

Assessment of legal and institutional framework for disaster management and disaster risk information systems in Armenia



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1 EXECUTIVE SUMMARY

This study has been carried out within the United Nations Development Project (UNDP) “Strengthening of National Disaster Preparedness and Risk Reduction Capacities” Project with the aim of assessing the institutional and legal framework of disaster management in Armenia. The survey also aimed at studying the entire disaster management process in Armenia, including risk identification and assessment, data collection and analysis, preparedness, etc.

Three experts were selected in the tender announced by UNDP for the implementation of this study and they subsequently carried out this work. The study was implemented within a timeframe of two months during which the experts developed a report template and a special questionnaire which was used as a basis for meetings with the key players in the sector.

The study delivered an overview of the legislative framework relating to this sphere, identified its strengths and weaknesses, gaps and duplications and defined all the players by structure, roles and implemented programs, as well as the present state of play in the sphere in terms of communications and coordination. Based on this analysis the study provided specific recommendations on improving the present situation.

Finally, the study enabled the availability of a strong disaster management database in Armenia which can consequently be used by counterparts as well, in their activities and in developing programs. Moreover, the results of the study are a starting point for the project implemented by UNDP which aims at strengthening the system of disaster risk management in Armenia. This project will reduce the negative impact of disasters on the development of the country.

Experts who implemented the study

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2 STUDY METHODOLOGY

To gain broader and clearer information on the issues examined by this study a combination of different methods was used. The methods used are as follow:

- Interviews with 39 relevant counterparts at national level (list provided in Annex 5)
- Review of the laws, decrees, legal acts and international agreements relating to the sphere
- Review of all available studies and other documents relating to the sphere
- Application of the method of analysis of strengths, weaknesses, opportunities and threats (SWOT analysis)

The application of these various methods was useful in collecting and reconciling the necessary data and information which were then analyzed and they shaped the findings and recommendations.

3 DESCRIPTION OF DISASTER RISK

The fact that Armenia is in a high-risk disaster zone makes detailed and separate studies and mapping of risks a necessity. It is evident that an adequate investment in disaster preparedness and mitigation is required, to reduce the exposure of the population in case of disaster.

Disaster risk mitigation includes all activities that are carried out before the disaster, including preparedness and long-term plans in risk reduction.

The following sections present the natural, technological and environmental risks to be addressed, and where the Government of Republic of Armenia (GOA) and other players in the sphere should combine their efforts to reduce the exposure to disaster risks, increase disaster preparedness and secure country's sustainable development.

3.1 Natural Hazards

Natural hazards are natural processes or phenomena which can cause loss of life, injury or health issues, property damage, loss of ownership and services, social and economic disruption or environmental damage.

The following natural hazards are specific to Armenia.

3.2 Geological Hazards

1. Earthquakes
2. Landslides
3. Rock fall
4. Mudflow
5. Overflow of water

3.3 Meteorological Hazards

1. Floods

2. Lightning
3. Snow-slips
4. Freezing
5. Thick fogs
6. Hails
7. Strong snowstorm
8. Drought
9. Natural fires
 - a) bush fires
 - b) peat fires
 - c) lowland fires

Historically earthquakes have been the main hazards on the territory of Armenia. There have been dozens of earthquakes over the entire history. In the 20th century there were 6 earthquakes with a magnitude of 6-8 degrees on Richter scale.

The biggest earthquake of the 20th century was Spitak earthquake in 1988. The earthquake damaged an area with a radius of 80 kilometers which covered the city of Gyumri and Spitak, and Stepanavan and Vanadzor towns which account for 40% of the Republic's territory. The earth shook at a magnitude of 6 degrees on a territory of 30 thousand kilometers. According to the official data of the United Nations Organization the country incurred a loss of 14.2 billion dollars, 25.000 people died and 19.000 people were injured. In addition, 517.000 people became homeless and 15.000 people were saved due to rescue activities. At present 48 cities and towns of Armenia with a population of 2.541.200 are located in an earthquake-prone zone and are considered to be under threat.

Around 569.500 people live in 368 communities located in areas exposed to hail hazard. It can cause serious damage to plantations, grape and fruit orchards, as well as people.

Floods in Armenia are emergencies that happen every year. They cause a big damage to the country every year. The relevant areas cover 114 villages with a population of 221.900 and 13 towns with a population of 259.200. 10% of the Republic is in a zone exposed to potential floods.

70% of the total territory of the Republic is occupied by 3.000 landslide zones. 519 villages with a population of 633.172 are located there. According to the data of the Armenian Rescue Service (ARS) the average annual damage caused by landslides over the period from the establishment of independence to date has amounted to 3 million dollars. However, in 1997 the damage amounted to 16 million dollars whereas in 1998 it was 25 million dollars. At present the Armenian settlements are exposed only to 12 landslides. Landslides can be a result of second-hand consequences of seismic activity, as well as human activity (logging, wrong irrigation and road construction).

According to data of National Statistical Service of RA for 2007, 38 mudflows and 7 landslides occurred in various regions of Armenia. No injuries were reported.

There is evidence of overflow of River Getar in Yerevan in 1946 (250 victims), Alaverdi overflow in 1972 (8 victims), Goris overflow in 1996 (4 victims). The following landslides have been identified: the group of landslides in Dilijan, the group of landslides in Kapan, landslides in villages of Voghjaberd, Sev Kar, Chiva and others. There are landslides that threaten highways in the section of Kober Sanahin, on the way to Alaverdi, near village of Haghartsin, etc. There

are landslides that threaten historical and cultural facilities, for example landslides threatening Makaravank and Jukhtak monasteries. At the request of the Ministry of Urban Development of the Republic of Armenia (RA) and the Government of Japan and with the efforts of Japan International Cooperation Agency (JICA), 2500 landslide centers were examined and mapped in the territory of Armenia.

According to the data of the National Statistical Service of RA for 2003-2007 the number of recorded national disasters amounted to 1381 incidents, with an average of 276 incidents per year.

3.4 Technological Hazards

Technological hazards are threats that arise from technical or industrial circumstances including accidents and breakdowns, hazardous processes, infrastructure disruptions or specific human activity which can cause loss of human lives, injuries, diseases or other health impacts, property damage, loss of ownership or services, social or economic disruption or environmental damage.

The technological hazards typical for Armenia are classified into the following main categories:

1. Nuclear power plant
2. Hydro-electrical power stations
3. Chemical industries
4. Biological industries
5. Production and storage of explosives
6. Collapse of buildings and structures
7. Transport
8. Fire hazards (of industrial units, social and cultural units, residential buildings, settlements, storages, reservoirs, etc.)
9. Hydro-dynamic hazards related to hydro-technical structures
10. Hazards related to subsistence utility systems

Thus, the Armenian nuclear power plant located in Ararat Valley at a distance of 28 kilometers from Yerevan is one of the hazards for Armenia. At the design stage the area where the nuclear power plant is located was assessed as an area of seismic magnitude of 8 degrees (on MSK 64-degree scale). The nuclear power plant started operation in 1976. In 1989, its operation was stopped because of non-compliance with international standards of safety. In 1995, after enhancing the seismic safety of the facilities of the nuclear power plant and upgrading equipment, the second unit of the power station was put into operation from economic considerations. At present, 37 communities and 2 cities are located in an area within a radius of 16 kilometers from the nuclear power plant. This area is a high disaster-prone area which can be caused by radio-active pollution flows.

Moreover, there are also 3 hydro-electrical power stations, 32 hazardous chemical production units, 3 units that are related to explosives, around 90 water reservoirs and 15 warehouses.

Reliability is a mandatory requirement for any element of a building. Preliminary studies have revealed that the majority of multi-storeyed buildings have low levels of sustainability as

compared to the real hazards due to low-scale design, low-quality construction, improper maintenance and other reasons.

According to the data of the National Statistical Service of RA for 2003-2007 the number of registered technological disasters amounted to 16.983 in that period, with an average of 3397 incidents per year.

3.5 Environmental Hazards

Environmental hazard is the probability of deterioration of elements of natural environment as a result of natural factors or human economic activity which can create threats for the existence of environmental components. The results of monitoring of the levels of air pollution can provide an illustration for this.

Environmental hazards typical for Armenia are classified into the following main types:

1. Heavy metals
2. Pesticides
3. Dioxin
4. Severely eroded soils
5. Fuel and ointment materials
6. Radial pollution
7. Consequences of natural disasters
8. Locust swarm
9. Devastating decrease of lithosphere stocks
10. Pollution of water pools
11. Desertization of lands
12. Deforestation

Based on the statistical data, all the above mentioned hazards reach huge amounts in Armenia. These hazards can be very harmful both for the country's economy and the population and can create obstacles for social and economic development. It is noteworthy that mitigation of hazards is one of the most important guarantees for the country's development. The tailing dumps located in three regions of Armenia are also potential environmental disasters.

4 DISASTER MANAGEMENT LEGAL FRAMEWORK AND ITS ANALYSIS

International agreements, contracts, laws of the Republic of Armenia (RA), decisions and other legislative acts in the sphere of disaster management were reviewed within this survey.

The level of regulation of relations in disaster management directed at disaster forecasts and prevention, disaster preparedness and response, reduction and recovery were studied and analyzed in accordance with legislative acts. Moreover, competences of various bodies in disaster management were studied and analyzed, including their rights and responsibilities, level of involvement, strengths and weaknesses and existing gaps. The analysis was conducted through horizontal, vertical and cross-cutting syntheses of the given objectives.

4.1 International cooperation

Significant and effective activities have been implemented in terms of international cooperation. RA has joined a number of conventions and agreements (please see Annex 1) signed in the framework of United Nations Organization and Council of Europe (European Union) on management, mitigation and recovery from all possible emergencies and phenomena causing emergencies.

Relevant contracts and agreements have been signed on responding to emergencies and mutual support with bordering and other states in the region and cooperation under these agreements.

RA is consistent in its activities in signing agreements with other countries on protection against emergencies and cooperation and implementing joint initiatives.

RA legislation provides regulatory coverage of around 80% of disaster management sphere. RA laws "On Protecting Population in Emergencies", "On Fire Safety", "On Hydro-Meteorological Activity", "On Seismic Protection", "On Civil Protection", "On State Regulation for Technical Safety", "On Armenian Rescue Service" and "On Units of Civil Protection" providing regulation for the sphere and numerous other relevant laws have been adopted (see Annex 2).

Disaster management sphere is also regulated at sub-legislative level: several hundreds of Government and Prime-Ministerial Decrees and Orders of the heads of other agencies are in effect (please see Annex 3).

At present, according to the Laws "On Protecting Population in Emergencies", "On Civil Protection" and other laws of RA, the disaster management system includes state government agencies, local governments and organizations.

