

IV. SPECIAL TYPES OF ASSISTANCE

1. Military assistance

The armed forces of a country, because of their considerable capability for rapid response at times of crisis, often play an important role when a disaster occurs. Sometimes they act in support of disaster relief operations directed by others, but may themselves be given complete responsibility for them.

The pattern of armed forces' involvement in disaster relief operations generally reflects the structure of the national society. Where this is characterized by a fairly centralized government structure, which relies heavily upon the resources and control provided (usually) by the army, the armed forces are expected to provide leadership and, subject to the control of the national government, to solve the problems with which the country is faced.

Sometimes, no proper prior arrangements have been made, and only at the time of disaster will national government officials decide if civil authorities will be in charge of emergency activities, or whether military officers will be appointed with authority over local government officials and other public and private organizations involved in the relief operations in a disaster area.

In yet other societies, both centralized and decentralized, the military forces have been given a distinct supporting role, and will respond only to specific requests for help from the civil authorities in charge of relief activities. In any case, it should be borne in mind that the military form only a small proportion of the country's manpower resources, and too great reliance upon them may therefore be unwise—and indeed wasteful of other resources.

Where there has been no clear guidance given in advance, confusion has been created at the time of the disaster as to the explicit authority of and the nature of the relationship between civil and military bodies.¹³⁸ Coupled with the confusion which usually follows a major disaster event, this lack of planning and forethought is a recipe for chaos. Disaster legislation, or plans made with legislative authority, must therefore establish a system of command, control, utilization, integration and co-ordination of government, military and private resources, in order to protect the population, prevent damage, provide prompt and appropriate assistance, and achieve recovery in case of disasters of any kind, regardless of how they have been caused.

In certain circumstances, provision may also have to be made, in the legislation or elsewhere, for the recovery of costs incurred by reason of the involvement of military forces in relief operations. In the United Kingdom, the general principle is that funds provided for defence by Parliament should not be used for other purposes, but the Ministry of Defence has a discretionary power to waive charges when urgent assistance is necessary to save life. When the degree of urgency is less, or when the danger has passed, either extra or full costs of assistance may be charged to the civil authorities.¹³⁹

The capabilities of military forces in the post-disaster phase are manifold. The assistance likely to be available to civilian authorities, should they require it, has been summarized as follows.¹⁴⁰

¹³⁸ On occasion, in such circumstances, the military have assumed the leadership and the community has submitted to it willingly, even though normally the military would not act without a formal request from the civil authorities. "Social Structure and the Role of the Military in Natural Disaster", paper by W. A. Anderson, published in *Sociology and Social Research*, volume 53, 1969, No. 2.

¹³⁹ "Military Aid to the Civil Community", published by the Ministry of Defence, London, 1978.

¹⁴⁰ "A Special Study on Disaster Preparedness and Relief Operations", Inter-American Defense Board, 1975.

