

PROPOSED PLAN OF ACTION FOR COOPERATION IN

Post Disaster Development

for the

Earthquake in Armenian SSR, USSR

prepared by

The WHO Regional Office for Europe

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WORLD HEALTH ORGANIZATION
Regional Office for Europe

Plan of Action

Executive Summary

This is a proposed Plan of Action, developed from observations and an initial health assessment of needs during the earthquake in Armenian SSR, USSR.

There is no doubt that a major effort will be required for the rehabilitation of the people of the stricken area and the reconstruction of their environment. From the health point of view the Ministry of Health of the USSR and Armenian SSR, the Alliance of Red Cross and Red Crescent Societies of the USSR, and the Armenian Red Cross Society are heavily engaged in the rehabilitation phase. Special resources will be needed for the assessment of health needs, and planning and implementing programmes for restoration of health and environmental services. This situation creates an opportunity for further international collaboration and coordination to assist the national authorities. Many international agencies are committed to continue to provide this assistance particularly the League of Red Cross and Red Crescent Societies and WHO.

An opportunity therefore presents itself for the national authorities, the Alliance and the Armenian Red Cross, the League and WHO to collaborate in this effort and to ensure the coordination of national efforts and foreign assistance that will become available.

A mechanism is required for this and it is proposed that a special centre be established in Armenian SSR to help in the assessment of the health situation, to plan and coordinate implementation of the plan for rehabilitation of the health of the population, their health services and their environment.

This centre would be a joint venture between the USSR, Ministries of Health of the USSR and Armenian SSR, the Alliance, the Armenian Red Cross Societies, the League and WHO.

The proposed plan of action has six main elements : comprehensive assessment of the effects of the earthquake on people, their health services and their environment; development of primary health care for each community; reconstruction of the hospital infrastructure and services; rehabilitation services; communication and information systems; environmental health and disaster preparedness.

To implement the proposals certain activities of an administrative and managerial nature are proposed - the nomination of counterparts from all the partners, establishment of the centre in Armenian SSR.

A programme of work to implement the plan of action will need to be developed containing the elements of administration and management, technical programme including assessment of needs and functional programmes and evaluation of the plan.

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WORLD HEALTH ORGANIZATION
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Plan of Action

1. Introduction

This draft plan of action^a has been developed as a result of observations made during the immediate post impact phase of the earthquake which struck Armenian SSR, at 11.41 a.m. on Wednesday, 7 December 1988. This proposal has emerged on the basis of preliminary discussions between the representatives of the Regional Office of WHO and USSR and Armenian authorities, Red Cross and Red Crescent Societies and UNDRO.

The establishment of a centre to help in the rehabilitation reconstruction of the Health and Environmental Health System in Armenian SSR is a very important part of this proposed plan. It is suggested that the following agencies will participate with the USSR and the Armenian SSR Governments, the League of Red Cross and Red Crescent Societies^(b), the Alliance of Red Cross and Red Crescent Societies of the USSR^(c), the Armenian Red Cross Society and the WHO Regional Office for Europe.

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- (a) Hereafter referred to as the Plan.
 - (b) Hereafter referred to as the League
 - (c) Hereafter referred to as The Alliance.

Note: The details of the earthquake are presented in the report: the "Situation Analysis: Health Aspects of the Armenian SSR, Earthquake, USSR", Copenhagen, WHO Regional Office for Europe, 20 December 1988.

Up to 23 December 1988, only very brief preliminary discussions had taken place among the various parties. The present text is a revised version following a First Joint Planning Meeting for Plan of Work which took place in Copenhagen, 5-6 January 1989, between representatives of UNDRO, LICROSS and WHO, which now needs to be studied by the USSR and Armenian SSR health authorities, the League of Red Cross and Red Crescent Societies, the Alliance and WHO.

The Plan proposes objectives, a strategy and activities aimed at the rehabilitation of the health and social well being of people of the stricken part of Armenian SSR and the reconstruction of their health services and health environment. It is a health plan, which for its development and implementation, depends upon the participation of many sectors, including the health sector. It is prepared in the spirit of the Alma-Ata Declaration of 1978 and within the European Regional Strategy for attaining Health for All by the Year 2000.

