Assessment Guidelines

I. Food and Agriculture

II. Health and Sanitation

III. Shelter

IV. Logistics and Management

V. Infrastructure

FOOD AND AGRICULTURE

I. General Principles

A. In assessing food needs, it is important to specify whether actual food stocks have been destroyed or whether access to food has been disrupted.

B. Except for vulnerable groups, most disaster victims can go without food, if need be, for days following the disaster. The need for food may be more psychological rather than physiological during this time. (The World Food Program has noted that in famine siutations, the need for food is variable. Lacking any hard data, one could assume that for every 1,000 people: 100 will require full feeding, 100 one-half feeding, 400 one-quarter, and 300 will require no feeding.)

C. Though food may not be an immediate need, information about food is an immediate need because of the long lead times associated with delivering food.

D. The need for food must be reviewed in concert with damage assessments of the logistical infrastructure as inadequate warehousing and trucking, for example, could become binding constraints on any food aid.

E. Food aid has great potential for disrupting local markets and social interaction as well as for straining disaster relief management capabilities. Complete data on food/agricultural needs are therefore especially important.

F. An earthquake does not generally destroy food stocks or crops; however access to food may be disrupted.

G. A hurricane may actually increase local food availability in the first days because tree crops are blown out of trees or root crops must be harvested. There may be a need for food in the medium term.

H. When disaster victims are evacuated, for example during a volcanic eruption, food aid may be required even though food stocks have not been destroyed.

I. In describing agricultural inputs such as seed, fertilizer, and pesticides, it is imperative to specify varieties and application rates used in and familiar to the affected area. New varieties or new practices should generally not be introduced during a disaster relief effort.

II. Food

A. Baseline Data

1. Describe the normal consumption pattern (food basket) of the affected population, any taboos, and acceptable substitutes.

2. Describe the normal food marketing system (including gov't. involvement, imports, subsistence).

3. Indicate what food aid programs, if any, exist and describe them.

4. Outline the indigenous food processing capacity.

B. Effect of the Event on Food

1. Ascertain the disaster's effect on actual food stocks and standing crops (damaged/destroyed).

2. Determine if access to food (e.g., roads, milling facilities)
has been disrupted and, if so, how long it is likely to remain disrupted.

3. Check market indicators of food shortages, such as:

a. Absence/shortage of staple grains and other foods on the market,

b. Price differential,

c. Change in supplies on the market (e.g., an increase in meat supplies may indicate people are selling animals to get money),

d. Change in wholesale grain availability,

e. Unusual public assembly at warehouse or dockside when grain is being unloaded,

f. Changes in warehouse stocks,

g. Black-market price changes or increase in black-market activities,

h. Commercial import changes or proposed changes, and

i. Sale of land, tools, draft animals, etc.

4. Check nutritional indicators of food shortages, such as:

   a. Signs of marasmus, kwashiorkor, or other signs of malnutrition,

   b. Increased illness among children, and

   c. Change in diet, i.e., quantity, quality, and type.

5. Check social indicators of food shortages, such as:

   a. Increased begging/fighting, and

   b. Migration from rural to urban areas.

C. Food Availability

1. 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?

2. Estimate local government stocks on hand and those scheduled to arrive. Is borrowing of stocks on hand a possibility?

3. Estimate the local commercial stocks on hand and scheduled to arrive.

4. Estimate the local volag/international organization stocks on hand and scheduled to arrive. Is borrowing a possibility?

5. Estimate local personal stocks on hand and scheduled to arrive.

6. Determine regional availabilities.

7. Canvass other donors to find out what they expect to contribute.

8. Estimate how much food aid would be required during specific time periods.

D. Distribution Systems

1. Describe existing food aid distribution systems, e.g., government rationing, volags, WFP (FFW, MCH, Canteen).

2. Describe government marketing mechanisms.

3. Judge the capacity of the above to expand/begin emergency aid. What is their record of accountability?

4. Mass feeding

   a. Explain the country's (agency's) previous experience with mass feeding.

   b. Determine the availability of facilities and materials, including fuel.