1. *Administration*
 - (a) *Public administration* Provide specialists to assist local governments in co-ordinating activities of various departments and in liaison with outside agencies providing emergency support.
2. *Communication*
 - (a) *Local communications* Provide and operate military-type communications within the disaster area headquarters site.
 - (b) *Intra-disaster area communications* Provide and operate military-type (mobile and tactical) communications on an austere basis within the disaster area.
 - (c) *Inter-area communications* Provide and operate inter-area communications between the disaster area and governmental and/or commercial communications access points outside the disaster area.
 - (d) *Communications administration* ... Provide communications specialists to assist local officials in supervision, operation, and re-establishment of all forms of public communications and communications systems including telephone, telegraph, radio, and television within the disaster area.
3. *Debris clearance*
 - (a) *Debris clearance* Provide earthmoving equipment, with operators, to clear debris from damaged areas and roadways.
4. *Evacuation*
 - (a) *Medical evacuation* Provide helicopter evacuation of casualties with inflight medical treatment and/or surveillance to medical treatment facilities from outlying areas inaccessible to ground vehicles. Provide ground ambulance evacuation of patients.
 - (b) *Normal evacuation* Provide helicopter evacuation of people from outlying, inaccessible, or endangered areas to care and control facilities. Provide ground evacuation for large numbers of people.
5. *Search and rescue*
 - (a) *Aerial search and rescue* Provide a co-ordinated, wide-ranging search and rescue service using fixed and rotary-wing aircraft to find and remove persons to safe areas or rescue centres.
 - (b) *Mobile search and rescue* Provide a co-ordinated search and rescue service using ground or water transport to find and remove persons to safe areas or rescue centres.
6. *Food*
 - (a) *Mass feeding* Provide field-type mess facilities operated by military personnel and issue emergency subsistence, when authorized.
 - (b) *Water supply* Provide potable water for emergency drinking and cooking purposes. Provide a water-hauling capability and chemicals for water purification.
 - (c) *Food administration* Provide specialists to assist and advise local government in surveying availability of local food and supplies and in supervising the storage, transport, and distribution of consumer goods and commodities made available by the armed forces and other agencies.
7. *Health, medical, and sanitation*
 - (a) *Grave registration and mass burial* Provide personnel and equipment to prepare necessary grave registration records and to supervise and establish temporary cemeteries.
 - (b) *Decontamination* Provide the trained personnel and equipment to contain, neutralize, or destroy hazardous materials, decontaminate the disaster site, provide security during the operation, and maintain control over the site until such time as relieved by competent authority.
 - (c) *Field sanitation* Provide trained specialists to plan and supervise health education programmes to include basic sanitation, personal health, and field sanitation team training.
 - (d) *Emergency medical treatment* Provide early care to injured or sick by trained medical personnel.
 - (e) *Emergency hospitalization* Provide hospitalization to personnel when temporary hospital facilities are required.

<i>Capability</i>	<i>Scope</i>
(f) Preventive medicine	Provide professional consultation services, support, and training in the fields of medical epidemiology and medical zoology, sanitary engineering, and veterinary aspects of zoonotic and food-borne disease control. Perform mass immunizations as required.
(g) Medical sorting (triage)	Receive, sort, and provide emergency or resuscitative treatment for patients until evacuated.
(h) Insect and Rodent Control	Conduct field surveys, investigate, and evaluate significant environmental health factors. Provide control of significant disease reservoirs in the civilian population and indigenous animals
(i) Veterinary service	Provide food inspection service, zoonotic disease control, and emergency veterinary treatment.
(j) Health administration	Provide specialists to assist and advise local government in establishing programmes for the control, treatment, and prevention of existing diseases, in providing measures for protection of food and water supplies, and in supervising maintenance of public health facilities and records.
 8. <i>Housing and shelter</i>	
(a) Emergency housing	Provide housing at military installations having facilities in excess of operational requirements
(b) Emergency construction	Erection of tented camps, and temporary shelter for public administrative offices, etc., utilizing military personnel. Provide engineer troop effort for emergency construction, when directed.
(c) Housing administration	Provide specialists to assist local government in the supervision and co-ordination of private and governmental labour agencies, in determining the availability of local labour needed to support and effect rehabilitation of facilities within the disaster area, and in effecting arrangements to provide the labour needs from the local area
 9 <i>Pollution control</i>	
(a) Oil and hazardous materials pollution control	Provide requested resources to assist in controlling a spill of oil or other hazardous materials in navigable waters.
 10 <i>Protection of life and property</i>	
(a) Maintenance of law and order	When authorized by proper authority, provide specialized military police units to assist local police agencies in maintenance of law and order.
(b) Prevention of looting and plundering	When authorized by proper authority, provide active military forces to assist local civilian authority in prevention of looting and plundering within the disaster area
(c) Firefighting	Furnish assistance in suppression of forest fires by providing earthmoving equipment with operators to clear fire breaks. Furnish units to provide a work force for firefighting equipment with operators to suppress fires in communities near military installations
(d) Police and fire departments	Provide specialists to assist and advise local government administration in supervising the activities of police departments and fire departments within the disaster area
 11 <i>Streets, roads and bridges</i>	
(a) Emergency repair	Clear and make emergency repairs to streets, roads and bridges utilizing engineer troop effort. Replace damaged bridging with temporary types, i.e. floating and/or panel bridges.
(b) Public works administration	Provide specialists to assist and advise local government in supervising operations of public works department within the disaster area and in co-ordinating the utilization of resources provided by other agencies

12. *Transport and traffic control*

- (a) *Emergency land, sea, and air transport* Provide land transport for the movement of personnel and supplies, utilizing military vehicles, for the accomplishment of primary missions. Provide boats and flood rescue parties.
Provide emergency airlift for the movement of personnel and supplies utilizing military aircraft not required for accomplishment of primary missions.