2. Objectives

The objectives of this plan are to:

- 1) prevent, reduce and mitigate the medium and long-term effects on the health of the people including their environment, of the affected area of the Armenian SSR following the earthquake, ensuring a rapid restoration of health conditions prevailing before the disaster and whenever possible, bring about an improvement in those conditions^(a)

(a) Disaster Preparedness and Relief: Development of the Programme including an Information and Communication System Copenhagen, World Health Organization Regional Office for Europe, 28 October 1986, p.4

- 2) reconstruct a well-functioning health services system in the affected area, based on primary health care and community participation and a well-functioning hospital and environmental health service;
- 3) develop the health aspects of disaster preparedness planning and appropriate measures for its implementation.
- 4) provide a mechanism for channelling international assistance from intergovernmental and other international organizations, together with bilateral and other sources, to the efforts of the USSR and Armenian authorities to attain objectives 1-3; in order to support these authorities in their efforts to reconstruct the health and health care system of the area, a special centre will be established for a time-limited period to advise and cooperate with the official authorities.
- 5) to collate and analyse the experience gained and the approaches successfully used in USSR for the benefit of other Member States.

3. Rationale

Most inter-governmental and non-governmental agencies limit their involvement in disaster relief to the search and rescue operations phase. Only some are committed to medium-term, and fewer still, to long-term rehabilitation and development of the health status and health care system of the affected area. A number of them may be motivated to cooperate in the longer term if a clear framework for such cooperation is provided. This may be particularly so for bilateral agencies.

The local authorities will have their hands full with day-to-day problems; special resources will be required for the assessment of needs, the development of a plan for rehabilitation of the people of Armenian SSR, and its implementation and evaluation.

On a national level, the major agencies with a commitment for long-term development are the USSR and Armenian SSR Governments, as well as the Alliance - a major agency in the Soviet Union involved in emergency relief and long term development. On the international scene, intergovernmental agency with policies for long term development is the World Health Organization (WHO), while the League is the major non-governmental agency on the scene.

The current situation opens up an important opportunity and merits a particular effort for creating a special mechanism for additional support to and collaboration with national authorities and to channel the assistance that WHO and the League could provide to the rehabilitation and reconstruction of the health care system and the environment that the USSR and Armenian SSR authorities will soon embark upon. It is essential that those people from the USSR and Armenian SSR levels given the responsibilities for decision making and for assessment of the needs, the planning and evaluation of the rehabilitation phase be closely involved in the special mechanism. Such a mechanism could be a joint USSR/Red Cross/WHO venture. It is to be expected that such a mechanism could also help to channel in an effective way the bilateral and other foreign assistance that in all likelihood now will become available for Armenian SSR and as such also help to increase the total amount of foreign aid.

4. Organizational aspects

It is proposed to establish a special centre in Armenian SSR in order to help in the assessment of the situation, in planning for the rehabilitation of the area in monitoring progress and in evaluating results. The centre would also help to channel and to increase the international/foreign assistance for this work. The Centre, a joint venture between the USSR Ministry of Health, the Armenian SSR Ministry of Health, the Armenian Red Cross Society, the Alliance, the WHO Regional Office for Europe and the League, would assist the responsible Armenian SSR authorities in their efforts to reconstruct the health care system in the affected areas. The centre would have the following elements:

4.1 Steering Committee

The work of the Centre would be the responsibility of a Steering Committee, established initially for a two-year period. The Chairman would be the Minister of Health of the Armenian SSR Republic and members of the Committee would represent the USSR Ministry of Health, the Alliance, the Armenian Red Cross Society, the WHO Regional Office for Europe and the League.

The task of the Steering Committee would be to help develop an overall plan for the assessment of the damage of the area (i.e. that damage which is relevant to health and the health care system); to help develop a plan for the improvement of health and the reconstruction of the health care infrastructure in the area; to help channel and guide the international aid available for reconstruction; to monitor and

evaluate the implementation of the work, (including the use of foreign aid resources); and, finally, to provide links to the participating organizations.