5. Determine whether repackaging facilities exist.

E. Social and Market Impact of Food Aid

1. Analyze the likely price impact on normal food suppliers. Describe the suppliers.

2. Decide whether food aid would free cash and labor for other aspects of relief, or would divert labor and create a dependent attitude.

F. Other

1. Research any legal impediments to importation of certain foods.

III. Agriculture

A. Baseline Data

1. Describe crops grown in the affected area following the points listed below:

   a. Crop name

   b. Average area planted (per data available)

   c. Average production (per data available)

   d. Planting season(s) (dates) and time to maturity

   e. Are crops climate-specific?

   f. Are hybrid seeds being used in the area?

   g. Cash or subsistence?

2. Describe domestic animals present in the affected area following the points listed below:

   a. Approximate number of animals in the area

   b. Value of individual animals

   c. Use of animals for food

   d. Use of animals for work

   e. Use of animals for cash production

   f. Are bred stocks used in the area?

3. Describe the agricultural system, including the following:

   a. Land use systems

   b. Agricultural labor system/land tenure

   c. Crop preferences

   d. Inputs

      1) Seeds (reserved or purchased?) Is treated seed used?

      2) Fertilizer

      3) Machinery/tools

      4) Pesticides

   e. Storage (on farm, government, private?)

   f. Agro-business facilities, processing of local or imported commodities

4. Describe the local fishing industry.

B. Effect of the Event on Agriculture/Livestock/Fisheries

1. Ascertain the extent of damage by crop/livestock/fisheries and by area, noting at what point in the production cycle the event occurred. State the source of the information.

2. Estimate the loss in production (tonage/head) by crop/livestock/fisheries and by zone within the affected area.

3. Analyze whether losses will increase over time and state why.

4. Describe damage to agricultural machinery.

5. Describe damage to irrigation systems.

6. Describe damage to seed, fertilizer, and pesticide stocks.

7. Describe damage to fishing gear.

8. For a drought, compare current rainfall to the normal or recent past precipitation.

9. Identify any unusual or untimely grazing changes.

10. Describe any threats from insects or disease that might follow the disaster.

C. Availability of Inputs - by type (e.g., seed, fertilizer, pesticides, tools, machinery, veterinary medicines, fishing boats, nets, breeding stock)

1. Estimate the local government stocks on hand and scheduled to arrive.

2. Estimate the local commercial stocks on hand and scheduled to arrive.

3. Estimate the local personal stocks on hand and scheduled to arrive.

4. Elicit from the victims information on how they plan to cope with losses.

5. Determine regional availabilities and elasticity of supply.

6. Ascertain what other donors plan to supply.

7. Outline what further inputs would be required to restore minimum productivity.

8. Find out if repackaging facilities for seed, fertilizer, and pesticides exist.

D. Distribution Systems/Technical Infrastructure

1. Outline host government (Ministry of Agriculture) operations in the affected area. Does it provide:

   a. Extension service,

   b. Crop storage/silos,

   c. Veterinary services,

   d. Irrigation services,

   e. Research facilities,

   f. Hybrid seed,

   g. Fertilizer,

   h. Other plants (fruit trees), and/or

   i. Pesticides?

2. Describe any agricultural projects and inputs provided by foreign organizations/governments.

3. Describe the operations of rural or agricultural credit organizations, cooperatives, or credit sharing organizations that exist in the affected area.

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

HEALTH AND SANITATION

I. General Principles

A. Identify and talk with any and all available officials of the host government (or affected area) "chain of command" for health issues. Find out what data gathering has begun and who is gathering it. Coordinate plans for your own data gathering activities with health officials so that subsequently arriving people/teams do not needlessly duplicate your efforts.

B. All information should be quantified whenever possible, including (a) number of people and (b) the extent to which they are involved. Rates should be determined by any available sampling procedures and these rates should then multiplied by estimates of the total number of people in an area.

1. (e.g.) For trauma:
   a. Villages or other habitational units probably representative of other affected areas should be chosen.

   b. A quick "walk through" survey should be done observing the first 20-30 houses encountered and noting how many people are injured and require major treatment.

   c. The injury rate should then be calculated and multiplied by the entire estimated affected population to obtain an estimate of the total number of injured people.

