/land tenure.
  - Crop preferences.
  - Inputs.
  - Seeds (reserved or purchases): is treated seed used ?
  - Fertilizer.
  - Machinery/tools.
  - Pesticides.
  - Storage (on farm, government, private).
  - Agro-business facilities, processing of local or imported commodities.
- Describe the local fishing industry.

Effect of the Event on Agriculture

- Effect of the event on agriculture/livestock/fisheries.
- Ascertain the extent of damage to crop/livestock/fisheries by area, noting at what point in the production cycle the event occurred. State the source of the information.
- Estimate the loss in production (tonnage/head) by crop/ livestock/fisheries and by zone within the affected area.
- Analyze whether losses will increase over time and state why.
- Describe damage to agricultural machinery

- Describe damage to irrigation systems
- Describe damage to seed, fertilizer, and pesticide stocks.
- Describe damage to fishing gear.
- For a drought, compare current rainfall to the normal or recent past precipitation.
- Identify any unusual or untimely grazing changes.
- Describe any threats from insects or disease that might follow the disaster.

Agricultural Production Capabilities

- Availability of inputs—by type (e.g., seed, fertilizer, pesticides, tools, machinery, veterinary medicines, fishing boats, nets, breeding stock).
- Estimate the local government stocks on hand and when they are scheduled to arrive.
- Estimate the local commercial stocks on hand and when they are scheduled to arrive.
- Estimate the local personal stocks on hand and when they are scheduled to arrive.
- Ask the victims how they plan to cope with losses.
- Determine regional availabilities and elasticity of supplies.
- Ascertain what other donors plan to supply.
- Outline what further inputs would be required to restore minimum productivity.
- Find out if repackaging facilities for seed, fertilizer, and pesticides exist.
- Distribution systems/technical infrastructure.
- Outline host government (Ministry of Agriculture) operations in the affected area. Does it provide:
  - Extension service,
  - Crop storage/silos,
  - Veterinary services,
  - Irrigation services,
  - Research facilities,
  - Hybrid seed,
  - Fertilizer,
  - Other plants (fruit trees), and/or
  - Pesticides?

Other

- Describe any agricultural projects and inputs provided by foreign organizations/governments.
- Describe the operations of rural or agricultural credit organizations, cooperatives, or credit sharing organizations that exist in the affected area.

- Judge the capacity of the above to incorporate rehabilitation disaster assistance.

E. SHELTER

1. Affected Population Profile

- Determine the number of people requiring shelter and whether it is temporary (a few weeks) or a displaced population requiring shelter for an indeterminate time.
- Determine the average number of people in an individual dwelling.
- Identify obstacles that prevent victims from meeting their own needs both for temporary and permanent shelter.
- Determine area affected (e.g., portion of city, several villages, large area of a country).
- Approximate the number of private dwellings (single family, attached, low-rise and high-rise multiple family) and public buildings (schools, churches, hospitals) damaged or destroyed by city, village, or region.
- Determine the number of damaged dwellings that are habitable without immediate repair, that are habitable only after repair, and that are not habitable and must be destroyed.
- Inventory existing structures and public facilities that can be used as temporary shelters, giving careful consideration to access to sanitation and water.

2. Materials

- Identify construction styles and materials normally used in the affected structures.
- Determine the availability and costs of indigenous materials to meet both cultural and disaster resistance requirements.
- Identify any suitable material substitutes, locally or externally available, that would meet the cultural and disaster prevention requirements.
- Identify the type and quantity of building materials that the victims can provide for themselves for temporary or permanent shelter.
- Identify the type and quantity of building materials that the affected government can provide for the victims for temporary or permanent shelter.
- Determine the type and quantity of materials needed from external sources for temporary or permanent shelter.

- Assess the suitability (i.e., infrastructure support), of available sites for both temporary and permanent shelters, including, where necessary, mass sheltering.
- Determine if relocation is necessary due to the nature of the disaster. Identify the problems this may cause with the local population.
- Assess the potential hazard and security vulnerabilities of available sites for both temporary and permanent shelters
- Assess the environmental conditions that would impose constraints on temporary shelters or camps, such as all season accessibility, proximity to sources of essential supplies (shelter materials, cooking fuel, water, etc.), soil, topography, drainage, and vegetation.
- Identify any problems related to land use such as grazing, cultivating, sanitation, and land tenure issues.

