



## Introduction

Armenia is one of few countries entirely located in the zone of high seismic risk. Due to it the losses from earthquakes in the territory of Armenia in 1988-1998 are 94% of the amount caused from all types of disasters. There were 2028 emergencies in Armenia in 2003 including 1859 e.g. 92% of technogenic origin (wildfire, destruction, car accidents etc) and 169 e.g. 8% of natural origin (earthquake, floods and deluge, landslides, hail, frost). During those events 227 people have been perished and 1788 people have been suffered. [Appendix 1](#) represents the catalogue of earthquakes occurred in Armenia in 2003. There were significant steps in the field of earthquake caused disaster management in the Republic of Armenia:

- establishment (after destructive Spitak 1988 Earthquake) of Armenian National Survey for Seismic Protection (Armenian NSSP) which succeed in relatively short time and awarded by UN-Sasakawa premium for impressing results in the field of natural disaster prevention.
- in 1999 the Government of the Republic of Armenia adopted the state complex programs on seismic risk reduction in the territory of Armenia and the city of Yerevan.
- in 2002 the National Assembly of the Republic of Armenia adopted The law "On Seismic Protection"

Armenian NSSP main tasks and goals are as follows:

- a. seismic hazard monitoring in the territory of the Republic of Armenia
- b. seismic hazard and risk assessment
- c. seismic risk reduction
- d. assessment of induced seismicity level
- e. assessment of secondary hazards caused by seismic hazard

The Expert Council established in Armenian NSSP includes prominent national and foreign scientists and specialists and is dealing with the reviewing and adoption the following matters of great importance:

- seismic zoning maps of various scale
- coordination the activities in the field of seismic risk reduction
- major earthquakes prediction in the territory of Armenia
- development relations for mutual benefit with foreign countries
- definition the directions of priority funding in the field of seismic risk reduction

Armenian NSSP possess the valuable Earthquake Catalogue of Armenia and adjacent areas as well as the detailed reports about the earthquakes occurred and activity undertaken. Since 2002 Armenian NSSP as an Agency was a part of Emergency Management Administration under the Government of the Republic of Armenia (EMA RA). The main functions of EMA RA are as follows:

- establish governmental policy in Civil Protection and enhance the country preparedness level
- mitigate the consequences of emergencies
- organize and implement civil training in the field of protection and survival in emergencies
- participate, organize and coordinate rehabilitation and rescue activities in emergencies and promote cooperation between governmental and public (volunteer) rescue organizations
- organize and provide resources for international cooperation in emergency protection problems.

The EMA Crisis Management Institute provides:

- training and education of specialists in the field of emergency protection for government management institutions, non-governmental and private organizations
- training and education of specialists in the field of emergency preparedness and prediction, and technological protection
- training and education of specialists in the field of planning the activities in emergency, operative and crisis management
- implementation the emergency education programs in higher education system of the Republic of Armenia
- training the lecturers dealing with the emergency problems in higher education system of the Republic of Armenia
- population training and education organization in emergency.

Armenian NSSP web-page is [www.nssp.am](http://www.nssp.am) and EMA RA web-page is [www.ema.am](http://www.ema.am)

The pages is temporarily not functioning in the period from 25 January 2004 till 10 February 2004 due to modernization.

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## The Stages of Disaster Management

The stages of disaster management are as follows:

- organization of disaster management
- organization of rescue operations
- organization of pre-medical aid
- organization of local authorities actions
- population life-support in disaster zone
- evacuation of population from disaster zone
- aid allocation

## Disaster Management National System in the Republic of Armenia

The scheme of disaster management system in the Republic of Armenia is presented in [Appendix 2](#). The main goal of the scheme is population protection and its system along with subsystems is presented in [Appendix 3](#).

Organization and structure of Disaster Management National System (DMNS) is stipulated by:

- losses and damage caused by earthquake and size of zone involved
- seismic vulnerability
- task force preparedness and being equipped
- government strategy based on understanding of disaster hazard and risk level
- availability of necessary resources in case of disaster

Major earthquake can cause national disaster for small nation.

In this case the government handles the disaster management and the regional (marze) and community (town and village) disaster management bodies are established under the aegis of DMNS including local authorities and representatives of a number of institutions namely Emergency, Seismic Protection, Internal affairs, Defence etc.

DMNS and its elements structure, staff, and tasks as well as responsibility are stipulated by legal and normative documents and government decisions. Below the tentative structure and tasks of the republican and community seismic disaster management headquarters are presented.