C. Sources of all information should be clearly specified. Examples might include whether it was observed, reported by an informant in a discussion, collected through a survey of a randomly sampled population, heard by rumor, etc. The information will be more meaningful to those interpreting it, especially with conflicting reports, if a source is indicated.

D. Reliable population data are essential for qualifying estimates of disease or injury (or almost any other disaster-related need). If such information does not exist prior to the team's arrival, the epidemiologist on the team should have the expertise to begin gathering population data.

E. Health conditions often change rapidly after a natural disaster. For this reason, it is best to concentrate on immediate needs, one of which is creation of a disease surveillance system to provide data for medium-term and long-term needs assessment.

F. Preventive rather than curative medicine should be stressed, except in cases of acute trauma.

G. Fear of an outbreak of disease after a disaster is largely unfounded. While endemic diseases will continue to exist, a disaster introduces no new ones.

H. Vaccines, especially cholera and typhoid, have no place in an emergency relief effort.

I. "Field" hospitals, large quantities of curative medicines, and unskilled labor from the outside world are almost never needed.

J. Corpses are not a source of disease except for anthrax, smallpox, and plague. There is, therefore, no health reason for mass burials (which may lead to social disruption). The only diseases transmitted by animal carcasses are rabies or, if the dead animal had fleas, plague and tularemia.

K. Halazone tablets are generally not an appropriate response to contaminated water.

II. Trauma

A. Determine or estimate* number of deaths and death rate in affected areas.
*Methodology must be specified for estimates (e.g., rumor, information from local leaders, spot surveys, random sample, etc.).

B. Determine or estimate number of major injuries and rate for each type of injury. Specify traumatic injuries requiring surgery, hospitalization (e.g. fractures, head injury, internal injuries).

C. Determine number and locations of health facilities which existed prior to the disaster.

D. Determine number of facilities which are still functioning and reflect the total number of usable beds.

E. Determine number of indigenous health personnel who are available.

F. Determine amount of medical supplies and drugs which are available on site or in country.

G. Determine additional amount needed immediately from sources outside the stricken area.

H. Determine what additional medical equipment is needed, and can be readily obtained, to deal with major injuries.

I. Suggested data sources:

1. National/provincial health officers
2. Hospitals
3. Clinics
4. Traditional healers
5. Local leaders
6. Fly over
7. Walk-through surveys

III. Water

A. Describe the types of systems that existed prior to the disaster in affected areas.

B. Describe how they relate to population concentrations still remaining in the area.

C. Determine who is in charge of local water system(s). (community group? committee? national authority?)

D. Ascertain whether the officials are aware of chlorine use.

E. Determine whether the system is still functional.

F. Specify how many people have been deprived of functional water supply.

G. Determine what material the system is constructed of.

H. Describe any evidence of unusual sanitation problems, e.g., ponding of water.

I. Establish a point for a controlled water supply to be put in, once resources become available. The assumption is being made that, after earthquakes and other natural disasters, water should be considered contaminated until proven otherwise.

J. Determine if there is any early evidence of water-related disease.

IV. Nutritional Status

A. Determine the pre-existing nutritional status of the population. For example, what percentage of children are "malnourished" by objective standards? (This information may be available in an OFDA Country Profile.)

B. Determine the nutritional status of a small sample of children, using weight (Satter scale) for height (height based) standards and by doing an edema count.

C. Determine at a local level if access to food has been disrupted.

D. Estimate the number of individuals requiring emergency food supplies and the duration of this need.

V. Communicable Diseases

A. Determine endemic disease levels by reading a country profile (should be done prior to arrival) and by talking with national and provincial health officers.

B. Encourage (and teach how, if necessary) local health personnel to set up a simple surveillance system designed to detect increases in communicable diseases and to help dispel rumors.

C. Determine which social disruptions could lead to communicable disease problems (e.g., crowding, interrupted vector control programs).

D. Ascertain which, if any, communicable diseases are being diagnosed. Document the method of diagnosis (clinical judgment versus laboratory test versus rumors).