The study and analysis have also covered powers reserved to the Government of RA (GOA), authorized agencies, ministries, government agencies, local governments and organizations and their functions (see Annex 4).

The authorities of ministries and other agencies are clearly specified at legislative and sub-legislative levels, both in general terms and in relation to specific phenomena causing potential emergencies.

The legislation of RA specifies the competences of the republican authorized executive agency in the sphere of emergencies: the Ministry of Emergency Situations (MES) and the powers of its subordinate agencies. This provides an almost full coverage of the framework for emergency prevention, mitigation and recovery.

The activities and powers of regional authorities are fully and clearly specified. For prompt and efficient emergency management, mitigation and recovery, the right to give direct instructions to regional sub-divisions of republican executive agencies has been reserved to regional authorities by laws and sub-legislative acts.

The legislative and sub-legislative acts specify the responsibilities of organizations mainly in relation to protecting their staff and the organization's activities from emergencies.

The weaknesses and gaps at all levels of disaster management identified during the analysis are presented below.

4.2 Republican Level

- There is a lack of a single coordinated, conceptual and integrated approach;
- The arrangements for the application of competences prescribed to the Government of RA, the procedures and criteria for assessment of implemented work and activities to improve their operations, identify and address potential weaknesses and gaps are not specified.
- There are gaps in the accountability framework in terms of reporting against specific decrees or instructions, as well as general activities reporting (on an annual basis).

Because of the above, as well as the lack of finances and resources the competences prescribed by law to the Government of RA are not implemented and the necessary sub-legislative acts are not adopted or adhered to.

For example:

According to RA law "On Protecting Population in Emergencies" the GOA:

- approves emergency mitigation and recovery and population protection programs and oversees their implementation.

In 1999 the 2000-2004 program for emergency mitigation and recovery and population protection was approved by Decree N796 of December 31 which was not implemented and consequently there were no such programs approved.

- specifies the procedures for state examination of units, objects and processes, design plans and solutions that are considered to be a potential cause of EM.

Such procedures were never approved.

- declares disaster zone and specifies its area, organizes activities for providing maximum assistance and commodity to this area.

Since 1990 there have been no declarations of disaster zones by Government decree, because there have been no large-scale emergencies, whereas the steps to be taken by the Government in case of small-scale emergencies are not specified (emergencies have not been classified by scale). The definition in the law is generic and requires maximum expenditure of state budget resources in the current constrained economic conditions.

- approves the procedures for assessing and compensating the population for the damage caused by emergencies (ES).

Such procedures were not approved.

- approves the procedures presented by the authorized agency for the creation and use of financial, food, medical and other commodity funds for providing assistance to the victims of emergency.

Such procedures were not approved.

- In accordance with the RA Law "On Seismic Protection"
- specifies the procedures for granting licenses for seismic-cyclic activity.

Such procedures were not approved.

- In accordance with the RA Law "On Fire Safety"
- approves and funds republican target programs.

Republican target programs for fire safety have not been approved.

- creates, restructures and liquidates fire and technical scientific and research institutions and fire and technical educational institutions.

The GOA has not created fire and technical scientific and research institutions.

- In accordance with the RA Law "On Civil Protection"
- approves the procedures for state examination of special and very important units, as well as objects, processes, design plans and solutions.

Such procedures were not approved.

4.2 Republican Executive Agencies

- Arrangements for implementing the ministries' and other state agencies' powers and activities in disaster management prescribed by law have not been specified or clearly defined.
- Provisions on rights and responsibilities reserved to state agencies by law in relation to emergency are not incorporated in their charters along with their main functions and objectives.
- The executive agencies do not have staff responsible for dealing with emergencies.

4.3 Authorized Agencies

There is a lack of arrangements for coordination and use of integrated approaches in disaster management.

For example:

- In accordance with the Law of RA "On Protecting Population in Emergencies" the authorized agency - the Ministry of Emergencies of the Republic of Armenia coordinates and oversees the activities of republican executive agencies, state government agencies, regional and local governments, enterprises, institutions and organizations in protecting the population.

However, the arrangements for coordination and oversight are not specified or made clear. The GOA assigns certain tasks to different ministries and agencies in fighting against various causes of emergency, mitigation and recovery. Implementation of these tasks is not coordinated by the authorized agency.

- Functions prescribed by laws are not carried out because of the lack of relevant arrangements or resources.

For example:

- In accordance with the Law of RA "On Protecting Population in Emergencies" the authorized agency - the Ministry of Emergency Situations of RA creates and accumulates financial, food, medical and other commodity stocks and funds for providing assistance to victims of emergencies and secures their targeted use.

Financial, food, medical and other commodity stocks and funds for providing assistance to victims of emergencies have not been created.

- There is an overlap and duplication in coordination of quick response forces, information collection and communication and other functions between the Ministry of Emergency Situations, Armenian Rescue Service, "National Service of Seismic Protection" Agency, Agency of State Reserves and other ministries and agencies.
- There are no legal foundations for a centralized system of disaster management and center of crisis management.
- There is a lack of programs for investment in newest technologies and approaches in disaster management.

4.4 Regional Authorities

- There are no clear arrangements for implementing the competences prescribed by law.
- There are no arrangements for involving the communities located within the area of regional administration in responding to emergencies, no arrangements for making them accountable and assessing their activities.
- There are no arrangements for giving instructions to regional sub-divisions of republican executive agencies, getting reports and providing assessment.
- Regional authorities are responsible for protection of population in the area of the region. However, there is no clear specification of what these responsibilities suggest.

4.5 Local Governments

- Again, there are no clear arrangements for ensuring protection of the community's population in emergencies.
- Local governments have only voluntary or delegated authorities from the state in emergency management.
- There are no mandatory functions for emergency prevention, mitigation and recovery. While local governments are the main collector of taxes from community population and organizations, they have no undertaking or responsibility to protect them.

- There is a lack of public or voluntary action in communities.
- There is a lack of any voluntary undertaking on the part of community and community population.

4.6 Organizations

- Failure by organizations to carry out responsibilities assigned to them, failure and lack of mechanisms to hold them to account for that.
- Lack of willingness or arrangements for organizations to implement their functions (to build the necessary capacity for protection of their employees, support or implement rescue and other activities of urgent nature.
- Lack of obligation for organizations to compensate for the damage caused to the environment, organizations, people, etc. as a result of emergencies that happened by their fault.
- Lack of arrangements and failure to provide protection and early warning of the population residing in the zone of potential hazard by special and very important designated units specified in the RA Law "On Protecting Population in Emergencies". The GOA has not specified procedures for this.

There is no regulation for the creation and application of disaster insurance, disaster risk management, disaster response and other databases and there is no specific line item in the state budget for disaster management.

Conclusion

The study and analysis of the legal framework for disaster management has led us to conclude that the effective international cooperation, multilateral support available from foreign countries and international organizations, developed legal framework, newly created and functioning Ministry of Emergency Situations with agencies in it that have many years' experience and the powers specified by legislation, the available scientific and educational framework, trained staff and professionals and efficient governance system will enable addressing the current weaknesses and gaps.

It is worth noting that the study and analysis have revealed the main and most important issues which play a critical role in vertical and horizontal relations.

To address these gaps and weaknesses and to prevent them from occurring in future it is necessary that "Concept Note on Protecting the Population" is developed and adopted with consideration of around 20 years' experience of Armenia in disaster management and response, as well as the experience of developed European countries. The concept note needs to outline the necessary amendments to laws or new laws to be adopted, including:

- alignment of the legislative framework of the Republic to international and European Union standards;
- specifying arrangements for implementing the competences prescribed to the GOA ;

- specifying procedures and criteria for assessment of activities in the sphere of emergencies and accountability arrangements, implementation of competences prescribed to the GOA and adoption of the relevant legal acts;
- specifying and clarifying the arrangements for implementing the powers and actions assigned to ministries and other state agencies and performing other necessary activities;
- creating disaster insurance system and resolution of other day-to-day issues.

After the adoption of the concept note, apart from specifying and regulating the above matters and relations, the following should also be addressed:

- specifying provisions relating to the rights and responsibilities of ministries and other state agencies in relation to emergency in their charters, along with their main goals and functions;
- creating legislative provisions for the appointment of a responsible official in the staff of ministries and other state agencies to deal with emergencies,
- putting in place arrangements for oversight and coordination in disaster management (DM), performing or review of the functions prescribed to the authorized agency;
- making sure that there are no overlaps and duplications in the functions of different agencies;
- creation of centralized system for DM and crisis management center;
- specifying the arrangements for implementing the competences in DM prescribed to regional authorities, mechanisms for involving communities in DM responses, arrangements for their accountability and assessment of their activities;
- putting in place clear arrangements for protection of community population by communities in case of EM;
- defining the mandatory competences of local governments in EM management, encouraging actions by community non-governmental organizations and voluntary movement following the example of the legislation, practice and achievements of European countries;
- putting in place arrangements for organizations to fulfill their functions, specifying procedures for compensation for damage caused to the environment, organizations and people as a consequence of EM that happened by their fault and addressing other issues;

Failure to implement the recommendations presented above may create risks of disruption in international co-operation; loss of achievements attained so far, failure to keep up development in line with international standards, obsolete legislation to meet the development needs of public relations and, most importantly, failure to protect the population and territories from disaster.

5 THE ROLES AND PROGRAMS OF DIFFERENT INSTITUTIONS

At this stage, institutional structure and roles of governmental, scientific, educational, international, non-governmental and other local organizations involved in disaster management. The information below will help having a clear understanding of the roles, structures, programs and cooperation of all bodies, which, in its turn, will help to identify possibilities for future cooperation. Collection and analysis of this information were done through interviews and questionnaires (see Annex 6).

5.1 STATE GOVERNMENT AGENCIES

First of all, the survey focused on the roles, structures, programs and local cooperation of state government agencies as these institutions, according to the Republic of Armenia (RA) legislation, are responsible for protection of the population, fighting against disasters and sustainable development of the country. It is obvious that each ministry, service or other state government agency has its responsibilities and competences defined by law (Annexes 1, 2 and 4) which are not always ensured.

Thus, based on interviews and inquiries the roles, current programs and cooperation of state government agencies involved in disaster risk management were mapped and defined. In particular:

5.1.1 Ministry of Emergency Situations

Ministry of Emergency Situations (MES) is a republican body of executive authority, which in line with such competences as are vested in it by laws and other legal acts, develops, implements and coordinates RA government's policy in the area of civil defense and protection of the population in emergency situations.