13. *Other*

- (a) *Restoration of utilities* Provide limited engineer troop support in the repair of water, sewer and low level voltage systems.
- (b) *Emergency power supply* Provide generators from available military resources. Construct limited low voltage distribution systems.
- (c) *Damage assessment* Provide personnel, with surface or air transport as required, to establish the location, nature, and extent of the emergency. Determine the type and amount of military resources required to supplement civilian efforts.
- (d) *Explosive ordnance disposal* Provide the capability to neutralize the hazards existing in explosive ordnance which because of unusual circumstances, present a possible threat to operations, installations, personnel or material. This includes the detection, identification, field evacuation, rendering safe, recovery, evacuation, and disposal of explosive ordnance which has been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard.
- (e) *Emergency flood control* Provide specialized engineer equipment (with operators) such as bulldozers, road-graders, front loaders, power shovels, scrapers, rollers, dump trucks and cranes. Also furnish units to provide a work force for filling and construction of emergency barriers.
- (f) *Preservation of art treasures and cultural objects* Provide specialists to supervise the identification, recording, custody, safeguarding, and disposition of works of art, religious effigies, monuments, archaeological or historic objects, archives and official public records within the disaster area.
- (g) *Civil affairs* Provide specialists to advise and assist local government in reviewing the facilities employed to disseminate information to the people; co-ordinating the operation of public communications media, and in planning, directing and supervising the preparation, distribution, and dissemination of necessary information through private or public agencies within the affected area.
- (h) *Emergency demolitions* Provide explosives and trained personnel to perform necessary demolition tasks, to include blasting ice masses threatening bridges and dams, or creating fire breaks.

A disaster area survey team (DAST) provided by the military can be an extremely useful addition to the facilities available to national authorities faced with a widespread disaster. United States practice calls for a DAST to consist of the following:

- | | |
|---|---|
| *Officer-in-charge (OIC) | Logistics/Supply NCO |
| *Civil engineer | Operations/Administrative officer |
| *Public health officer | Operations/Administrative NCO |
| *Communication officer | Food service supervisors and assistants |
| Preventive medicine officer | Air operations officer |
| Sanitary engineer | *Airfield survey team |
| Medical speciality team (medical doctors, veterinarian and medical technicians) | Combat control team |
| Medical supply officer/NCO | Army aviation operations officer |
| Radio operators and repairmen | Shallow water boat team |

although obviously not every disaster will call for the services of every one of these personnel.

Speed in the deployment of the DAST is of the essence. The personnel indicated with an asterisk (*) in the list above form an advanced unit, which has to be ready to move within a maximum of six hours after the request for the DAST's services is received. United States instructions stipulate that:

- (a) The primary mission of the DAST is to assist the Commander, US Military Forces in obtaining an estimate of the disaster situation and a reasonable assessment of the needs that may be required. The secondary mission is to provide relief assistance within its capability when directed by the US authorities in-country
- (b) The employment of DAST personnel to provide immediate humanitarian assistance must be carefully weighed against the essential need to gather information. A survey will be conducted of all or an assigned portion of the disaster area for the COMUSMILFOR to assess the requirements of the situation and establish priorities of the total US effort. Although the need for emergency assistance will usually be greatest during the early stages of DAST operations, the requirement to conduct the survey and report priority of needs is also greatest during this period.
- (c) To be effective, the DAST must tenaciously hold to its survey mission and not be diverted from the job of collecting key information and assessing needs to providing direct assistance to disaster victims. To do otherwise will inhibit identification of priorities and slow the delivery of urgently needed relief supplies. Relief teams can accompany the DAST, if some prior indication of need has been given, or they can quickly be called forward by the survey team upon determination of need based on survey of the area.