E. Determine which health officials can/will investigate rumors of disease outbreaks.

F. Support national authorities in their efforts to restrict vaccine use to specific indications.

VI. Vectors

A. Determine what endemic vector borne diseases are problems and which control programs have been functioning.

B. Include these diseases in your surveillance system to detect future increases.

VII. Waste Disposal/Sewage

A. If the disaster occurs in a rural area, waste disposal is almost never a problem unless sewage "ponds" in a public area. Determine if this is occurring.

B. 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.]

C. Determine the adequacy of sewage disposal facilities in any public buildings or other areas being used to temporarily shelter homeless people.

SHELTER

I. General Principles

A. Shelter assessment should be done in direct coordination with the affected government, since the government will usually have a preponderant role in all aspects of a shelter program (e.g., timing, location, type, distribution).

B. It is also important to ascertain the desires and plans of the victims themselves, as they may initiate reconstruction activities on their own

II. Private Dwellings

A. Damage

1. Determine the type (urban/rural) and size of the area affected through field visits.

2. Determine accessibility to the affected areas, for both assessment and delivery.

3. Approximate the percentage of units of private dwellings (i.e. single family, attached, low-rise and high-rise multiple family) damaged and destroyed by village or region.

4. Determine the number of damaged dwellings that are habitable without immediate repair, that are habitable only after repair, that are not habitable and must be destroyed.

5. Inventory existing structures and public facilities that can be used as temporary shelters, giving careful consideration to access to sanitation and water.

B. Victims

1. Determine the number of homeless victims.

2. Determine the average number of people in an individual dwelling (if not already known).

3. Elicit the perceived needs of the disaster victims and how they are currently meeting or planning to meet their own needs (temporary as well as permanent).

4. Determine the number of victims that will need some form of temporary shelter.

5. Identify obstacles that prevent victims from meeting their own needs both for temporary and permanent shelter.

C. Materials

1. Identify construction styles and materials normally used in the affected structures.

2. Determine the availability (and costs) of indigenous materials to meet both cultural and disaster resistance requirements.

3. Identify any suitable material substitutes, locally or externally available, that would meet the cultural and disaster prevention requirements.

4. Identify the type and quantity of building materials that the victims can provide for themselves for temporary/permanent shelter.

5. Identify the type and quantity of building materials that the affected government can provide for the victims for temporary/permanent shelter.

6. Determine the type and quantity of materials needed from external sources for temporary/permanent shelter.

D. Sites and Conditions

1. Assess the suitability, i.e., infrastructural support, of available sites for both temporary and permanent shelters, including, where necessary, mass sheltering.

2. Determine if relocation is necessary due to the nature of the disaster.

3. Assess the potential disaster vulnerability of available sites for both temporary and permanent shelters.

4. Assess the environmental conditions that affect needs for temporary shelter.

5. Assess the environmental conditions that would impose constraints on permanent shelter.

6. Identify any problems related to land use and land tenure.

E. Distribution

1. Determine availability of a distribution mechanism (local, regional, national, or international) to distribute shelter materials (temporary or permanent) to the victims.

2. Identify committees, credit unions, government agencies, co-ops, etc., that can mobilize forces to help implement a shelter program.

3. Determine an equitable means of allocation and an appropriate medium of exchange for the building materials.

III. Public Buildings & Mass Shelter

A. Damage

1. Assess the number of buildings destroyed, damaged, repairable by category (schools, churches, community centers, etc.).

2. Identify those public buildings designated as public shelters (prior to a disaster) that are in usable condition.

3. Determine what repairs, if any, are needed to make the structures usable for their intended purpose or for mass shelters.

B. Analyze the likely impact of public buildings not being available for their intended use, i.e., if they become public shelters.

C. Sites and Conditions

1. If necessary, identify suitable (i.e., with adequate infrastructure support) new premises to be used as public shelters.

2. Verify whether management personnel to operate public shelters are available.

3. Verify that shelters have necessary utilities (sanitation, water supply, electricity).

4. Assess the number of people that can be accommodated in public shelters.

D. Materials

1. Identify construction materials and styles normally used in the affected structures.

2. Determine the availability (and costs) of indigenous materials to meet both cultural and disaster resistance requirements.