MES is an authorized body for disaster management. Main objectives of the ministry include:

- Coordination of development and implementation of government policy for protection of the population,
- Organization and coordination of state investigation of objects, processes and projects that may create emergencies,
- Organization and coordination of preventive and recovery activities.

Ministry subordinate agencies are:

- a) Armenian Rescue Service,
- b) National Service for Seismic Protection,
- c) Armstatehydromet Service,
- d) National Reserves Agency,
- e) and Center for Technical Safety.

The Ministry cooperates with all the institutions of the disaster management system. It also closely collaborates with relevant structures of various countries, in particular with the USA, Argentina, Russian Federation, Italy, Belarus, Ukraine, Georgia, France, Germany, Switzerland, Sweden, Romania, Hungary, Bulgaria, England, Estonia, Belgium, Japan and China.

The Ministry closely cooperates with international organizations, such as United Nations Development Program (UNDP), International Organization for Civil Protection, “Open Agreement on Struggling against Large-scale Disasters” of the EC, International Federation of Red Cross and Red Crescent Societies, NATO (PFP), International Atomic Energy Agency, Doctors without Borders (Medecins Sans Frontiers) Black Sea cooperation countries, intergovernmental council for natural and technological emergencies, Swedish and Estonian Rescue Services, NATO, UNDP, Intergovernmental Council of Commonwealth of Independent States, World Bank, Japan International Cooperation Agency (JICA), Swiss Development and Cooperation Agency, Black Sea Cooperation Countries, Asian Disaster Reduce Council and Intergovernmental Council on emergencies of CIS.

Structural subdivisions of the MES carry out the following activities:

a) Armenian Rescue Service

Armenian Rescue Service (ARS) is a state body subordinate to MES. ARS carries out civil protection and provides safety of the population in emergency situations, as well as coordinates the activities of disaster prevention, reduction and recovery. It also coordinates the works on the level of local self-government bodies through its regional departments.

Subordinate bodies are the Crisis Management State Academy (CMSA), regional departments, State Fire Inspectorate, 60 fire rescue brigades, special water and mountain rescue brigades and the center of active influence on atmospheric phenomena.

ARS cooperates with the Government of Republic of Armenia (GOA), international organizations acting in Armenia in disaster management, Swedish Rescue Agency, Estonian Rescue Service, National Guards of Kansas, USA, University of Lyon, France and similar institutions of CIS countries.

b) National Service for Seismic Protection

National Service for Seismic Protection (NSSP) coordinates the works of seismic risk reduction and manages the systems of earthquake forecasting in the country.

There are four regional subdivisions – Northern, Southern, Central and Republic of Mountainous Karabakh – which work on seismic risk reduction in their regions.

The Structural Seismological center of NSSP works on development and running of building database, seismic risk assessment and seismic risk reduction policy and strategy. Five experimental laboratories are subordinate to the center.

Programs being implemented in the field are: a republican program of seismic risk reduction in Armenia and Yerevan, assessment of seismic vulnerability of special units in the sphere of seismic protection, collection of information and development of a database on Armenia’s intensive earthquakes, development and update of building database of Armenia and Yerevan with the purpose of seismic risk assessment, preliminary seismic risk assessment of Yerevan, final seismic risk assessment of Shengavit community of Yerevan. The above mentioned risk assessment maps have served as a basis for zone mapping, resettlement and development for communities.

NSSP implements programs on assessment and reduction of seismic risks in Yerevan, Spitak, Maralik and Artik.

Based on long term state programs, exercises, seminars and other various preventive activities have been carried out with the participation of Ministries of Emergency Situations, Territorial Administration and other ministries where NSSP, local-self government bodies, regional administrations, as well as the National Academy of Sciences (NAS) and CMSA have had a sufficient role.

NSSP cooperates with all the state government agencies, regional administrations, Institute of Geological Sciences of NAS, Institute of Radio-physics, Yerevan state University, UNDP, Armenian Red Cross society, Center of Seismology and Seismic Construction of Iran Islamic Republic, Center of Seismology and Seismic Construction of Macedonia and Asian Disaster Reduction Committee (ADRC).

c) Armstatehydromet and State Service for Monitoring,

Armstatehydromet develops and implements government policy and strategy of hydrometeorology, works on regime and special observations, studies and forecasts of hydro-meteorological phenomena.

Armstatehydromet provides information services to agencies of all spheres on local and national levels. There are 46 meteorological stations, 7 hydrological and 97 observation posts 3 of which are located on the reservoirs of Azat, Aparan and Akhuryan.

Currently, there are no programs being implemented in the field.

There is an extensive cooperation mainly in the field of operative information sharing amongst Ministries of Nature Protection, Energy and Natural Resources, Transport and Communication, Health, Emergency Situations, Agriculture and other ministries and other state agencies which operate in the sphere of climate conditions (Department of Civil Aviation), as well as the State Nuclear Safety Regulatory Committee adjunct to the GOA, staff of the Prime Minister and staff of the President.

There is cooperation with the private sector, World Bank, USAID and UNEP.

d) National Reserves Agency

The agency provides general material or technical security of the population, response and recovery activities in elimination of disaster consequences. The agency is in the structure of MES having three organizations which are currently in the stage of legal reformation.

There are no programs being implemented in the field.

The agency cooperates with all state government bodies and similar institutions of CIS countries.

e) National Technical Safety Center

Oversees technical safety in industrial dangerous objects, identifies and ensures implementation of technical safety rules.

There are no programs being implemented in the field.

There is a large sphere of cooperation amongst Ministries of Energy and Natural Resources, Agriculture, Territorial Administration, Urban Development, Transport and Communication, State Nuclear Safety Regulatory Committee adjunct to the GOA and other state agencies to work on prevention of disasters in Armenian Nuclear Power Plant (ANPP), Thermal Power Plants, reservoirs, tailing dumps, roads, gas pipes and other dangerous objects.

5.1.2. Ministry of Health

The Ministry implements awareness raising activities on health care, provides conclusions on sanitary-hygienic situation of disaster consequences, organizes anti-epidemic and quarantine activities and timely arrival of medical groups to the place of disaster and undertakes first aid activities. Moreover, it provides medical assistance during evacuation and for the injured.

Ministry subordinate agencies are healthcare units, hospitals, maternity hospitals, ambulatory policlinics, State Hygiene and Anti-epidemiological Inspectorate, psychiatric clinics and dispensaries.

Programs being implemented in the field are as follows: training of disaster healthcare groups in Vayots Dzor and Tavoush regions with financial support of Swiss Agency for Development and Cooperation (SDC) and foundation of regional institutions for disaster healthcare in cooperation with St. Gregory Health Center.

The Ministry cooperates with the GOA, Ministries of Emergency Situations, Agriculture, Territorial Administration, Transport and Communication, RA Police, National Security Service and the World Health Organization (WHO).

5.1.3 Ministry of Foreign Affairs

In the field of disaster management, the Ministry assures international cooperation, preparation and signing of inter-governmental and agreements, organization of humanitarian aid, participation of international rescuers and institutions in recovery activities, etc.

Various inter-governmental programs have been implemented based on inter-governmental agreements as a result of cooperation amongst Council of National Security, , Ministries of Emergency situations, Energy and Natural Resources, Urban Development, Education and Science, Nature Protection, Transport and Communication, Agriculture, Finance and with the efforts of the Ministry of Foreign Affairs. Various experts and state delegations from Sweden, Switzerland, France, Islamic Republic of Iran, India, China, USA, Argentina, Germany, Russian Federation, Estonia, Georgia, Ukraine, Great Britain and other countries took part in these programs. Activities in this field have been implemented based on the concept note on international cooperation in protection of population and taking into account the importance of international cooperation in disaster management.

The works are implemented through the cooperation with UN relevant agencies, Black Sea cooperation countries, relevant partners of CIS countries, NATO, relevant structures within EU and EC, International Organization for Civil Protection, International Committee of the Red Cross and other organizations.

5.1.4 Ministry of Nature Protection

In the field of disaster management, the Ministry regulates and controls ecological safety, implements activities for preservation of soil from pollution, regulation and control over atmospheric exhaustion, increasing the level of safety of natural preservations, issues related to climate change, etc.

Subordinate agencies of the Ministry are:

- National Environmental Inspectorate,
- Bio and Water Resource Management Agencies,
- Environmental Experimental SNCO,
- Impact on Environment SNCO,
- National parks,
- Specially protected territories.

Programs being implemented in the field include soil management aimed at poverty reduction, development of relevant projects directed at recovery of displaced soil and against landslides. Risk assessment of nature exploitation is being conducted through the Armenian branch of the Caucasus Regional Environmental Center. Adaptation programs are being carried out in cooperation with the UNDP and the Global Environmental Fund.

The Ministry cooperates with the GOA , Ministries of Emergency Situations, Territorial Administration, Energy and Natural Resources, etc, National Security Council, UNDP, German Technical Cooperation (GTZ), Organization for Security and Cooperation of Europe (OSCE), UN Environmental Program (UNEP) and UN Food and Agriculture Organization (UNFAO).

5.1.5 Ministry of Agriculture

The Ministry implements plant quarantine, cattle epidemic and anti-mudflow activities in disaster management. The Ministry is a state government authorized body for organization and implementation of preventive and recovery measures against damages caused by rivers specified by Water Code.

Subordinate institutions of the Ministry are:

- Department of Land Exploitation Melioration,
- Economical Development Program of Rural Areas,
- "Hayantar" SNCO.

Reinforcement of river banks and mudflow channels, and Japan funded program for economic development of rural areas, as well as acquisition and installment of anti-hail systems are carried out within the Ministry programs.

Reinforcement of safety of 22 reservoirs was implemented with the funding of World Bank and due to cooperation between Ministries of Agriculture and Emergency Situations. The issue of regulating mudflow threats lies with the Ministry of Agriculture. The roles of regional administrations are very important in this area. Due to joint efforts of Ministries of Agriculture of ES an anti-hail system was created in Armenia.

The Ministry cooperates with the Government of RA, Ministries of ES, Territorial Administration, Nature Protection and Finance, local self-government bodies, World Bank, GTZ, US Agency for International Development (USAID), UNFAO.

5.1.6 Ministry of Energy and Natural Resources

In the field of disaster management (DM), the Ministry deals with population safety in case of nuclear or radial accidents in ANPP, raising safety of ANPP and reservoirs of hydro power plants, safe exploitation of energy systems and structures, ensuring stable work both on daily basis and in cases of disasters, etc.

Currently, there are no programs being implemented in the field of DM.

The Ministry cooperates with all the state government agencies.

5.1.7 Ministry of Education and Science

The Ministry organizes education on disaster management in all educational institutions of the Republic.