An apparent weakness in the regulations is that while it is expected that the reports sent by the U.S. Ambassador in the affected country should be repeated to the military authorities, there is no corresponding requirement for the DAST's reports to be copied to the U.S. Ambassador. This means that the DAST information sometimes does not reach those who need to know it for the purpose of co-ordination of international relief.

THE ALLOCATION OF SPECIAL FORCES FOR DISASTER RELIEF

Sweden has joined with other Nordic countries in making units of the armed services available to the United Nations for duties with peace-keeping forces, but so far only Sweden has also made parallel arrangements for the provision of similar units for disaster relief.¹⁴¹

A total of 160 officers and men are formed into the administrative and operational structure of the organization which comprises executive units and four direct relief units responsible for:

- (a) Survival,
- (b) Health,
- (c) Technical assistance, and
- (d) Transport and storage,

as shown in figure 51.¹⁴² The organization relies on small specialized teams averaging four technically trained personnel. The teams are equipped to operate independently. The flexible structure of the special units allows the relative size of an operation to vary from that of an individual to the combined efforts of one or more relief units, depending on the nature and extent of the disaster.

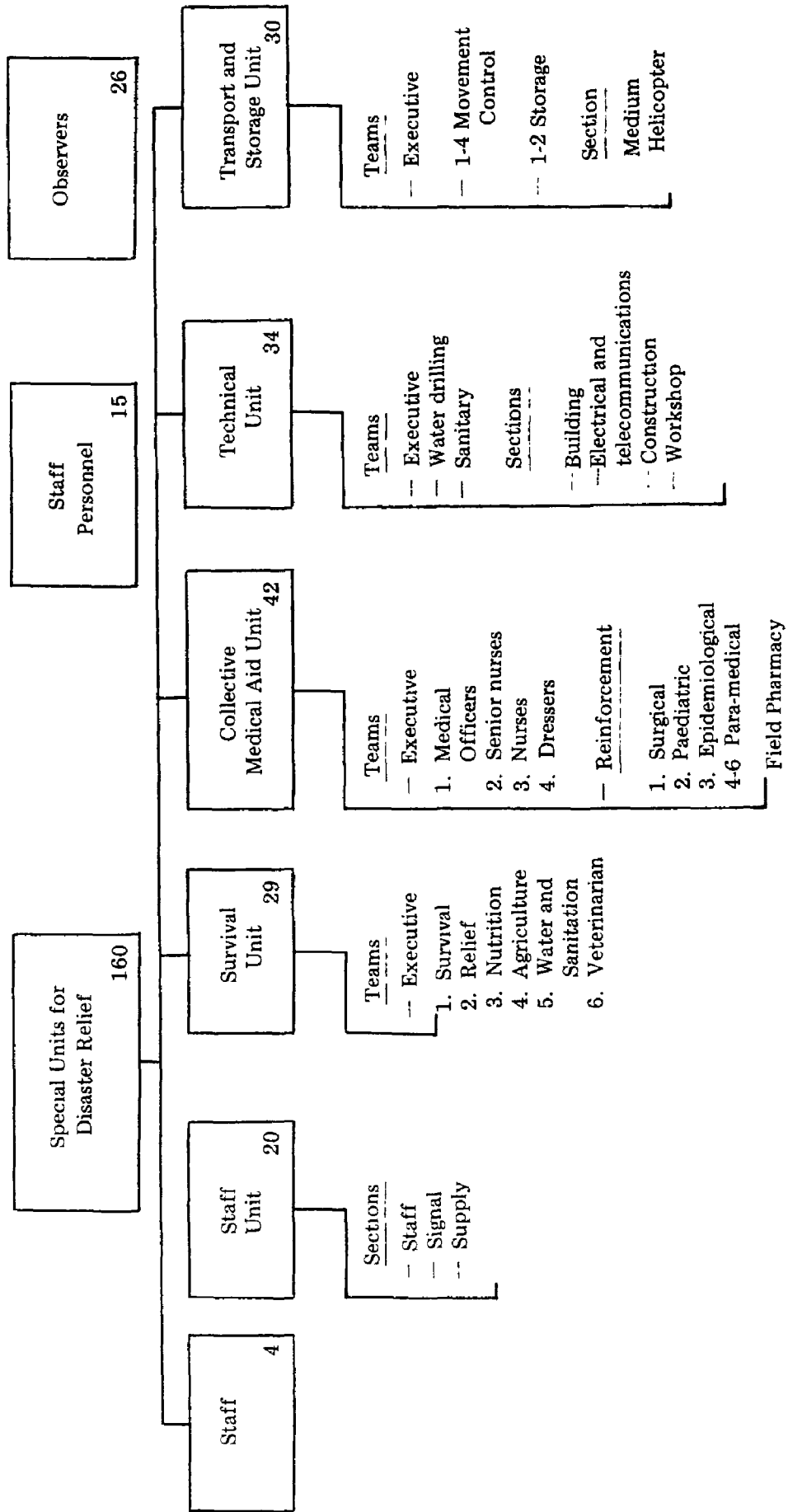
The role to be played by different elements of the special units would correspond with the type of operation and the terms under which it was being conducted, viz.