3. Identify any suitable material substitutes, locally or externally available, that would appropriately meet the cultural and disaster prevention requirements.

4. Identify the type and quantity of building materials that the affected government can provide for the victims for temporary and permanent shelter.

5. Determine what repairs the victims can make themselves to make the affected structures occupiable.

6. Determine the type and quantity of materials needed from external sources for temporary and permanent shelter.

E. Distribution

1. Gather pertinent information as under II.E. above.

IV. Personal Effects

A. Make a general determination of number and type of personal articles lost in the disaster or needed because the victims are displaced.

1. Blankets

a. Estimate the number and type (according to climatic conditions) of blankets needed.

b. Identify what is available within the country from personal, commercial, volag, or government stocks.

c. Determine what is needed from external sources.

2. Clothing

a. Describe the clothing traditionally worn, by season and area.

b. If clothing is needed, estimate the amount by age group and sex.

c. If clothing is needed, determine if used clothing is acceptable and, if so, for which groups.

3. Heating/Cooking Fuel

a. Describe normal heating/cooking practices.

b. Determine whether heating equipment and/or fuel are required.

c. Estimate types and quantities needed over a specific time period.

d. Determine appropriate storage and distribution mechanisms.

e. Identify what is available locally.

f. Identify what is needed form external sources.

4. Other

a. Determine if other personal effects, such as cooking utensils and small storage containers, are needed.

LOGISTICS AND MANAGEMENT

I. General Principles

A. Assessment of the logistical capabilities of a disaster stricken country is a prerequisite to the formulation of reasonable requests for assistance and to the delivery of the right items to the right place at the right time.

B. There are ample statistics and detailed information on port and airport facilities available in Washington (and world wide). Assessment should concentrate on identifying changes created by the disaster or by excessive use during relief operations.

C. Baseline data on port facilities are available in Ports of the World and from carriers serving the port(s) in question. These are summarized in OFDA Country Profiles, where they exist.

D. Baseline data on airports of the world, including grass strips and unpaved airports, are available from the Federal Aviation Administration (Bill Hamm or Mr. Webb - 202-426-3163 and from aircarriers serving the airport(s) in question. These are also summarized in the OFDA Country Profiles.

E. Baseline data regarding storage and distribution systems may be available from voluntary agencies in country.

F. Some of the requested information is needed before civil or military cargo aircraft can be dispatched. Other information is aimed at maximizing flexibility and efficiency.

II. Airports

A. Identify the airport being assessed, by:

1. Name,

2. Designator,

3. Location, and

4. Elevation,

B. Describe the current condition of facilities.

1. Ascertain whether the airport is fully operational. Daylight hours only?

2. Furnish information on usable runway lengths and location(s).

3. Determine whether taxiways, parking areas, and cargo handling areas are intact.

4. Establish whether runway and approach lights are operating.

5. Specify which navigational aids are operating.

6. Describe available communications facilities.

7. Determine whether the terminal building is operating.

8. Check the availability and cost of aviation fuel.

9. Find out if facilities exist for mandatory aircrew rest.

10. Explore whether the cargo handling area can be lighted for night cargo operations.

C. Determine what cargo-handling equipment is available, including fuel and operators.

1. Forklifts (number, capacity)

2. Scissors Lift (capacity)

3. Cargo dollies (number)

D. Determine what start-up equipment is available, including fuel and operators.

E. Describe maintenance operations (facilities, personnel, hours).

F. Outline what storage is available.

1. Covered?

2. At the airport? Off airport? How far?

3. Capacity and suitability for storage of foods or other perishables

G. Civil Air

1. Find out whether arrangements can be made for prompt overflight and landing clearances.

2. Ascertain that the air controller service is functioning.

3. Specify working hours for airport personnel.

4. Explore having "No Objections" fees or "Royalty" fees waived or paid locally. (This applies principally to the Middle East and to parts of Africa where a charge, equal to 15% of the charter cost, may be levied against chartered aircraft.)