Ministry subordinate agencies are:

- National Academy of Sciences,
- secondary schools,
- colleges,
- vocational schools,
- institutions of higher education
- research and scientific institutions.

Programs implemented in the field include publication of textbooks for senior high schools and introduction of disaster management basics in primary schools. School textbooks and programs were introduced with the participation of the CMSA, Ministries of Defense, and Emergency Situations.

The ministry cooperates with all the state government agencies and Crisis Management State Academy.

5.1.8 Ministry of Territorial Administration

Based on the legislation, Ministry of Territorial Administration (MTA) has a coordinator's role for Regional Authorities as the latter are subordinate to the Ministry. At the same time, the Minister is also the Deputy Prime Minister.

Ministry subordinate agencies are:

- Regional Administrations,
- State Committee for Water Management,
- National Archives of Armenia,
- Agency of Migration.

The Ministry cooperates with GTZ, World Bank, JICA and UNDP, as well as carries out operative programs of response.

The Ministry cooperates with all the state government agencies.

State Committee for Water Management of MTA

The Committee is a state agency which develops and implements the policy of Armenia on management and safe exploitation of state water systems.

Subordinate bodies of the committee are:

- "Hrazdan Jrar" CJSC,
- "Akhuryan Jrar" CJSC,
- "Debed Jrar" CJSC,
- "Shirak Jrar" CJSC,
- "Lori Sewerage" CJSC,
- "Norakunq Sewerage" CJSC,
- "Armenian Sewerage" CJSC,
- "Yerevan water" CJSC,
- and "Melioratia" CJSC.

Monitoring of ground waters in Ararat Valley and cadastre of meliorative condition of irrigable and dry lands are being run within the committee programs.

The committee cooperates with all the state government agencies.

5.1.9 Ministry of Urban Development

The Ministry carries out scientific researches and experimental-construction activities towards seismic proof construction, organizes and coordinates the process of development of normative technical documents in the field of seismic proof construction, as well as surveys of territories and architectural safety. The Ministry is responsible for recovery of houses in zones of disasters, as well as coordination of cremation and burial of dead bodies in cases of sanitary-epidemic threats.

Currently, there are no disaster management programs being implemented by the ministry. However, several joint programs have been implemented before. In particular, development and approval of national norms for seismic proof construction was implemented through the cooperation between Ministries of Urban Development and Emergency Situations. Due to agreements signed between the Governments of Japan and Armenia, research project on landslides management was implemented with the participation of Ministries of Urban Development, Emergency Situations and Foreign Affairs and JICA. This project contributed to paying more attention to living areas under landslide threats and to development of national policy in the related field.

The Ministry cooperates with all the state government agencies.

Conclusion

Based on the analysis of roles of ministries in disaster management it can be concluded that distribution of roles, rights and responsibilities and cooperation mechanisms are clearly regulated. Each state agency is responsible for disaster management in its field of operation. Not all the ministries are presented in this chapter, but the study revealed that all the ministries

are involved in this process. There is a clear cooperation which is regulated by various decisions, orders and relevant laws.

Here are some examples of cooperation:

There is a 35 year strategic plan for seismic risk reduction in Armenia. All structures of disaster management are involved in this plan in horizontal and vertical relations. They submit annual reports on implemented activities for seismic risk reduction and future plans. This process is managed by the government.

Based on a government decision, there is a reporting process for ensuring stable work and security of objects of special importance which are submitted by subordinate bodies of various state government agencies and local-self government bodies. Reports are submitted describing the conditions of relevant structures, necessary works to overcome shortcomings, etc. This process is managed by MES.

One of the most obvious examples of cooperation among ministries is the process of making any decision related to disaster management. Draft of such a decision is discussed in all the ministries, comments are provided and all ministries are present at the approval of the decision.

Local government and local-self government bodies have a special role in disaster management process. This study did not cover their roles and involvement, however, studying the functions of ministries showed that rights and responsibilities of local government and local self-government bodies are clearly regulated. Operation of the latter in DM is organized, implemented and managed by regional rescue service departments. There are many issues (agricultural, population safety, etc.) in the regions that are dealt with by ministries. This process is difficult to imagine without involvement and cooperation with local government and local self-government bodies.

Analysis of this part also revealed that there are issues in the field, in particular – not all the state government agencies have disaster management departments or specialists. It is necessary to involve a disaster management specialist in all state government agencies. Training and qualification of such staff is one of the most important issues of inter-agency cooperation. Main reason for such a shortcoming is that different specialists or managers of some ministries do not clearly understand their role in disaster management.

One of the weaknesses of the field is that reservoirs are divided between the Ministry of Energy which is responsible for reservoirs with hydro power plants and Ministry of Agriculture which is responsible for reservoirs used for irrigation purposes. Involvement of local self-government bodies in ensuring safety of reservoirs is very important. Only warning and evacuation plans and activities are not enough for ensuring safety of communities. All stakeholders should be involved in the consideration of this issue.

One of the weaknesses of the Ministry of Health is lack of a system for regulating psychological issues of the injured during and after disasters. There isn't such an institution which would deal with these issues. Institutions of psychological preparedness are weak in all structures of rescue services.

Several duplications have been noticed during the study. One of them is that issues of landslides are managed by Ministries of Territorial Administration, Agriculture, Nature

Protection, regional government and local self-government bodies. Cooperation in this field is very weak and is not clearly regulated. It is necessary to establish an integrated system for regulating the activities of landslide safety.

And, mapping of seismic risk boundaries and norms of seismological safety construction are handled both by the Ministry of Urban Development and NSSP. There is no cooperation in the field. Each agency conducts its own studies without considering the data of other institutions.

5.2 SCIENTIFIC AND EDUCATIONAL BODIES

It is known that disaster management is a continuous process and a chain of inter-related activities where disaster risk management has a clear role. It is aimed at reduction of population's vulnerability to disasters and raising their capacities in disaster preparedness through identification and analysis of risks, as well as reduction of disaster impacts through preventive measures. In this context, study of scientific and educational bodies is essential, as both risk assessment and disaster awareness raising and training should be scientifically justified, accepted and approved by state authorized bodies. Therefore, a list of such institutions was prepared to conduct interviews with to define their roles in disaster management, structure, programs being implemented and local cooperation in the field. In particular:

5.2.1 Institute of Geological Sciences of NAS

The Institute works on development of geological, geophysical, seismological, geodynamic, topographic, infrastructural and waterology complex databases. Moreover, it carries out mapping in geographic information system (GIS), assessment of natural hazards and risks, monitoring of geodynamical and seismological processes, as well as laboratory investigations of physical, chemical and mechanical characteristics of rocks in water. The institute is subordinate to the NAS, and has a geophysical observation station in Garni and regional geological basis in Lori, Syuniq and Gegharkunik regions.

The programs being implemented in the field include geophysical surveys, identification of seismic limits/boundaries, assessment of natural hazards and their impact on the environment, assessment of areas in danger of strongholds collapse and water overflow using GIS technologies, as well as assessment of dynamics and level of environment pollution.

The Institute cooperates with all state government agencies and similar scientific research institutes of all CIS and other countries.

5.2.2 Center for Ecology and Noosphere Surveys of the NAS

The center conducts assessment of sustainability of landscapes, ecological risks and level of pollution, and carries out laboratory analysis.

Programs being implemented by the center in the field include: development of methodology for disaster and ecological risks analysis, assessment of sustainability of landscapes, identification of risk groups living in areas under pollution of chemical elements, assessment and analysis of heavy metals and radial hazards, identification of dangerous elements in trophic chains and complex assessment of impact of hazardous units on the environment.

The Center collaborates with the NAS, Inter-governmental Council of Emergency Situations, similar institutes of the Russian Federation and other organizations, operates within the Joint scientific research inter-governmental program.

5.2.3 Faculty of Geography and Geology of Yerevan State University

Consultation and implementation of specific activities on studying natural disasters, forecasts and struggle against disasters are provided by the faculty using geographical, geomorphological, geological, geophysical and geochemical methods. The Center for Geological Studies LLC operates in the faculty.

Sustainability of natural slopes, landslides and geo-ecological issues of the Lake Sevan are being studied within the programs of the faculty.

The faculty cooperates with the Ministry of Energy and Natural Resources, NAS, Institute of Water Problems, Faculty of Chemistry of the State Architectural University, NSSP, Armstatehydromet and the Institute of Armenian Water Project.

5.2.4 Crisis Management State Academy

The Academy organizes and provides courses on disaster management for all state government, local self-government bodies and organizations, and prepares qualified specialists in the field. The Academy is in the structure of the Armenian Rescue Service and has a college in Stepanavan.

Programs implemented include organization of trainings in Ararat Region in cooperation with UNDP, in Lori and Tavoush regions in cooperation with GTZ, trainings on evacuation at schools within the Armenian-Swedish-Estonian cooperation, and training of firemen within SDC “Ardzaganq” project.

The Academy conducts scientific research and studies on disaster risks, vulnerability, capacities, hazards and consequences, develops various training materials for the population, methods for training different target groups, organizes scientific and educational seminars on disaster management and training, etc.

It cooperates with all state government, regional administration and local self-government bodies, and other organizations, with relevant educational institutions of France, Russia, Sweden, USA, Japan, China and many other countries.

Conclusion

The study of the above mentioned institutions revealed that there is a huge scientific potential in the country which implements various works, studies and trainings in the field of disaster management. Activities of these institutions involve studies on assessment, analysis and monitoring of hazard vulnerability and capacities, as well as disaster prevention activities.

It is necessary to establish a coordination unit which would regulate the works of these institutions and make their activities more effective.

5.3 INTERNATIONAL ORGANIZATIONS

There are many international organizations in Armenia some of which implement projects in the field of disaster management. The process of disaster management includes taking over competences assigned by international agreements which are partially implemented with international organizations in the country such as the UNDP, World Bank, EU, etc.

In some cases, it is observed that international organizations carry out their own projects without collaborating with other similar institutions. Thus, international organizations were studied based on their role, programs and cooperation in ES to get a clear picture of the current situation. In particular:

5.3.1 United Nations Development Program

The main purpose of the UNDP is capacity development in DM on national and local levels, mainly focusing on disaster prevention and reduction.

Projects being implemented in the field are: “Strengthening of National Capacities for Disaster Preparedness and Risk Reduction” –first stage (September 2007-September 2009) aimed at disaster risk management on local level in Ararat region, raising public awareness and strengthening of capacities of public information center of the Armenian Rescue Service.

For providing continuation of the mentioned processes in Armenia, activities of the second phase of the project (2009-2010) are aimed at supporting Armenia in strengthening legislative and institutional framework of disaster risk management, as well as development of national comprehensive strategy for disaster risk reduction.