3. Distribution

- Determine accessibility to the affected areas for both assessment and delivery.
- Determine availability of a distribution mechanism (local, regional, national, or international) to distribute shelter materials (temporary or permanent) to the victims.
- Identify committees, credit unions, government agencies, or co-ops that can mobilize forces to help implement a shelter program.
- Determine if an equitable means of allocation and an appropriate medium of exchange for the building materials can be implemented.

F. Search and Rescue (SAR)

- Determine how many collapsed structures in an urban area have been affected. What types?
  - Hospitals, multistory public housing units, schools.
  - Buildings constructed of reinforced concrete or other materials that would leave voids where trapped victims could survive (not adobe or mudbricks):
    - Apartment buildings.
    - Industrial buildings.
    - Office buildings .
    - Hazardous installations creating secondary risks.
  - Pre-dominant building types and construction material:
    - Wattle and daub.
    - Masonry buildings (adobe, brick, concrete blocks, stone masonry).

    - Reinforced concrete structures (frames with brick infill, frames with load bearing masonry walls, bearing walls, and prefabricated structures).
    - Steel structures (multistory steel structures, steel frames enfilade with reinforced concrete).
    - Timber structures.
    - Other.
  - Type of roof (reinforced concrete, steel, wood, grass, etc.)
- Determine if the local authorities request SAR assistance
  - Type of assistance needed:
    - Search with technical equipment and/or dogs.
    - Rescue with lifting, pulling, cutting, digging, and lighting equipment.
    - Medical to oversee and aid in victim extraction.
    - Special operations for removing hazardous materials, demolition, shoring of dangerous structures, or damage and emergency repair.

G. SANITATION

1. Displaced Population Situation

- Determine the placement, number, and cleanliness of latrines.
- Determine if the design and placement of latrines is affecting their use due to cultural taboos.
- Determine if there is a sanitation plan if the population increases.
- Determine evidence of water-related diseases.
- Determine the proximity of latrines and refuse areas to water sources, storage areas, and distribution points
- Determine the placement and plan for the disposal of corpses.
- Determine if there is a plan for the collection and disposal of garbage.
- Determine if there is an insect and rodent control plan
- Determine the need for a specialist to assist with evaluating requirements.

2. Non-displaced Population Situation

- If the disaster occurs in a rural area, waste disposal is usually not a problem unless sewage "ponds" in a public area Determine if this is occurring.

- If you are on an island affected by hurricane or in an area affected by flooding, determine if the sewage drainage system is still open. [See also Infrastructure.]
- Determine the adequacy of sewage disposal facilities in any public buildings or other areas being used to temporarily shelter homeless people.

H. LOGISTICS

1. Airports

- Identify the airport being assessed by:
  - Name.
  - Designator.
  - Location.
  - Elevation.
- Describe the current condition of facilities.
- Ascertain whether the airport is fully operational. Daylight hours only?
- Furnish information on usable runway lengths and location(s).
- Determine whether taxiways, parking areas, and cargo handling areas are intact.
- Establish whether runway and approach lights are operating.
- Specify which navigational aids are operating.
- Describe available communications facilities.
- Determine whether the terminal building is operating.
- Check the availability and cost of aviation fuel
- Find out if facilities exist for mandatory aircrew rest.
- Explore whether the cargo handling area can be lighted for night cargo operations.
- Determine what cargo handling equipment is available, including fuel and operators:
  - Forklifts (number, capacity).
  - Scissors lift (capacity).
  - Cargo dollies (number).
  - Trucks with drivers and laborers for hand unloading
- Determine what startup equipment is available, including fuel and operators.
- Describe maintenance operations (facilities, personnel, hours).
- Outline what storage is available:
  - Covered?
  - At the airport? Off airport? How far?
  - Capacity and suitability for storage of foods or other perishables.