4.2 Secretariat

The Steering Committee would have a full-time, permanent Secretariat responsible for preparing detailed proposals, based on instructions from the Steering Committee; for drafting documents for the Steering Committee; for maintaining close working links with the Armenian SSR authorities responsible for the reconstruction in the area; and, finally, for monitoring the use of international aid resources.

The composition of the Secretariat would have to comprise a minimum number of professional staff, including expertise in fields such as epidemiology, public health management; health care institution design, construction and equipment; community participation and health education; environmental health. The necessary general service staff (secretaries, translator) and services (office space, transport, communication links) would also have to be provided.

WHO would provide initially one professional and one general service staff for a period of 12 months, after which WHO would provide a total of 2 m/m of professional staff (for participation in the Secretariat and the Steering Committee) yearly for another 2 years. In addition, WHO would provide technical documentation and experts required in different fields, as identified by the Steering Committee. It would pay salary and travel for its staff but would expect the USSR authorities to provide for their board, lodging and local transport, as well as operational expenses for the Secretariat as such. WHO would make available US\$ 25 000 for

consultant experts for 1989 and the same amount for 1990; should outside expert assistance beyond this budgetary ceiling be required, the financial coverage would have to be identified by the Steering Committee. WHO may also be able to help with a telefax and word processor for more efficient communication.

5. Overall Recommendations

- A. There should urgently be initiated a more comprehensive assessment of the health effects on people and the full extent of damage to their health services and their environment from the earthquake. This is necessary to improve the basis for the Plan of Action and its implementation.
- B. A model primary health care system for each community be designed and serve as the basis for rehabilitation and reconstruction.
- C. A plan for the reconstruction of the hospital infrastructure and services be designed.
- D. A plan be developed and implemented for disaster preparedness in the health field including an assessment mechanism for the Armenian SSR, one that might serve as model for other republics and USSR as a whole.

- E. Local, regional and national expertise be developed in all aspects of the Plan of Work through formal and informal education and training programmes, and systems of public and professional communication be developed to ensure the participation of various population groups.
- F. The Plan should include activities to support social rehabilitation and reintegration of survivors of the disaster into society with the participation of nongovernmental organizations, taking into account the psychosocial and mental health aspects.

6. Elements of the Plan and its Implementation

It is clear that the health status of the population as well as the conditions and nature and extent of aid - will change in the months and years ahead. The plan of work will therefore need to be flexible and to include both more urgent steps and those which will take longer to develop.

6.1 Care of survivors

- (a) The care of the injured needs to be continued; an assessment should now be made of the expected number and type of disabilities and how to meet the needs for medical, social and occupational rehabilitation of the large number of injured.

In this context the mental health rehabilitation not only of the surviving local population still living in one area, but also the evacuees must be kept in mind.

(b) Psychosocial support

To enhance the potentials for rehabilitation of the affected population, a Plan for psychosocial support, attention and information needs to be developed. The basis should be the recognition of the populations suffering and strengthen the provision of educational consultation process. The primary target groups for support are children, the bereaved, the injured victims, the homeless and the rescue workers. Primary target groups for information are local and central leaders, along with key personnel in contact with victims (teachers in schools and preschools, orphanages, health and welfare organizations). They should be provided with appropriate information and eventually guidance to facilitate actions and activities. In addition, the general community and the authorities should be provided with information on the psychosocial consequences and needs following such a tragedy.

The objectives of the psychosocial support efforts are to increase awareness and knowledge of disaster stress and reactions and enhance the empathy and support. In addition, professionals and others responsible for or in contact with victims should be further educated and mobilized for detecting post traumatic health problems in order to provide support.

6.2. Primary Care

- a) A more extensive epidemiological survey of the disaster using specific methods developed for this purpose should be undertaken including follow-up of the victims, together with a comprehensive environmental impact assessments.