UNDP co-chairs Donor Coordination group on disaster management with the Ministry of Emergency Situations since 2008; As of March 2009, this group was merged with the Disaster Management Team (DMT), chaired by the UN Resident Coordinator and comprising of all UN agencies, Ministry of ES /Rescue Service, Armenian Red Cross, interested donor agencies and international and local NGOs. While the main focus of the DMT is on disaster preparedness and response, it also provides room for programmatic discussions, and thus is considered the only coordination and information exchange forum in the area of disaster management.

The UNDP cooperates with the Ministries of Emergency Situations, Territorial Administration, the Armenian Rescue Service, CMSA, ARCS and all international organizations in the country.

5.3.2 United Nations Children’s Fund

The main activity of the UN Children’s Fund (UNICEF) in the related field is to provide support to children during emergencies. UNICEF is meant to ensure first healthcare needs for women and children, provide friendly environment for children in case of disasters, as well as protect children from being separated from parents and assist to reunite with families.

UNICEF also possesses emergency stock including family and hygiene kits, stationery, emergency health kits, beds and blankets, etc.

Projects related to the relevant field include a technical team for providing social-psychological support to children in emergency situations will be established during the year. It

is planned to implement a “Preparedness of schools in Emergency Situations” project in case of availability of relevant funding. A new system will be introduced within the project jointly implemented with the Ministry of Labour and Social Issues which will be aimed at controlling children’s displacement in emergencies and exclude cases of loss with family links.

The Fund collaborates with the Ministries of Emergency Situations, Labour and Social Issues, Health and Education and Science. At the same time, UNICEF is a member of the DMT.

5.3.3 World Health Organization

The main purpose of the Organization is to support Ministry of Health in strengthening capacities of ES preparedness and response activities.

The Organization supports the MOH in two areas within the 2010-2011 two-year agreement: strengthening of stability and security of healthcare institutions in case of ES and revision of crisis management educational program.

It cooperates with the Ministries of Health, Emergency Situations and Nature Protection and is a member of the DMT.

5.3.4 World Bank

World Bank carries out a DM institutional survey to provide relevant recommendations and, in case of willingness of the Government, future programs may be funded.

Programs being implemented in the field are: development of institutional reforms in disaster risk reduction in Armenia, as well as projects “Reservoir 1” and “Reservoir 2” being implemented in the last 10 years in 22 water reservoirs where early warning systems were also established, to protect lives of about 500.000 people living below these reservoirs.

The Bank cooperates with the Ministries of Emergency Situations and Territorial Administration, Armenian Red Cross Society (ARCS) and a number of international organizations in the country.

5.3.5 Swiss Agency for Development and Cooperation

The main purpose of the Agency is to develop disaster preparedness and response capacities of the Armenian Rescue Service. Moreover, an agreement for cooperation in emergency situations was signed between the governments of Switzerland and Armenia on 8 December, 2008.

The main projects of the Agency are: “Ardzaganoq” aimed at training of firemen rescuers, “Firemen in communities” awareness raising project, capacity development of the Armenian Rescue Service, Search project, and establishment of medical units (conducting trainings and provision of equipment).

The Agency cooperates with the Ministries of Emergency Situations and Health, ARS, UNDP, ARCS, GTZ and “Lore” rescue team.

5.3.6 German Technical Cooperation (GTZ)

GTZ activities related to DM include strengthening capacities of South Caucasus most endangered communities to protect themselves from negative impacts of natural disasters.

The project being implemented in the field is Disaster Prevention in South Caucasus which, at this stage, is focused on disaster risk management, and implementation of disaster risk reduction activities in 5 high risk communities. A special attention is paid to early warning with the purpose of identifying endangered communities located in the same water pool, and, in case of necessity, establishing an early warning system. Moreover, disaster risk assessment of Tavoush and Lori regions has already been carried out within the project.

GTZ cooperates with the Ministries of ES, Territorial Administration, ARS, Tavoush and Lori regional authorities. Other stakeholders are the civil society, NGO-s and international organizations.

5.3.7 Japan International Cooperation Agency

The agency supports capacity development and provides technical equipment to the Armenian Rescue Service.

Earthquake hazard mapping in Shirak, Lori and Tavoush regions are being implemented since 2009, fire vehicles with special equipment have been provided to MES. A survey of landslides in the whole country was conducted in 2006.

The agency cooperates with the Ministries of Emergency Situations and Urban Development and ARS.

5.3.8 Organization for Security and Cooperation in Europe (OSCE)

OSCE mandate does not imply involvement in DM, however, it is involved in dissemination of information and awareness raising activities.

Strengthening of Emergency information center of ARS is a project being implemented in the field.

OSCE cooperates with the Ministry of Emergency Situations, Armenian Rescue Service and UNDP.

5.3.9 International Federation of Red Cross and Red Crescent Societies

The mission of the International Federation of Red Cross and Red Crescent Societies (IFRC) is to improve lives of vulnerable population through mobilization of humane power. The IFRC provides humanitarian aid to the victims of disasters and develops capacities of its member National Societies. IFRC activities are focused on 4 main areas: promotion of humanitarian values, disaster response, disaster preparedness and protection of health and communities.

Projects being implemented in the field include a number of projects providing humanitarian assistance, and rehabilitation and capacity development of the ARCS since 1988 earthquake. Starting from 1998, IFRC has been carrying out Disaster Management project

together with ARCS. Currently, IFRC is planning to start a community disaster risk reduction project in cooperation with ARCS.

There is cooperation with the Government of Armenia and international organizations.

5.3.10 World Vision Armenia

The purpose of the organization is to raise stability of communities and work and respond to emergencies jointly. Currently, there are 10 Territorial development projects in seven regions and each office has a warehouse and an experienced staff for implementing development programs.

A disaster risk reduction capacity development project is being implemented for the youth and children in Gyumri and Stepanavan.

The organization cooperates with the MES, ARS, NSSP, CMSA, ARCS, UNDP, GTZ, Save the Children, SDC, "Lore" rescue team and other organizations.

5.3.11 Save the Children

The Mission of the organization is to create lasting change in the lives of children in need. It implements community-based health, educational and social capacity development programs.

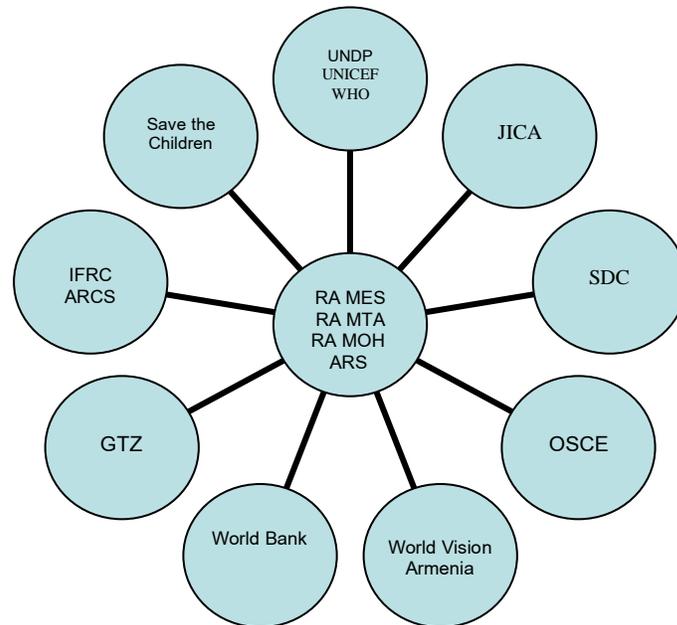
Programs implemented in the field include organization of trainings and distribution of posters on Avian influenza in communities in 2007 and 2008. Currently, with the instruction of the Headquarters of Save the Children, preparatory works are being carried out on Swine influenza to provide rapid response in case of epidemics.

Save the Children cooperates with the Ministries of Territorial Administration, Labour and Social Issues, Health and Education and Science, UNDP, regional administrations and local self-government bodies and various non-governmental organizations.

Conclusion

The study illustrates that international organizations have a special role in disaster risk management and strengthening of national capacities. The following diagram shows the current situation of communication and coordination among mentioned organizations:

Diagram 1



Thus, it is clear from the Diagram that international organizations have their national partners with which they coordinate their projects and actions. In addition, the DMT forum is used by stakeholders to exchange valuable information and coordinate activities.

Using the international best practice and implementing the strategy of international cooperation in a right way will allow making the system of civil protection more living and flexible in Armenia, increase the level of community ownership, improve the environment and introduce sustainable basis for development. This will also allow identification of risk objects, reduce the level of vulnerability and introduce and develop general institutional infrastructures for disaster management.

5.4 NON-GOVERNMENTAL AND OTHER LOCAL ORGANIZATIONS

As non-governmental and other local organizations have essential role in disaster risk management and generally in issues of global interest, the survey also focused on analysis of roles of such organizations in disaster risk management, their programs and sphere of cooperation. In particular:

5.4.1 “Arame Sarafyan Club” foundation

The main purpose of the foundation is strengthening of disaster preparedness capacities of the population. The foundation is involved in strengthening of emergency situations prevention system, development and implementation of educational, scientific and nature protection programs, development of emergency situations database, etc.

Currently, there are no programs being implemented in this field.

The foundation cooperates with the Ministry of Emergency Situations, NSSP, CMSA, Armenian Seismic Construction Research Institute OJSC, Institute of Geological Sciences and faculty of Geography and Geology of Yerevan State University.

5.4.2 “Georisk” scientific research society CJSC

According to its Regulation, the Society develops geological, geophysical, seismological, geodynamic, topographic, infrastructural and waterology complex databases. Moreover, it conducts mapping in GIS system, assessment of natural hazards and risks, monitoring of geodynamical and seismological processes, as well as laboratory analysis of physical, chemical and mechanical characteristics of water rocks and detailed specification of seismic boundaries of territories and special areas.

Programs being implemented in the field include: geophysical surveys, identification of seismic boundaries, assessment of natural hazards and their impact on the environment, assessment of areas in danger of strongholds collapse and water overflow using GIS technologies, as well as assessment of dynamics and level of pollution.

The Society collaborates with the Institute of Geological Sciences, geophysical observation station of Garni and similar scientific research institutes of all CIS and a number of other countries.

5.4.3 “Garni” International Center

The Center develops geological, geophysical, seismological, geodynamic, topographic, infrastructural and waterology complex databases, carries out assessment of natural hazards and risks, monitoring of geodynamic processes and creates structures of rapid response for organization of monitoring network in epicenters.

Programs being implemented in the field include: geophysical surveys, identification of seismic boundaries, assessment of natural hazards and their impact on the environment, assessment of areas in danger of strongholds collapse and water overflow using GIS technologies, as well as assessment of dynamics and level of pollution.