2. Civil Aviation

- Find out whether arrangements can be made for prompt overflight and landing clearances.
- Ascertain that the air controller service is functioning.
- Specify working hours for airport personnel.
- Explore having "no objections" fees or "royalty" fees waived or paid locally.
- Find out if arrangements can be made to work around the clock, including customs.
- Identify personnel to tally and document cargo as it is received and transshipped.
- Ascertain that the host government will accept deliveries by means of military as well as civil aircraft.
- Describe security arrangements.
- Determine what repairs and/or auxiliary equipment would be needed to increase airport capacity. How soon can local authorities be expected to restore service?
- Determine if there are any local air carriers, their availability, and their rates.

3. Alternative Aircraft

- Identify any usable airports or suitable helicopter landing sites in the disaster zone.
- Determine the local availability and cost of helicopters and/or fixed wing aircraft.
- Estimate their capacity.
- Identify the owners/agents.
- Determine the availability and cost of fuel.

4. Seaports

- Identify the port being assessed by:
  - Name and location.
  - Describe the current condition of facilities.
  - Ascertain whether the port is fully operational. Daylight hours only?
  - Security fences/facilities.
  - Percentage of port losses reported.
  - Collection for port losses possible?
- Determine whether the disaster has altered the physical characteristics of the port, e.g.;
  - Depth of approach channels.
  - Harbor.
  - Turning basin.

  - Alongside piers/wharves.
  - Availability of lighters
- Determine whether the disaster has blocked or damaged port facilities
  - Locks.
  - Canals.
  - Piers/wharves.
  - Sheds.
  - Bridges.
  - Water/fuel storage facilities.
  - Communications facilities.
  - Customs facilities
- Describe the berths:
  - Number.
  - Length.
  - Draft alongside (high tide and low tide).
  - Served by rail? Road? Sheds? Lighters only?
  - Availability.
  - Check the availability and cost of fuel.
  - Determine what cargo handling equipment is available, including condition, fuel, and operators.
  - Heavy lift cranes (number, capacity)
  - Container and pallet handling (with port equipment? with ship's gear only?).
- Outline what storage is available:
  - Covered?
  - Hardstand space?
  - Capacity?
  - Quality?
  - Security?
- Find out if pilots, tugs, and line handlers are available.
- Specify working hours for the port.
- Specify working hours for customs.
- Determine whether arrangements can be made with port and host country authorities to obtain priority berthing for vessels delivering disaster relief shipments.
- Identify an adequate number of personnel to tally and document cargo as it is received and transshipped.
- Check the history of turnover time. What effect has the disaster had on turnover time?
- Determine what repairs and/or auxiliary equipment would be needed to increase port capacity. How soon can local authorities be expected to restore service?

5. Transfer Points

- Identify transfer points by location.
- Determine whether surface transportation for cargo is available from airports and seaports.
  - Road?
  - Railroad?
  - Canal/river?
- Estimate the capacity of transfer points, including handling.
- Outline what storage is available.
- Describe security arrangements.
- Identify an adequate number of personnel to receive and document cargo for transshipment.

6. Trucking

- Describe damage to the road network as it relates to the possibility of delivering relief supplies by truck.
- Indicate any restrictions such as weight, width, length, or height limitations at bridges, tunnels, etc.
- Determine whether it is possible to bypass damaged sections of the road network and what weight restrictions would apply.
- Determine whether containers can be moved inland.
  - 20 feet
  - 40 feet
  - To the disaster site or to a transfer point?
- Check the availability and cost of host government-owned trucks.
- Check the availability and cost of PVO/NGO/IO-owned or operated vehicles.
- Check the availability and cost of commercial vehicles.
- Determine the types, sizes, and number of commercial vehicles available.
- Judge whether the relief program could or should contract for any of the above trucks. What would be the freight rates per ton? What about collection for losses?
- Ascertain that maintenance facilities and spare parts are available.
- Outline measures to provide for security of cargo in transit.
- Check the availability and cost of fuel.

7. Railroads

- Identify and locate any railroads in the disaster stricken area. Assess their current condition.

- Describe any damage to the electrical power system.
- Identify any interdictions—damaged bridges, tracks, fallen trees, etc.
- Judge the reliability of the rail system.
- Determine whether cars can be made available for relief shipments on a priority basis
- Determine the capacity and cost of rail shipments.
- Outline security measures to protect cargo in transit.