- (a) An operation initiated and co-ordinated by the United Nations;
- (b) A bilateral agreement between Sweden and the disaster-affected country.
- (c) Lending support, in the form of personnel and equipment, to a Swedish humanitarian organization engaged in giving aid to a disaster-affected country;
- (d) Participating in relief work within the scope of a United Nations peacekeeping mission

¹⁴¹ "Nordic Standby Forces in United Nations Service", published by the U.N. Department, Army Staff, Stockholm, on behalf of NORDSAMFEN, second edition, 1978.

¹⁴² Figure 51 is adapted from the organization diagram in "Nordic Standby Forces in United Nations Service" and information provided by the Swedish Army for a meeting on Mobile Disaster Units, held by UNDRO, Geneva April 1982. Figure 52 is taken direct from that information.

FIGURE 51
Swedish Special Unit for Disaster Relief



The appropriate *modus operandi* would be decided after the receipt by the Swedish Government of an official request for the assistance of the organization.

However, no decision would be taken until after an initial survey visit and even then, after allowing for the current availability in storage of the necessary equipment, it is expected to be 3-4 weeks after the disaster before the personnel would arrive in the country concerned (see figure 52).¹⁴²

As a self-supporting organization, the units carry necessary contingent equipment required for camps, vehicles and implements as well as personal kit and initial supplies of rations, medical equipment, medicines etc. as dictated by the nature of the mission.

In an operation of this kind it is assumed that the disaster-affected country would be able to provide local assistance and necessary labour to sustain the effort of the special units. Supplies brought from Sweden would be supplemented where necessary by suitable local equipment and vehicles.

NAVAL FORCES

The greater part of this section has been concerned with the potential for assistance offered by armed forces operating from fixed bases—a category which can of course include naval personnel. It is obviously difficult to plan for assistance which might be offered by the ships' companies of warships in harbour, whether visiting or belonging to the country concerned, but it is indisputable that valuable and resourceful help can be provided from this source. Emergency planners and managers should be ready to take advantage of aid of this kind, and to adapt their operational plans accordingly.

A particular element which naval services might be able to provide is that concerned with the restoration of harbour and port services for emergency operation. As an example, the Swedish unit for peace-keeping duties can include a Harbour Command which is organized to include a platoon responsible for all guard duties, a technical section, and a harbour administration section. The Command is trained to take over and direct the terminal harbour services. This involves the management and control of available harbour installations (quays, cranes, means of transport, warehouses, etc.) and the direction of the shipping within the harbour area and entrance including control of territorial waters in close proximity to the port