### Disaster Management Community (Town) Operative Headquarters

The headquarters are arranged immediately after earthquake by the order of Prime Minister or Governor. The order provides the headquarters named staff, location and main obligations and responsibilities. Operative Headquarters are working round clock and maintaining meetings everyday. Conditions for headquarters effective work are provided and permanent communication with DMNS, government and municipal services are ensured. Headquarters comprise of 15-20 experts and representatives of state management bodies who are directly dealing with rescue operations and organizational tasks of earthquake consequences elimination. To solve problems mentioned below the special committees under the town headquarters are expedient to establish. Every committee should have clear and distinct idea about its main tasks, obligations and authority, and work timetable (round clock during the first month after earthquake).

### Main Tasks of Disaster Management Community Operative Headquarters

1. Assess the situation and earthquake consequences extent and provide operative activity for organization of rescue operations
  - define the extent of destruction and the number of victims and injured
  - define the necessary equipment and mechanisms for rescue operations
  - involve Army and its equipment in rescue operations
  - meet and allocate rescuers from abroad according damaged areas and units
2. Organize the providing injured with immediate medical aid
  - define the number of required experts and equipment including specialized cars, medicine and materials
  - define the required amount of donor blood or substitutes
  - organize the medical service
  - define the possibility of heavy sick people evacuation to other towns and abroad
3. Ban the transportation entrance to disaster zone besides those of special purpose
4. Organize people evacuation
  - with families to foreign countries by shuttle buses, railroad and airplanes
  - to other towns and resorts of the country by local transportation
5. Organize the registration of unknown victims and burying
6. Put a place law and order and fight looting
7. Provide operative activities for earthquake secondary consequences prevention and localization.
8. Get, allocate and install the temporary households such as vans and tents
9. Provide the people with the necessary resources including dry and liquid fuel, warm clothes, sleeping accessories, food and water
10. Organize the answer service for inquiries about the destiny of relatives and acquaintances.
11. Make up the list of missing and injured, and dead people
12. Provide citizens who have lost the passport due to earthquake with temporary identity.

### Earthquake Consequences Liquidation Permanent Acting Committee under the Community Headquarters

1. Committee on rescue operations organization
2. Committee on rapid medical aid
3. Information center
4. Committee on victims burying
5. Committee on population evacuation
6. Committee on temporary shelter reception allocation
7. Committee on earthquake consequences extent and situation evaluating
8. Committee on a place law and order
9. Committee on life-support

### Republican Management Operative Headquarters

Usually the destructive earthquakes circle the territory of several administrative areas (marzes, regions, towns etc). Due to it the establishment of republican earthquake consequences liquidation headquarters is essential. The main goal of republican headquarters is the coordination of activities of different community headquarters with the aim at saving human lives and liquidation of earthquake consequences. The republican headquarters are formed by the decree of the President. It indicates the staff of headquarters, location and main obligations and responsibilities. The headquarters are working round clock organize the meetings several times if needed and not less than once a week. The headquarters are headed by the Prime Minister. It involve the ministers, governors and the Chairman of National Assembly etc.

### Main Tasks of the Republican Headquarters

1. Defining the borders of disasters zone, settlements selection by the priority of aid provided.
2. Evaluation of damage extent and number of victims and suffered as well as other earthquake consequences in the territory of state
3. Rescue operation organized on state level
4. Organization of providing the injured with immediate medical aid
5. Coordination of activities of regional community earthquake liquidation headquarters and providing support to local authorities of disaster zone and planning the actions after earthquake
6. Definition the number of required specialists including rescuers, physicians etc. and equipment (first place rescue and medical ones) and amount of medicine and other materials and appeal to international organizations and foreign states for assistance.
7. Allocation of experts including the foreign ones and equipment and materials in disaster zone.
8. Organization of population evacuation from disaster zone to other regions and if possible to foreign countries
9. Visa and customs easy clearance for experts arrived from international organizations and foreign counties and for material and technical assistance.
10. Providing the assistance including food, water and shelter to the population of disaster zone at the expense of state resources and reserves, increase of life-support and preserving the essential resources including valuable equipment and materials
11. Developing and organization urgent actions for earthquake secondary consequences prevention and localization
12. Providing population and organizations with information about earthquake and current situation