The Center collaborates with the Institute of Geological Sciences, Garni geophysical observation station and similar scientific research institutes of all CIS and a number of other countries.

5.4.4 Association of Seismologists and Earth’s Physics in Armenia

The association carries out educational, awareness raising and consultation activities in the given field, as well as assessment of natural risks and hazards. It is a non-governmental scientific organization.

Programs being implemented in the field include: disaster management in case of earthquakes in Caucasus; and running an open network of scientific centers for risk reduction in South Caucasus and Southern Asia.

It cooperates with the Institute of Geological Sciences of the NAS, NSSP, OSCE, UNDP, “Georisk” scientific research society CJSC, Faculty of geography and geology of Yerevan State University, Eurasia foundation and MSF France NGO.

5.4.5 Armenian Seismic Construction Research Institute OJSC

The Institute is involved in investigation of landslides and technical conditions of constructions.

There are no programs being implemented in this field.

The Institute cooperates with the Ministry of Urban Development, Yerevan Municipality and communities.

5.4.6 Armenian Water Project Institute CJSC

The Institute is specialized in the security of water technical structures.

Programs of the Institute include: security program for 22 irrigation reservoirs and 4 energy reservoirs was finished in 2008. A concept paper for anti-flooding project was submitted to the Government in 2007, which has not been funded yet. A Concept Note for controlling flows of reservoirs was developed in 2005. Currently, there are no programs in the field because of no funding.

The Institute cooperates with the Ministries of Emergency Situations, Agriculture, Energy and Natural Resources, Transport and Communication, State Committee of Water Resources, Police, National Security Service and other structures.

5.4.7 "Geocom" LTD

The organization studies natural hazardous phenomena.

Projects implemented in the field include: "Risk Assessment in Ararat Region", contracted by UNDP Armenia and "Disaster Risk Assessment in Tavoush and Lori Regions", contracted by GTZ.

The organization cooperates with UNDP, USAID, GTZ, SDC, RA Ministry of Nature Protection, ARS and Institute of Geological Sciences of NAS, EU planning programs of trans-boarder water and river pools.

5.4.8 Armenian Red Cross Society

ARCS assists the government of Armenia and carries out humanitarian mission for the most vulnerable groups of the country. One of the main areas of the ARCS mission is reduction of disaster vulnerability of the republic. Currently, there are 11 regional and 2 territorial DM centers in the Society with 170 staff members and volunteers.

Continuous projects include public awareness raising, strengthening of ARCS disaster response capacities, community level disaster risk management, training on mine risks, etc.

ARCS cooperates with MES, ARS, NSSP, CMSA, World Bank, SDC, JICA, IFRC, International Committee of the Red Cross, various Red Cross/Red Crescent National Societies and other organizations.

Conclusion

The study demonstrates that these institutions have huge potential, much work has been implemented and there is an enormous database. They cooperate with scientific, educational, government, international and non-governmental organizations in the country.

However, there is no regular exchange of data among these organizations which would improve the quality of work.

It is necessary to use the potential and opportunities of such institutions, as well as engage them in the process of disaster management where they could have their own contribution.

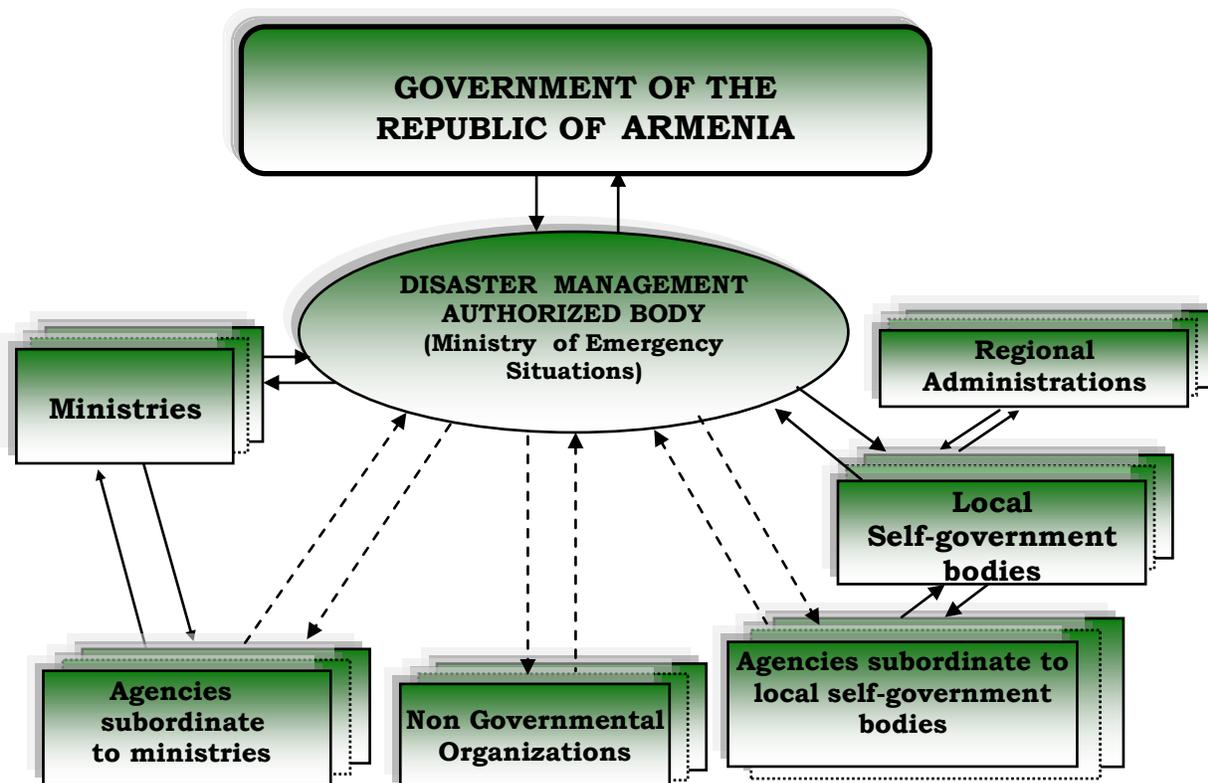
6 DISASTER RISK MANAGEMENT

6.1 INSTITUTIONAL FRAMEWORK OF DISASTER RISK MANAGEMENT

The most important issue of every country is protection of its population which is a system of various processes with the participation of all institutions of the country. Effectiveness of these processes is greatly dependent on institutional structure based on which mechanisms of cooperation and coordination, as well as responsibilities and competences are set up.

In this context, the system of disaster management was studied with the purpose of identifying all acting parties. Based on the study of legislation as described in Chapter 4, the diagram of disaster risk management system looks as presented below:

Diagram 2



The diagram demonstrates that the united system of disaster management (DM) includes republican and regional government agencies, local self-government bodies, enterprises, institutions and organizations, as well as non-governmental organizations. The main purpose of the system is protection of population in the whole country through legal and organizational complex activities. The diagram shows that the DM system in Armenia involves all possible parties and reflects their functional and operational subordination and cooperation chain.

However, this diagram may not always be applicable: the main authorized body prior to the establishment of the Ministry of Emergency Situations (MES) was the Armenian Rescue Service (ARS) of the Ministry of Territorial Administration (MTA). MES has a coordinator's role at the whole-country level during emergencies. At the same time, the MTA has a role of coordinator for Regional Authorities (see 5.1.8). Also, the Government of Armenia (GOA) may re-assign this role depending on the scale of emergency: Prime Minister has authority to manage emergency response or assign the role of coordinator to the Deputy Prime Minister [who is at the same time Minister of Territorial Administration].

It is worth noting that based on the provisions of Republic of Armenia (RA) National Security Strategy disaster management is one of the components of national security¹.

In 2008, the President of RA signed orders on approval of regulations of National Security Council and its staff. According to the above, the National Security Council is to organize, coordinate, control and make relevant decision on the implementation of National Security Strategy and state programs.

At present, the National Security Council is in the stage of institutional development and is the representative body of disaster management in the President's office.

ARS, National Service for Seismic Protection (NSSP), Crisis Management State Academy (CMSA), "State Service of Hydrometeorology and monitoring" SNCO, "National Reserves Agency" SNCO and the Water Economics State Committee of the Ministry of Territorial Administration have a special and important role in disaster risk management. These agencies act based on the National Security Strategy where threats and challenges of nature protection are presented among which much importance is given to natural disasters, energetic infrastructures and technological emergencies in big industries, non rational use of natural resources, deforestations, non economical use of the earth's water reserves, etc.

Conclusion

Thus, based on legislation, all institutions involved in disaster management have their roles, objectives, functions and responsibilities which are closely connected with each other. Moreover, disaster management process, cooperation mechanisms, approaches, prevention of emergencies and recovery activities are planned, implemented and managed by the government and relevant authorized bodies. However, there are some issues which should be resolved. It is noteworthy that organizational and legal mechanisms in disaster risk management and state control over public security are imperfect and the public have non-efficient participation in the related field.

¹ According to point 6 of Article 55 of the RA Constitution, the President establishes and manages a National Security Council.

6.2 ASSESSMENT OF DISASTER RISKS

One of the most important steps in disaster management is comprehensive analysis and correct understanding of the hazard. Next important step is risk assessment conditioned with many factors where hazard and vulnerability being the most important ones.

The fact that Armenia is in a high disaster-prone area, it becomes necessary to analyze hazards in detail and do hazard mapping. It is obvious that risk assessment is followed by disaster preparedness and reduction activities to decrease vulnerability of population during disasters. At this important stage, it is valuable to identify scientific potential of the country to involve them in state programs.