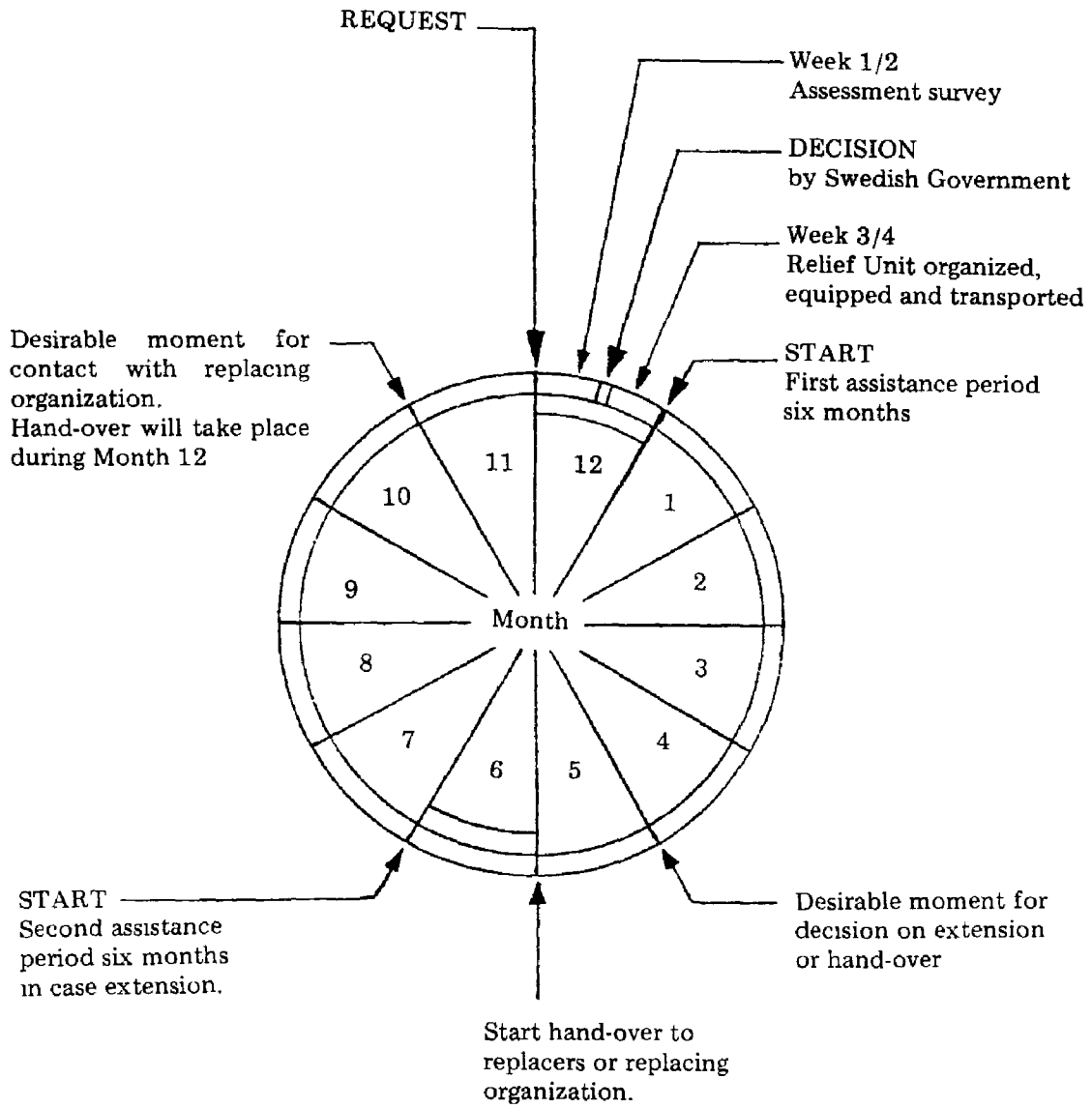
STATUS OF FORCES

Legal difficulties have been known to occur when military units from abroad have been brought in to a country affected by disaster. For a further consideration of these and related problems, the reader is referred to chapter II, section 2 ("Legislation") in this volume.