8. Warehousing

- Identify undamaged, or damaged but usable, warehouses located in reasonable proximity to the disaster site.
  - Determine capacity of these warehouses.
  - Determine their availability over a specific period of time.
  - Specify whether the warehouses are government, PVO/NGO/IO, or privately owned.
  - Determine whether they are staffed or not.
  - Determine cost per square meter.
  - Assess the adequacy of the warehouses' construction:
    - Ventilation.
    - Lighting.
    - Hard floor.
    - Fireproofing.
    - Loading docks.
    - Condition of roof (check during day).
- Describe loading/unloading equipment that is available:
  - Pallets.
  - Forklifts and fuel for them.
- Ascertain that adequate security exists:
  - Perimeter fence.
  - Lighting.
  - Guards.
- Determine whether any refrigeration is available.
- Determine whether sorting and repackaging facilities exist.
- Determine whether fumigation is necessary and available for food, medicines, etc.
- If assessing a functioning warehouse determine:
  - Accounting and record keeping procedures.
  - Bin/stock cards on piles must match warehouse register.
  - Physical inventory checks at random intervals.
  - Use of waybills.
  - Stacking methods.
  - Spacing system between rows.
  - Cleanliness.
  - Commodity handling system.

- Reconstitution of damaged goods.
- Prompt disposal of damaged goods.
- First in/first out system.

I. COORDINATION CAPACITY

- Evaluate the coordination capacity of the following by identifying qualified personnel, reviewing program descriptions, evaluating past performance:
  - Affected government. Describe coordination operation among various levels of government and their ability to provide liaison with outside donors.
  - PVO's/NGO's/IO's. Do PVO's/NGO's/IO's have sufficient experienced field staff to carry out their present activities effectively and expand them if required? What is their coordination link with the affected government?
  - Local service agencies, e.g., credit unions, cooperatives.
- Describe coordination mechanisms, including meetings.
- Determine whether a lead agency has been designated.

J. INFRASTRUCTURE

- Determine the pre-disaster condition of infrastructure.
- Ascertain from the affected government, the minimum needs for infrastructure recovery.

1. Communications

- Describe where the system's facilities are located.
- Determine the broadcast/reception area or zone of influence (e.g., towns serviced by system).
- Identify the organization/firm that is responsible for operations and maintenance of the system. Is there a disaster response plan with identification of priority facilities, material supply, priority screening of messages?
- Obtain technical information, such as:
  - Broadcast power.
  - Operating frequencies, call signs.
  - Relay/transmission points.
  - Hours of operation.
  - Standby power sources.
  - Mobile capability.
  - Repair/maintenance facilities, including capabilities of manufacturer's local agent.
  - Language of transmission.
- Identify key personnel (owners, management, operations, maintenance).

- Determine the degree of integration of military and civilian communications networks
- Note the source(s) of the above information.
- Determine what communications facilities exist that are operable or easily repaired and could be used to pass assessment information and to assist in coordination of life-saving responses.
- Identify the type of system assessed:
  - Radio.
  - Private Ownership.
  - Commercial.
  - Broadcast.
  - 2-way.
  - Amateur.
  - Citizens Band.
  - Public systems.
  - Police.
  - Armed Forces.
  - Government agencies (which ministries have communications facilities?).
  - Telephone.
  - Cable and wireless.
  - Television.
  - Newspaper.
  - Other.
- Describe specific reasons why a system is not operating.
  - Unavailability of:
    - Personnel.
    - Power.
    - Fuel.
    - Access to facilities.
    - Damage to system:
      - Broadcast/transmission equipment.
      - Antennae.
      - Buildings.
      - Transmission lines.
      - Relay facilities.
      - Power source.
      - Other.
- Note source(s) of the above information.
- Outline options for restoring minimum essential services.
- Identify local/regional suppliers of communications equipment and materials available for repair. Check cost and availability.
- Determine the local/regional availability of technical services available for repair.