5. Find out if arrangements can be made to work around the clock, including customs.

6. Identify personnel to tally and document cargo as it is received and transhipped.

7. Ascertain that the host government will accept deliveries by means of military as well as civil aircraft.

H. Describe security arrangements.

I. Determine what repairs and/or auxiliary equipment would be needed to increase airport capacity. How soon can local authorities be expected to restore service?

III. Seaports

A. Identify the port being assessed, by:

1. Name, and

2. Location.

B. Describe the current condition of facilities.

1. Ascertain whether the port is fully operational. Daylight hours only?

2. Determine whether the disaster has altered the physical characteristics of the port, e.g.:

a. Depth of approach channels

b. Harbor

c. Turning basin

d. Alongside piers/wharves

e. Availability of lighters

3. Determine whether the disaster has blocked or damaged port facilities.

a. Locks

b. Canals

c. Piers/wharves

d. Sheds

e. Bridges

f. Water/fuel storage facilities

g. Security fences/facilities

h. Communications facilities

i. Customs facilities

4. Describe the berths.

a. Number

b. Length

c. Draft alongside

d. Served by rail? road? sheds? lighters only?

e. Availability

5. Check the availability and cost of fuel.

C. Determine what cargo handling equipment is available, including fuel and operators.

1. Heavy lift cranes (number, capacity)

2. Container and pallet-handling (with port equipment? with ship's gear only?)

D. Outline what storage is available.

1. Covered?

2. Hardstand space?

3. Capacity

4. Security

E. Operations

1. Find out if pilots, tugs, and linehandlers are available.

2. Specify working hours for the port.

3. Specify working hours for customs.

4. Determine whether arrangements can be made with port and host country authorities to obtain priority berthing for vessels delivering disaster relief shipments.

5. Identify an adequate number of personnel to tally and document cargo as it is received and transshipped.

6. Check the history of turnover time. What effect has the disaster had on turnover time?

F. Determine what repairs and/or auxiliary equipment would be needed to increase port capacity. How soon can local authorities be expected to restore service?

IV. Transfer Points

A. Identify transfer points by location.

B. Determine whether surface transportation for cargo is available from air and seaports.

1. Road?

2. Railroad?

3. Canal/river?

C. Estimate the capacity of transfer points, including handling.

D. Outline what storage is available.

E. Describe security arrangements.

F. Identify an adequate number of personnel to receive and document cargo for transshipment.

V. Trucking

A Describe damage to the road network as it relates to the possibility of delivering relief supplies by truck.

1. Indicate any restrictions such as weight limitations and width, length, or height limitations at bridges, tunnels, etc.

2. Determine whether it is possible to bypass damaged sections of the road network and what weight restrictions would apply.

B. Availability

1. Determine whether containers can be moved inland.

a. 20-feet

b. 40-feet

c. To the disaster site or to a transfer point?

2. Check the availability and cost of host-government-owned trucks.

3. Check the availability and cost of volag-owned or operated vehicles.

4. Check the availability and cost of commercial vehicles.

5. Judge whether the relief program could or should contract for any of the above trucks. Could an established price be maintained under a contract?

C. Ascertain that maintenance facilities and spare parts are available.

D. Outline measures to provide for security of cargo in transit.

E. Check the availability and cost of fuel.

VI. Railroads.

A. Identify any railroads in the disaster stricken area. Locate the railroads.

B. Assess their current condition.

1. Describe any damage to the electrical power system.

2. Identify any interdictions - damaged bridges, tracks, fallen trees, etc.

C. Judge the reliability of the rail system.

D. Determine whether cars can be made available for relief shipments on a priority basis.

E. Determine the capacity and cost of rail shipments.

F. Outline security measures to protect cargo in transit.

VII. Alternative Aircraft

A. Identify any usable airports or suitable helicopter landing sites in the disaster zone.

B. Determine the local availability and cost of helicopters and/or fixed wing aircraft.

1. Estimate their capacity.

2. Identify the owners/agents.

C. Determine the availability and cost of fuel.

VIII. Warehousing

A. Identify undamaged, or damaged but usable, warehouses located in reasonable proximity to the disaster site.

B. Find out the capacity of these warehouses.

C. Determine their availability over a specific period of time.

D. Specify whether the warehouses are government, volag, or privately owned.

E. Assess the adequacy of the warehouses' construction.

1. Ventilation

2. Lighting

3. Hard floor

4. Fire proofing

5. Loading docks

F. Describe loading/unloading equipment that is available.

1. Pallets?

2. Forklifts and fuel for them?

G. Ascertain that adequate security exists.

1. Perimeter fence

2. Lighting

3. Guards

H. Determine whether any refrigeration is available.

. Determine whether sorting and repackaging facilities exist.