- b) A system of epidemiological surveillance should be established to identify communicable diseases and vaccine preventable diseases.
- c) A comprehensive assessment is required of the extent of damage to primary and health care facilities, equipment and staffing through the whole disaster area.
- d) A plan should be developed for reconstruction of the health services and environmental health services, both in terms of services to be rendered and the buildings, manpower and equipment to be replaced. Special efforts should be made to channel foreign aid towards essential new equipment, etc.
- e) Since transport facilities for the population will continue to be inadequate in the period before permanent services can be rebuilt, an interim system of delivery of primary health care by mobile units, should be considered, both for urban and rural areas. Staff of such units and in other primary health care structures should quickly start to develop community-led health maintenance programmes and ensure targetted services for priority groups, including bereavement counselling, first aid, referrals, primary health care, community assessment and surveillance activities. The WHO Family Record could be used to ensure continuity throughout the system and help to assess the status and progress towards family health.

- f) Based on the various surveys carried out, a community profile and assessment of need according to checklist should be progressively developed for each primary care area, including demography, vital statistics, health status (disease prevalence, immunization status) and resources (health and environmental health facilities and personnel).

6.3 Secondary and Tertiary Care

- (a) An assessment of damage to hospital buildings, equipment and personnel should be made and consideration given to the use of suitable existing buildings or rapidly acquired pre-fabricated ones with identification of equipment and staffing needed.
- (b) Functional and communication links should be established between the temporary primary care facilities and the hospitals.
- (c) A plan should be developed for how to meet the rapidly accumulating backlog of routine hospital patients currently being displaced by emergency cases.
- (d) A plan for the role, functions, structure of the hospital system in the area should be developed, and the need for construction, equipment, staffing, training elaborated. Special attention should be given to the structural design of earthquake-resistant buildings and the special requirements for health facilities.

- (e) Extensive efforts should be undertaken to channel and coordinate foreign aid to this construction and rehabilitation phase.
- (f) Disaster plans for individual hospitals should be prepared and staff trained in their use.

6.4 Rehabilitation services

- (a) The health (physical, mental) and social needs of victims should be identified;
- (b) Programmes should be developed, including provision of appropriate equipment, to ensure medium and long-term rehabilitation services.
- (c) Rehabilitation teams should be organized in order to support both primary health care services and specialized hospital-based services.

6.5 Communication and Information Systems

An information system should be developed for the health services. As an urgent requirement, an external communication system is required between rural and urban areas; when mobile units go to the rural areas, they need to be in contact with staff at the polyclinics and hospital ('walkie talkies', with a 7-10 km. radius could be used in addition to other types of communication devices.). An effective communication system is also essential between Moscow, Yerevan and internationally.

In the longer term, a permanent system needs to be developed.

6.6 Environmental Health

This is an aspect which requires strong intersectoral participation in assessment and reconstruction.

(a) Water supply services

A more extensive assessment is urgently needed in relation to:

- the water resources still available for domestic use (drinking, cooking, laundry, bathing, etc.) and for municipal, industrial and agricultural use;
- a structural evaluation of the condition of water-supply reservoirs;
- the water quality of surface water and of groundwater sources, together with detection of chemical or biological pollution that could have resulted from the earthquake;
- damage to the water distribution network;
- damage to drinking-water treatment plants (structural damage, equipment, supplies);
- damage to the water-quality control infrastructure (laboratories, equipment, supplies);

- present manpower needs, including sanitary, mechanical, chemical and electrical engineers, laboratory personnel, plant operators, health inspectors and all other categories.
- training needs and existing training facilities.

On the basis of the assessment, a plan for intermediate and permanent reconstruction needs to be prepared.

(b) Wastewater disposal

Assessment is urgently needed in relation to:

- damage caused to the piped sewerage network;
- damage caused to wastewater treatment plants, including those treating industrial wastes (structural damage, equipment, supplies);
- the discharge of potentially hazardous pollutants;
- the wastewater disposal facilities being provided for survivors (in permanent or temporary shelters);
- potential risks of drinking-water contamination resulting from temporary wastewater disposal facilities constructed, (biological contamination being priority).

On the basis of this assessment, a plan for intermediate and permanent reconstruction needs to be prepared.

(c) Solid waste disposal

Assessment is needed in relation to:

- the conditions of "landfill sites" being used for disposal of wastes from permanent or temporary shelter camps provided for the homeless in order to evaluate the risk of drinking-water contamination;
- damage caused to municipal waste disposal equipment, for example heavy-duty bulldozers, cranes, compactors, trucks for garbage collection, and garbage containers.