For the purpose of identifying the roles of the main stakeholders, inquiries were made to find out their involvement in any of the stages of disaster risk assessment (identification, assessment, monitoring, database). The table below presents the results:

Table 1: Involvement of main stakeholders in disaster risk assessment

Ministries, Agencies, Organizations	Identification	Assessment	Monitoring	Database²
Ministry of Emergency Situations	no	yes	yes	yes
Ministry of Territorial Administration	yes	no	no	no
Ministry of Health	yes	yes	no	yes
Ministry of Agriculture	no	no	no	no
Ministry of Education and Science	no	no	no	no
Ministry of Nature Protection	no	yes	no	no
Ministry of Urban Development	yes	yes	yes	no
Ministry of Energy and Natural Resources	no	no	no	yes
State Nuclear Regulatory Commission by the Government	yes	yes	yes	no
National Service for Seismic Protection	yes	yes	yes	yes
NSSP Structures' seismic Resilience Center	yes	yes	yes	yes
Armenian Rescue Service	yes	yes	yes	yes
Armstatehydromet	yes	yes	yes	yes
National Reserves Agency	no	no	no	no
Institute of geological sciences of National Academy of Sciences	no	yes	yes	yes
Crisis Management State Academy	no	no	no	no
Faculty of geography and geology of Yerevan State University	yes	yes	yes	yes
“Georisk” scientific research society CJSC	no	yes	yes	yes
Armenian Seismic Construction research Institute	yes	yes	no	yes
Seismologists and Earth's Physics Company of Armenia	no	yes	no	yes
“Arame Sarafyan Club” foundation	no	no	no	no
Armenian Water Project Institute CJSC	yes	yes	no	yes
Center of Ecology - Noosphere Surveys of RA National Academy	yes	yes	yes	yes
State Commission for Water Management	yes	yes	no	no
Garni International Center	no	yes	no	yes
Geocom LTS	yes	yes	no	yes
Armenian Red Cross Society	yes	yes	no	no
Total – 27	15	20	11	16

² Institutions that maintain database of risk-related information

Conclusion

This table shows that stakeholders are widely involved in the assessment stage. Meetings and interviews revealed that it is important to develop common norms for assessment of hazards, risks and vulnerability and include those in legislation and create local standards.

During the study it was identified that there is not a single institution where database could be updated and be accessible to all users. Data on hazards, risks and vulnerability are collected and kept in various ministries, agencies, specialized organizations and scientific and research institutes (Ministries of Emergency Situations, Territorial Administration, Nature protection, ARS, NSSP, Georisk scientific research company CJSC, Institute of geological sciences of NAS, Center of Ecology - Noosphere Surveys of NAS, Water Economics State Committee, etc). This fact comes to once again prove inefficient communication and low level of coordination in the field.

There is a monitoring center in ARS including 5 units and is subordinate to the Department of Territorial and Population Protection. The center runs database on disaster risks of all types and conducts analysis on regional and local levels. Results are further used for planning ARS activities.

Disaster risk assessment should be paid special attention to making it basis for protection of territories and population, as well as for development and implementation of long term programs and development strategies. It is necessary to create one integrated system where all processes of risk assessment would be included and all institutions working on risk identification would be involved.

6.3 DISASTER MANAGEMENT

All four stages of disaster management (prevention/mitigation, preparedness, response and recovery) are mutually interrelated where the effectiveness of one stage depends on the effectiveness of the previous stages. Therefore, this study was not limited to reduction and preparedness; it also focused on the whole cycle of disaster management, including response and recovery.

Based on the above, ministries, agencies and organizations involved in disaster management were interviewed to find out their roles and programs, as presented in the table below:

Table 2: Involvement of the main stakeholders in disaster management

Ministries Agencies Organizations	Prevention and mitigation	Preparedness	Response	Recovery
Ministry of Emergency Situations	yes	yes	yes	yes
Ministry of Territorial Administration	yes	yes	yes	no
Ministry of Health	yes	yes	yes	yes
Ministry of Agriculture	yes	yes	no	yes
Ministry of Education and Science	No	yes	no	no
Ministry of Nature Protection	yes	no	no	no
Ministry of Urban Development	yes	yes	no	yes
Ministry of Energy and Natural Resources	yes	no	no	no
State Nuclear Regulatory Commission by the Government	yes	no	yes	no
National Service for Seismic Protection	yes	yes	yes	yes
NSSP Structures' seismic Resilience Center	yes	yes	no	yes
Armenian Rescue Service	yes	yes	yes	yes
Armstatehydromet	No	yes	yes	no
National Reserves Agency	yes	no	yes	yes
Institute of geological sciences of National Academy of Sciences	yes	yes	no	no
Crisis Management State Academy	yes	yes	no	no
Faculty of geography and geology of Yerevan State University	yes	yes	no	no
"Georisk" scientific research society CJSC	yes	no	no	no
Armenian Seismic Construction research Institute OJSC	No	no	yes	yes
Seismologists and Earth's Physics Company of Armenia	yes	yes	no	no
"Arame Sarafyan Club" foundation	yes	yes	yes	no
Armenian Water Project Institute CJSC	yes	no	yes	yes
Center of Ecology - Noosphere Surveys of RA National Academy	yes	yes	yes	no
State Commission for Water Management	yes	yes	yes	no
Garni International Center	yes	yes	yes	no
Geocom LTD	yes	no	no	no
Armenian Red Cross Society	yes	yes	yes	yes
GTZ	yes	yes	no	no
IFRC	yes	yes	yes	yes
JICA	no	yes	yes	yes
OSCE	no	yes	no	no
SDC	yes	yes	yes	yes
Save the Children	no	yes	yes	yes
UNDP	yes	yes ³	yes	yes
UNICEF	no	yes	yes	yes
WHO	yes	yes	yes	yes
World Bank	yes	yes	no	yes
World Vision	yes	yes	yes	yes
Total – 38	31	29	23	20

The table shows that most of the stakeholders act in mitigation and preparedness stages. At the same time, the positive fact is that many of them are involved in response and recovery

³ UNDP has mandate to support early recovery activities

as these are the important stages which are intended to protect the population, reduce disaster impacts and recover damages.

The main stakeholders have different involvement in separate stages of disaster management. In particular:

Ministries of Emergency Situations, Urban Development (MUD), Agriculture (MoAgr), Energy and National Resources (MENR) and Health (MOH) are main stakeholders in disaster **prevention**. They develop legislative documents and present them for approval (including but not limited to inter-governmental agreements and normative acts).

The above mentioned agencies implement the following organizational and engineering activities in disaster prevention:

- MES controls and coordinates seismic and other disaster risk reduction activities through its subordinate structures, establishes relevant sub-structures and develops state target programs;
- MUD controls and coordinates the process of studying, monitoring and preventing landslides in the country;
- Ministry of Agriculture controls and coordinates risk reduction and prevention activities in flood-prone and mudflow-prone areas of the country, as well as preventive activities in cattle epidemics;
- MOH controls and coordinates activities for prevention of epidemics within its authorization;
- MENR controls and coordinates safe exploitation of energy and scientifically justified use of natural resources.

Moreover, organizational and engineering activities are carried out in this stage. An example of important organizational event is establishment of NSSP and ARS. Establishment and upgrading of special rescue brigade and reformation of the CMSA are also noteworthy. An example of engineering is development and approval of seismic-proof construction norms, as well as the project "Survey of Landslide Management in Armenia" implemented in 2004-2005 with the support of Scientific and Technical Department of the RA Ministry of Urban Development and the Government of Japan, and raising safety of mudflow channels and other mudflow protection constructions. Two-stage geological and geo-physical surveys of the Armenian Nuclear Power Plant industrial platform are of special importance.

The role of international and local organizations is very important in this stage as they fund various projects for disaster risk assessment and prevention.

MES has the main role in disaster **preparedness**, which trains the population, supports communities in development of disaster response and evacuation plans and is responsible for establishment and correct use of early warning systems. Mentioned activities are implemented through the Ministry subordinate bodies. The main educational institution of the Ministry is the CMSA which qualifies personnel responsible for management of all levels. About 1700 state servants working in disaster management pass special trainings and requalification on annual basis. A special training is provided for lecturers of higher educational institutions and teachers of schools on the subjects of Civil Protection and Emergency Situations (ES). Several educational handbooks and children's books on disasters have been published for the last 20 years. For the past years, CMSA has had first graduates specialized in disaster management.

A relevant unit in NSSP has a special role providing trainings to children.

One of the main parties of this stage is Ministry of Education and Science which develops state policy for ES educational programs.

International and local organizations have an important role of assistance through various activities and publication of training materials which contributes to raising public awareness and level of education.

MES has a coordinator's role in disaster **response**. It supports both regional administrations and separate communities in organizing medical, social and humanitarian assistance. MES carries out search and rescue activities through ARS. Ministries of Territorial Administration, Urban Development, Health, Agriculture, Energy and Natural Resources and a number of other state agencies have a leading role in the field.

International and local organizations also have an important role as they involve local and international capacities, as well as volunteer potential in response activities.

Ministries of Urban Development, Finance and Transport and Communication have an essential role in disaster **recovery** supported by Ministries of Emergency Situations, Territorial Administration, Energy and Natural Resources, Agriculture and other state agencies. The above mentioned agencies are involved in engineering protection of specific territories, construction, selection of new areas for construction, road construction, recovery of damages, etc.

The important role of international and local organizations should also be mentioned in this stage as the international practice proves that it is difficult for countries to recover from major disasters without assistance from the mentioned organizations.

Finally, it was found out that state, inter-governmental and international programs of disaster management have been and should be implemented involving all spheres, i.e. economic, political, legal, social, scientific, educational, etc. Ministries of Emergency Situations, Agriculture, Nature Protection, Urban Development, Territorial Administration and other state government agencies, international and local organizations have implemented short term national capacity development projects dedicated to protection of population from disasters.

6.4 SWOT ANALYSIS

Strengths, weaknesses, opportunities and threats (SWOT) analysis is a way of providing strategic alternatives through situation analysis. SWOT stands for strengths, weaknesses, opportunities and threats. SWOT analysis was used in 1960's for the first time and is widely used until now for analysis and assessment of various sectors, organizations or programs.

SWOT analysis can be used as a filter which reduces information to a manageable quantity. SWOT analysis classifies internal aspects to strengths and weaknesses and external factors into opportunities and threats. These 4 factors allow strengthening weak sides, take advantage of opportunities and prevent potential threats by using available capabilities.

SWOT analysis identified strengths, weaknesses, opportunities and threats in disaster risk management of Armenia to support further development of the field.

Strengths

- RA has joined a number of conventions and agreements signed in the framework of United Nations Organization and Council of Europe on management, mitigation and recovery from all possible emergencies and phenomena causing emergencies,
- RA has signed relevant contracts and agreements on responding to emergencies and mutual support with bordering and other states in the region,
- Existence of the Disaster Management Team, managed by the UN, and being the only forum for the information exchange and coordination on disaster management issues.
- The ES legislative and institutional field is on a satisfactory level though requires ongoing review,
- RA Government activities in ES protection and management are fully regulated by relevant laws and legal acts,
- Competences of ministries and other state government bodies are set out by legislation for general functions and in cases of ES,
- Competences for MES as a republican authorized body in the sector of ES and its subordinate agencies are set out which almost fully cover ES prevention, mitigation and recovery,
- There are state authorized bodies with essential importance, such as ARS and NSSP,
- All directions and competences for regional authorities are clearly identified,
- Competencies of organizations are identified by legislation on protection of staff and functions of the organization in cases of ES,
- There is a sufficient quantity of highly qualified experts in MES who are able to train new specialists,
- There is a contemporary educational system in the field of disaster management, which is in need of reforms.