2. Electric Power

- Describe the power system including:
  - Base load facility.
  - Peaking facility.
  - Number of units.
  - Fuel source.
  - Plant controls.
  - Output capability (specify voltage and cycle).
  - Mobile plants.
  - Other standby capability.
  - Switching facilities.
  - Transmission facilities.
  - Distribution facilities (number of substations).
  - Interconnections.
- Inventory auxiliary equipment that may be available locally, from construction companies, for example.
- Determine why power is not available (i.e., at what point the system has been damaged).
- Ascertain the condition of generating units.
- Check the integrity of the fuel system.
- Determine whether towers, lines, and/or grounding lines are down.
- Assess the condition of substations.
- Outline the impact of power loss on key facilities such as hospitals and water pumping stations.
- Describe options for restoring minimum essential services.
- Ascertain whether load shedding and/or switching to another grid can restore minimal services.
- Identify local/regional suppliers of equipment and materials. Check cost and availability.
- Determine the local/regional availability of technical services available for repair.

3. Water/Sewerage

- Describe the pre-existing systems: i.e, for water, the source, treatment facilities, mains, pump stations, and distribution network; and for sewerage, the treatment facilities and pump stations.
- Estimate the numbers of people who depend on the water sources by type (e.g., river, city water system).
- Determine why water (especially potable water) is not available (i.e., at what point the system has been damaged).
- Check the integrity of the water source.

- Assess the condition of water and sewerage treatment facilities and of the distribution network. Are pump stations operational?
- Determine whether water mains are broken. Are leaks in the sewerage system contaminating the water supply?
- Outline the impact of water loss on key facilities and on individual users. How quickly can the responsible ministries be expected to restore services?
- Describe options for restoring minimum essential services.
- Evaluate possible alternative water sources.
- Identify local/regional suppliers of equipment and materials. Check cost and availability.
- Determine local/regional availability of technical services available for repair.

4. Hydro Facilities (Hydroelectric, Irrigation)

- Describe the function of the facilities. their proximity to the stricken area, and their relationship to the disaster itself.
- Identify the host country organization that controls and operates the facilities.
- Identify the suppliers, contractors, and/or donors that built the facilities (i.e., what were the equipment and technical sources?).
- Describe any damage to systems.
- Check the soundness of structures and outlet works. Are reservoirs watertight?
- Identify any immediate or near-term safety risks (generating and control machinery, structural defects, power to operate gates, etc.).
- Assess the condition of canals and/or downstream channels.
- Identify any changes in watershed conditions (e.g., saturation, ground cover, stream bed loading, new impoundments).
- Determine whether water is being contaminated.
- Evaluate the management of the facilities.
- Determine whether storage and outflow quantities are being managed in accordance with prescribed curves.
- Identify preparations for follow-on storm conditions (e.g., emergency draw down of reservoirs).
- Describe the probable impact of discharging on downstream damage and/or relief efforts (e.g., depth at river crossings, releases into damaged canals). Is there a need to impound water until downstream works can be repaired?
- Outline options for restoring minimum essential services.
- Outline repair plans of the responsible host country officials.

- Check on any proposed assistance from the original donors of the facilities.
- Identify local/regional sources of equipment and technical expertise.

5. Roads and Bridges

- Describe road networks in the affected area by type. What is the load capacity of the bridges?
- Identify the responsible ministries and district offices and constraints on their operations.
- Describe any damage to the network.
- Determine which segments are undamaged, which can be travelled with delays, and which are impassable.
- Describe any damage by type:
  - Blockage by landslides, fallen trees, etc.
  - Embankments.
  - Drainage structures.
  - Bridges/tunnels.
  - Road surfaces.
- Identify alternate crossings and/or routes.
- Evaluate the importance of the road network to the relief effort and to rehabilitation.
- Outline options for restoring minimum essential service.
- Determine which elements must be restored first.
- Describe needs for traffic control (police, military, other) on damaged or one-way segments.
- Determine how long emergency repairs can accommodate relief traffic (size, weight, volume?). Will emergency maintenance and fuel points be needed in remote areas?
- Identify host country agencies, military, and/or civilian forces available to make repairs. Do they have equipment, spare parts, maintenance support?
- Check whether local or expatriate construction companies can loan equipment and/or expertise
- Check regional sources of equipment and/or expertise available for repair.
- Ascertain that arrangements can be made for standby forces at damaged sections to keep roads open.