On the basis of the survey, a plan for immediate and for long-term measures needs to be developed.

(d) Housing

Assessment is needed in relation to:

- classification of buildings according to the damage level and usability, using uniform methodology for damage classification
- the need for planning of temporary housing on the base of the studies of earthquake effects and damage distributions

- estimation of the value of earthquake-induced damage
- planning for construction of new settlements for housing based on the immediate needs, existing stock of usable buildings and future urban developing taking into account basic principals of planning in earthquake prone zones.

Basic principles in earthquake resistant design and urban planning in seismic active zones should be taken into account and special attention should be paid to execution of repair and strengthening of damage buildings, including reconstruction (repair and strengthening) of traditional and local type of the buildings and structures. It would be necessary to re-establish existing safety criterion for buildings used for health purposes as well as for housing.

In the reconstruction phase, two major factors should be taken into consideration which are particularly important from the health perspective, structural security and the culture and lifestyle of the population.

(e) Food supplies and veterinary public health

Assessment is needed in relation to:

- the needs of the surviving population, particularly those with no resources.
- the existing food distribution and processing chain.

Action should be taken to improve health animal husbandry through a systematic assessment of current status of animal health and other factors influencing health risks to humans and animals and the development of a regional emergency plan for areas at risk - including an information data base on livestock numbers, production and nature and extent of disease.

6.7 Health Aspects of Disaster Preparedness

At the time of a disaster such as an earthquake, the local community will need to cope till help arrives. Programmes for disaster preparedness are required, using the primary health care and community participation approach. Plans are required in which the following elements are included : epidemiology (experience from past disasters), services (health, environmental and social), public education, training of the public and professionals, an emergency response plan and an information system which includes a community profile of existing resources and a check-list protocol to be used at the time of the disaster to assess the health and environmental needs of the stricken population.

7. Practical actions needed to start developing the plan

To implement the above recommendations, the following actions are required:

- (a) Nomination of counterparts from Ministry of Health, Armenian SSR, the Ministry of Health, USSR, the Armenian Red Cross, the Alliance,

the League, and the WHO Regional Office for Europe to elaborate a joint version of this preliminary plan.

- (b) Establishment of an office in the Armenian SSR as the first stage in the development of the Centre for implementation of the plan of action.
- (c) Establishment of an agreement to create a Centre for the support of WHO and LICROSS to the USSR and Armenian SSR efforts to reestablish the health, the health care system and the environmental health services in the disaster area.
- (d) Development (in the beginning of January 1989) of a preliminary version of the workplan for the Centre for the period January 1989-December 1990. This plan would, inter alia, include:
 - support to the development of the instruments needed for undertaking the different surveys required for a comprehensive assessment of the damage done to the health of the population, the health care system and the environment;
 - support to the development of methods and a plan of action to alleviate the anxiety, confusion, depression and other effects on the mental health of the population;
 - support to the development of a plan for the medical, social and vocational rehabilitation of the disabled victims;

- support to the development of a comprehensive plan for the re-establishment of an integrated health care and environmental health system in the disaster area; including buildings, manpower and equipment;
- development of a mechanism to stimulate and effectively channel international aid for the reconstruction of the health care and environmental health system, and help develop good accountability procedures for this aid;
- identify international experts to participate in the programme;
- assist in the training of national personnel in selected areas of expertise required;
- develop a system to permit periodic evaluation of the reconstruction efforts and assist in such evaluation;
- support the development of a disaster preparedness plan for the region and for individual institutions and provide appropriate training for local staff.

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CROSS REFERENCES
 WORK PROGRAMME FOR REHABILITATION FOLLOWING
 THE EARTHQUAKE IN ARMENIAN SSR, USSR (7 Dec 1989)

AGREEMENT :

PROPOSED PROGRAMME DATED 9 FEBRUARY 1989

PROGRAMME 30 MAR 89

<u>Elements</u>	<u>Short-term</u>	<u>Medium-term</u>	<u>Long-term</u>	<u>Detailed short-term</u>
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