2. Search and rescue

Search and rescue (SAR) services are often considered as being of use only when an aircraft accident has occurred. In so far as such an accident involves injury to persons (either from the aircraft or on the ground) or damage to property, it may assume the character of a disaster, and the SAR service may well be the quickest means of bringing medical help, or firefighters, to the scene as well as offering the best means of evacuating casualties to hospital. For this reason alone, SAR would have a place in a publication devoted to aspects of disaster preparedness. But the skills and facilities available in an SAR service can provide a valuable—sometimes essential—addition to the national resources needed after major natural or other disasters. The search function alone can help to establish quickly the geographical extent of the effects of a disaster, and to warn of any secondary dangers which may have been caused by the first event; for example, a landslide in a mountainous area may form a natural, if temporary, dam across a river bed with the attendant danger of a massive flood if the obstacle is not first removed under controlled conditions. Recent disasters which have occurred in island States (Dominica, 1979; Azores, 1980) have demonstrated once again the need for countries to plan for, and maintain in readiness, survey, rescue and relief distribution

FIGURE 52
 Swedish Special Unit for Disaster Relief



services—both by air and by water—to replace the inland communications blocked or destroyed by the effects of hurricane and earthquake.

As in many other disaster relief operations, the work will be materially assisted by co-operation from those in need of help. Examples of the kind of ground-to-air signals in use in Australia are shown in figures 53 and 54.

Figures 55 and 56 provide guidance for those responsible for packing supplies which will be dropped to survivors of disasters who cannot be immediately evacuated to safer areas.

INTERNATIONAL STANDARDS

Annex 12 to the Convention on International Civil Aviation lays down international standards and recommended practices for search and rescue. Although many of these standards and practices are specifically concerned with SAR after an aircraft accident, others are of more general application and are therefore of use to the preparedness planner. Contracting States are called upon to.

- (a) Co-ordinate their search and rescue operations with those of neighbouring States;
- (b) Develop common search and rescue procedures to facilitate co-ordination of search and rescue operations with those of neighbouring States;
- (c) Enter into agreements with neighbouring States setting forth the conditions for entry of each other's rescue units into their respective territories. These agreements should also provide for expediting entry of such units with the least possible formality;
- (d) Authorize their rescue co-ordination centres to.
 - (i) Request from other rescue co-ordination centres such assistance including aircraft, vessels, personnel or equipment, as may be needed;
 - (ii) Grant any necessary permission for the entry of such aircraft, vessels, personnel or equipment into its territory; and
 - (iii) Make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry;
- (e) Authorize their rescue co-ordination centres to provide, when requested, assistance to other rescue co-ordination centres, including assistance in the form of aircraft, vessels, personnel or equipment;
- (f) Make arrangements for joint training exercises involving their search and rescue units and those of other States and operators, in order to promote search and rescue efficiency;
- (g) Make arrangements for periodic liaison visits by personnel of their rescue co-ordination centres and subcentres to the centres of neighbouring States; and
- (h) Make available, through the rescue co-ordination centres or other agencies, information regarding their search and rescue plans of operation.

The International Civil Aviation Organization, in volume I of the "Search and Rescue Manual" summarizes the planning of a search and rescue service in the following way:

GENERAL

Once an SAR organization has been established, a plan setting up an SAR service must be developed. When planning, the head of the SAR service should consider the following points:

- (a) Precise delineation of the area of responsibility of the SAR service;
- (b) Determination of the facilities, personnel and equipment required by the SAR service and definition of their search and rescue functions;

FIGURE 53

**IDENTIFY YOUR PROPERTY!
POSITIVE IDENTIFICATION
COULD SAVE LIVES!**



"Tillalee" homestead isolated by floodwater

Important Telephone Numbers

POLICE
 FIRE
 AMBULANCE
 LOCAL COUNCIL
 DOCTOR



Other Standard Ground/Air Signals

For Use In

Search and Rescue Operations

FOR USE BY SURVIVORS

- Require map and compass **□**
- Am proceeding in this direction **↑**
- Probably safe to land **△**
- NO **N**
- YES **Y**
- Not understood **JL**

FOR USE BY SEARCH PARTIES

- Operation completed **LLL**
- Returning to base **XX**
- Nothing found, will continue search **NN**

EMERGENCY GROUND/AIR SIGNALS

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