J. Determine whether fumigation is necessary/available (for food, medicaments, etc.).

IX. Managerial Capacity

A. Evaluate the managerial capacity of the following by identifying personnel, program descriptions, opinions on effectiveness.

1. Embassy/Mission

2. Host government. Describe coordination & operation among various levels of government and their ability to provide liaison with outside donors.

3. Volags. Do volag field staff have the authority to sign grants? What is their past history on accountability?

4. U.N. System. Do U.N. field staff have the authority to sign grants? What is their past history of accountability?

5. Local service agencies, e.g., credit unions, cooperatives

B. Describe coordination mechanisms, including meetings.

C. Determine whether a lead agency has been designated.

INFRASTRUCTURE

I. General Principles

A. Infrastructure needs should be addressed in the following order of priority: communications, electric power, water/sewerage, hydro facilities, and roads and bridges.

B. All infrastructure needs may be considered immediate needs; variation comes in the degree of restoration that is required immediately.

C. In lesser developed countries, the pre-disaster condition of infrastructure is frequently less than ideal; so the gap between current and pre existing conditions may be smaller than an outside assessor might assume.

D. Setting minimum needs for communications, power, etc. is a function of decision making, not of information gathering. Minimum needs should be determined by officials in the stricken country before launching appeals to donors because many donors tend to overreact in this sector.

E. Minimum needs will rise over time, as a relief effort progresses.

F. At the onset of disaster recovery, deal with damage to infrastructure by bypassing infrastructure where possible and by "load shedding."

G. Look at damage from the perspective of responding to the stricken population's minimum need. Determine what action should be taken to restore a vital service immediately, e.g., switching to another power source in an electrical grid (when damage is localized).

II. Communications

A. Baseline Data

1. Describe where the system's facilities are located.

2. Determine the broadcast/reception area or zone of influence (e.g., towns serviced by system).

3. 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?)

4. Obtain technical information, e.g.:

   a. Broadcast power

   b. Operating frequencies, call signs

   c. Relay/transmission points

   d. Hours of operation

   e. Standby power sources

   f. Mobile capability

   g. Repair/maintenance facilities, including capabilities of manufacturer's local agent

   h. Language of transmission

5. Identify key personnel (owners, management, operations, maintenance).

6. Determine the degree of integration of military and civilian communications networks.

7. Note the source(s) of the above information.

B. For communications, first determine what facilities exist which are operable or easily repaired and which could be used to pass assessment information and to assist in coordination of life saving responses.

C. Identify the type of system assessed, e.g.,

1. Radio

   a. Private Ownership

      1) Commercial

         a) Broadcast

         b) 2-way

      2) Amateur

      3) Citizens Band

b. Public Systems

1) Police

2) Armed Forces

3) Government agencies (Which ministries have communications facilities?)

4) Other

2. Telephone

3. Cable & Wireless

4. Television

5. Newspaper

6. Other

D. Describe specific reasons why a system is not operating.

1. Unavailability of:

a. Personnel

b. Power

c. Fuel

d. Access to facilities

e. Other

2. Damage to system:

a. Broadcast/transmission equipment

b. Antennae

c. Buildings

d. Tranmission lines

e. Relay facilities

f. Power source

g. Other

3. Note source(s) of the above information.

E. Outline options for restoring minimum essential services.

F. Repair Capability

1. Identify local/regional suppliers of communications equipment and materials. Check cost and availability.

2. Determine the local/regional availability of technical services.

III. Electric Power

A. Baseline Data

1. Describe the power system including:

a. Base load facility

b. Peaking facility

c. Number of units

d. Fuel source

e. Plant controls

f. Output capability (specify voltage and cycle)