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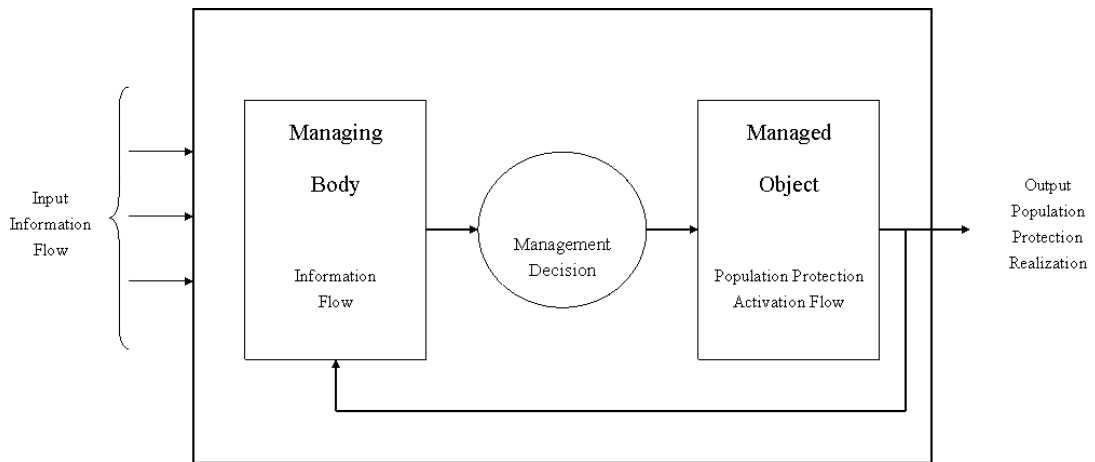
[Appendix 1](#)

### 2003 Earthquake Catalogue

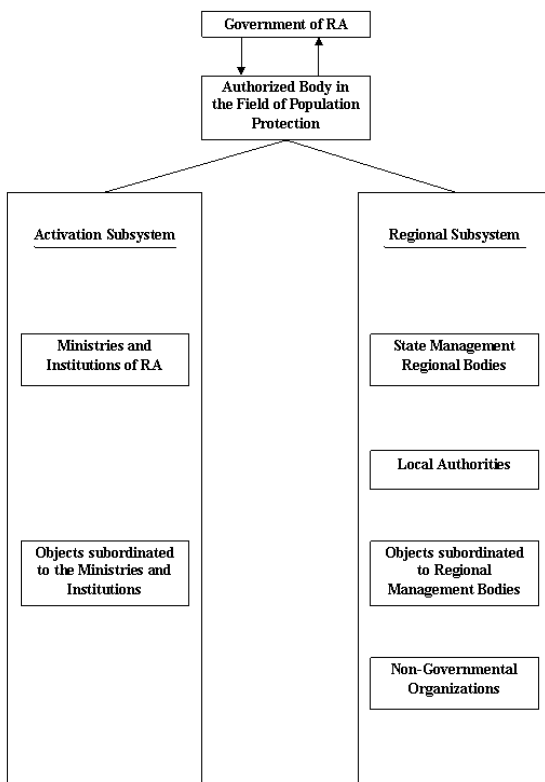
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2	2003	02	20	23:15:19	41.08	43.91	2.71
3	2003	02	24	21:52:01	41.13	43.91	2.52
4	2003	02	25	21:21:39	41.08	43.80	2.47
5	2003	02	26	23:13:39	41.22	43.92	1.45
6	2003	03	27	15:50:34	41.02	43.68	2.10
7	2003	05	09	21:43:25	40.98	44.34	2.00
8	2003	05	10	16:42:21	40.37	43.92	1.67
9	2003	05	15	08:41:24	40.25	45.80	2.48
10	2003	05	20	10:33:27	41.13	44.12	1.69
11	2003	07	30	05:31:21	40.10	44.12	2.23
12	2003	08	14	07:59:50	41.02	44.87	2.80

13	2003	08	19	14:05:56	40.67	44.30	2.62
14	2003	08	27	15:19:19	40.58	44.22	2.27
15	2003	08	31	14:08:21	40.28	44.25	1.75
16	2003	09	12	20:56:19	40.33	44.80	2.45
17	2003	09	14	09:27:24	40.27	43.65	2.85
18	2003	09	18	19:04:15	39.37	45.82	1.57
19	2003	10	02	15:41:58	40.85	43.92	1.70
20	2003	10	15	07:42:40	40.57	45.00	2.25
21	2003	10	27	15:46:13	41.12	43.98	2.16
22	2003	11	15	08:36:45	41.00	43.87	2.33
23	2003	11	17	01:57:42	41.13	43.53	1.66
24	2003	11	19	02:00:18	40.32	44.15	2.10
25	2003	11	23	09:43:49	39.02	46.32	1.44
26	2003	11	27	05:22:14	40.28	44.32	2.37
27	2003	12	01	17:25:52	40.32	44.22	2.14
28	2003	12	31	22:40:42	41.12	43.98	1.83

Appendix 2



Appendix 3



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