g. Mobile plants

h. Other standby capability

i. Switching facilities

j. Transmission facilities

k. Distribution facilities (number of substations)

l. Interconnections

2. Inventory auxiliary equipment that may be available locally, from construction companies, for example.

B. Determine why power is not available, i.e., at what point the system has been damaged.

1. Ascertain the condition of generating units.

2. Check the integrity of the fuel system.

3. Determine whether towers, lines, and/or grounding lines are down.

4. Assess the condition of substations.

C. Outline the impact of power loss on key facilities such as hospitals, water pumping stations.

D. Describe options for restoring minimum essential services.

E. Repair Capability

1. Ascertain whether load shedding and/or switching to another grid can restore minimal services.

2. Identify local/regional suppliers of equipment and materials. Check cost and availability.

3. Determine the local/regional availability of technical services.

IV. Water/Sewerage

A. Baseline Data

1. 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.

2. Estimate the numbers of people who depend on the water sources by type (e.g., river, city water system).

B. Determine why water (especially potable water) is not available, i.e., at what point the system has been damaged.

1. Check the integrity of the water source.

2. Assess the condition of water and sewerage treatment facilities and of the distribution network. Are pump stations operational?

3. Determine whether water mains are broken. Are leaks in the sewerage system contaminating the water supply?

C. Outline the impact of water loss on key facilities and on individual users. How quickly can the responsible ministries be expected to restore services?

D. Describe options for restoring minimum essential services.

E. Repair Capability

1. Evaluate possible alternative water sources.

2. Identify local/regional suppliers of equipment and materials. Check cost and availability.

3. Determine local/regional availability of technical services.

V. Hydro Facilities (Hydroelectric, Irrigation)

A. Baseline Data

1. Describe the function of the facilities, their proximity to the stricken area, and their relationship to the disaster itself.

2. Identify the host country organization that controls and operates the facilities.

3. Identify the suppliers, contractors, and/or donors that built the facilities. (i.e., what were the equipment and technical sources?)

B. Describe any damage to systems

1. Check the soundness of structures and outlet works. Are reservoirs watertight?

2. Identify any immediate or near-term safety risks. (generating and control machinery, structural defects, power to operate gates, etc.)

3. Assess the condition of canals and/or downstream channels.

4. Identify any changes in watershed conditions, e.g., saturation, ground cover, streambed loading, new impoundments.

5. Determine whether water is being contaminated.

C. Evaluate the management of the facilities.

1. Determine whether storage and outflow quantities are being managed in accordance with prescribed curves.

2. Identify preparations for follow-on storm conditions, e.g., emergency drawdown of reservoirs.

3. 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?

D. Outline options for restoring minimum essential services.

E. Repair Capability

1. Outline repair plans of the responsible host country officials.

2. Check on any proposed assistance from the original donors of the facilities.

3. Identify local/regional sources of equipment and technical expertise.

VI. Roads and Bridges

A. Baseline Data

1. Describe road networks in the affected area by type. What is the load capacity of the bridges?

2. Identify the responsible ministries and district offices and constraints on their operations.

B. Describe any damage to the network.

1. Determine which segments are undamaged, which can be travelled with delays, and which are impassable.

2. Describe any damage by type, e.g.;

a. Blockage by landslides, fallen trees, etc.

b. Embankments

c. Drainage structures

d. Bridges/tunnels

e. Road surfaces

3. Identify alternate crossings and/or routes.

C. Evaluate the importance of the road network to the relief effort and to rehabilitation.'

D. Outline options for restoring minimum essential service.

1. Determine which elements must be restored first.

2. Describe needs for traffic control (police, military, other) on damaged or one-way segments.

3. Determine how long emergency repairs can accommodate relief traffic (size, weight, volume?). Will emergency maintenance and fuel points be needed in remote areas?

E. Repair Capability

1. Identify host country agencies, military, and/or civilian forces available to make repairs. Do they have equipment, spare parts, maintenance support?

2. Check whether local or expatriate construction companies can loan equipment and/or expertise.

3. Check regional sources of equipment and/or expertise.

4. Ascertain that arrangements can be made for standby forces at damaged sections to keep roads open.