Weaknesses

- There is no concept note on protection of the population and territories,
- Laws lack systematization and general approach. There is a need for harmonization.
- Lack of strategy and legislative basis for protection of territories from ES,
- Lack of clarification and appropriate implementation of competences,
- Lack of strategies for disaster risk reduction and disaster management,
- Lack of mechanisms for implementation of monitoring and coordinating as established in disaster management legislation,
- Lack of a disaster response national plan which involves roles of state bodies, as well as international and local organizations,
- Lack of national center for crisis management,
- Lack of projects for introduction of new technologies and approaches for disaster management,
- Lack of legislative basis for regulation of medicine in ES,
- Lack of relevant legislation on voluntary action,
- Lack of legislation providing state regulation for protection of geological monuments of the nature,
- Lack of general norms and local standards for disaster risk assessment,
- Lack of general database on disaster risks,
- Lack of standards for classification of disasters based on their scale,
- There is a highly individualized and low structural approach towards management of the field,
- Low level of coordination and awareness amongst state institutions,

- Necessity to improve mechanisms for execution of disaster management competences of ministries and other state agencies,
- Central apparatus of the executive bodies lack relevant units, specialists and officials dealing with emergency situations,
- Incomplete cooperation and communication between national and local levels,
- Non-adequate execution or use of laws and competences on community level,
- Lack of mandatory competences delegated to communities in the field of ES,
- Insubstantial involvement of communities in the field,
- Communities lack professionals of the field.

Opportunities

- Effective international cooperation on the level of conventions and other international agreements,
- Presence of international organizations in the field and implementation of projects,
- The level of development of the existing legal base,
- Newly established MES and its subordinate experienced bodies,
- Effectual structure of self-government system,
- Consolidation of national scientific power working with contemporary technologies and involving advanced professionals and scientific institutions of other countries,
- Involvement and promotion of non-governmental organizations in disaster management operating in Armenia and elsewhere,
- Involvement of economic organizations in disaster management through investments,
- Existence of national base of specialists and qualified human resources.

Threats

- Non-predictable ES on national level,
- Possible disruption in international cooperation,
- Obsolete legislation to meet the development needs of public relations,
- Failure in sustainable development of the country,
- Direct impact on increasing poverty,
- Decreasing the living-standards of the nation,
- Possible various ecological disasters due to inefficient exploitation of the lithosphere, soils, forests and water,
- Loss of geological, historical and cultural monuments due to inefficient management of disaster,
- Community-level continuous losses and damages due to disasters.

7 CONCLUSIONS AND RECOMMENDATIONS

The number of natural and technological disasters has increased in the world for the last 20 years. Armenia has also been subject to various disasters during that period. Taking into account the importance of the discussed matter for sustainable development of the country, it is necessary to develop a state policy and a scientifically justified security program for disaster risk management, protection of population and recovery.

The results of the study revealed that there is an effectual and sufficient legislative field in Armenia; there are various governmental, local and international organizations acting in different stages of the field, as well as mechanisms for cooperation and coordination amongst mentioned

organizations. However, all those factors need management reforms, generalization and standardization and stated in the legislative field.

Moreover, coordination is still imperfect both between state bodies and other organizations. There is a gap of general mechanism for coordination as different bodies are authorized for managing different hazards and each of them agrees its activities with the Prime Minister. Therefore, there are no clear mechanisms for coordination so that Ministry of Emergency Situations (MES) coordinated activities of all state agencies to except duplication and raise the effectiveness.

The issue of decreasing damages and losses from earthquakes in Armenia should be one of the main components of state policy, as well as the guarantee for development and security of the country.

For the purpose of supporting sustainable development of communities, it is necessary to centralize efforts for developing the field of disaster risk management. It is necessary to develop a national strategy for disaster risk mitigation based on Hyogo framework and relevant local programs in support of the strategy.

From the study of DM structure and the legislative field, it can be concluded that the Government of Armenia can have an effect on the security of population and contribute to sustainable development of communities by implementing reforms in disaster risk management.

It is necessary to create a general system of standards which will provide regulation of the legislative field and development of economic mechanisms, as well as ecological and industrial safety of the country.

Thus, it is recommended to develop, approve and/or adopt:

- A concept note on protecting the population and territories from ES,
- Law on healthcare which will allow regulating various issues relating to the field, for instance mental health which is closely connected with human factor causing technological disaster,
- Law on community-level voluntary undertaking to promote public and voluntary movement following the example of the legislations, practice and achievements of European countries,
- A separate chapter on geological risks in the law on lithosphere,
- Long term targeted national program for strengthening capacities of disaster preparedness and risk reduction,
- Disaster insurance system with the participation of the Government of Armenia,
- General norms and standards for disaster risk assessment,
- Standards for classification of disasters based on their scale,
- Disaster response national plan which includes state bodies and international and local organizations,
- Inter-agency concept note on the safety of residential objects,
- A joint system for identification, analysis and assessment of disaster risks, hazards and vulnerability,
- Combined methodology for estimating disaster risk measure (DRI),
- Methodology for mapping natural and technological disasters,
- Joint system for mitigation of earthquake damages.

Develop:

- Cadastre for landslides,
- General system for assessing losses from natural, technological and ecological disasters,
- A legislative basis for assigning an official responsible for emergency situations (ES) in the apparatus of ministries and other agencies,
- Legislative field for providing state regulation for protecting natural geological monuments.

Identify:

- Mechanisms for providing for and executing monitoring and coordination by an authorized body on the level of a law or a legislative act,
- A regulation for development, running and maintaining a general database on geological, meteorological and ecological disasters,
- Mechanisms for execution of competences and activities delegated to ministries and agencies; or clarification of the existing ones,
- Mechanisms for execution of competences authorized to regional administrations in the field of ES,
- Clear mechanisms for communities for protection of community population in ES,
- Mechanisms for involvement of communities in ES response, and mechanisms for assessment of their work,
- Procedures for compensation for damage caused to the environment, organizations and people as a consequence of emergencies that happened by the fault of organizations. The RA legislative field should be accustomed with international and EU standards.

In addition:

- Delegate mandatory functions to local self-government bodies on ES management on legislative basis,
- Establish a National center for crisis management by introducing ES centralized system and mandatory information technologies with relevant legal acts being accepted beforehand,
- Apply geographical information system (GIS) as a contemporary technology for risk management,
- Clarify responsibilities of disaster management (DM) system stakeholders,
- Fix ES roles and responsibilities among main objectives of ministries and agencies.

In summary, it is worth noting that the study of international and local experience shows that ES management is a whole-of-government issue and cannot be processed by just one state agency.

International experience in disaster risk management reveals that most dangerous technological establishments are usually located in densely inhabited areas. Thus, it is unacceptable to establish and use complex technological establishments without taking into account new standards of safety.

8 ANNEXES

Annex 1.

INTERNATIONAL CONVENTIONS AND AGREEMENTS SIGNED BY ARMENIA

The following international agreements were signed in the sphere of prevention of emergency situations:

1) Agreement signed on 11 August, 1992 on “Co-operation between National Seismic Protection Service by RA Government and US Geological Service in the field of reducing earthquake risks”. The main purpose of the agreement was co-operation in identifying signs of new earthquakes, research of geological environment of active seismic disconnection and hotbeds of intensive earthquakes and other issues. The agreement was signed for 5 years.

2) Agreement signed on 11 August, 1992 on “Co-operation between National Seismic Protection Service by RA Government and US Geological Service in the field of establishment of observation post of IRIS global seismographic network in Armenia”. The main purpose of the agreement was establishment of observation post of IRIS global seismographic network in Armenia with the aim of analysis of registration and warning of earthquakes.

3) Convention signed on 10 April, 1995 (ratified on 6 March, 1996) on “Co-operation between RA and Republic of Bulgaria in the veterinary-sanitary field”, with the main purpose to carry out joint events protecting their territories from cattle epidemics.

4) Agreement signed on 3 May, 1997 (ratified on 31 May, 2000) on “Co-operation between the governments of RA and Georgia in the field of prevention and recovery of natural and technological emergency”. The main purpose of the agreement is co-operation and mutual assistance in the field of prevention and recovery of emergency situations.

5) Convention signed on 5 April, 2000 (ratified on 22 February, 2001) on “Co-operation between the governments of the RA and Romania in the field of protection of plants and phytosanitary quarantine” with the main purpose to co-operate in the field of prevention of quarantine pests and plants diseases.

6) Memorandum of Understanding signed on 27 December, 2001 (ratified on 22 May, 2002) on “Co-operation between the governments of the RA and Iran Islamic Republic in the field of seismic protection”, with the main purpose to co-operate in the field of seismic risk reduction and management, seismic protection and other issues.

7) Agreement signed on 1 March, 2001 (ratified on 28 October, 2002) on “Co-operation between the RA government and Ukraine Ministers’ office in the field of prevention of emergency situations and liquidation of their impacts” with the main purpose to mutually support and co-operate in the field of prevention of emergency situations, reduction and liquidation of possible impacts.

8) Agreement signed on 18 September, 2003 (ratified on 7 September, 2004) among the participating countries of Commonwealth of Independent Countries on “Sharing information on natural or technological emergency situations, informational co-operation during liquidation of their impacts and on the assistance to the affected population”. The main purpose of the agreement is to co-operate in the field of information sharing with the aim to raise effectiveness

of co-operation in the field of reducing and liquidating risks and possible impacts of emergency situations.

9) Agreement signed on 25 November, 2003 (ratified on 4 May, 2004) on “Co-operation between the governments of the RA and the Republic of Tajikistan in the field of seismic protection” with the main purpose to co-operate in seismic protection, seismic risk reduction and other issues.

10) Convention signed in Geneva on 22 June, 1993 (ratified for Armenia on 3 January, 1997) on “Prevention of large industrial accidents” with the main purpose to prevent large accidents with dangerous materials in the objects of high danger and limitation of impacts of such accidents.

11) Convention signed in Vienna on 26 September, 1986 (ratified for Armenia on 24 September, 1993) on “Early warning of nuclear accidents”, with the main purpose to prevent or minimize the impacts of nuclear accidents.

12) Convention signed in Vienna on 26 September, 1986 (ratified for Armenia on 24 September, 1993) on “Assistance during nuclear accidents or radiations”, with the main purpose to provide an immediate assistance during nuclear accidents or radiation emergency situations to minimize the impacts of radioactive exhaustions and protection of live, property and environment from such accidents (risk reduction).

13) Agreement signed in Sochi on 15 April, 1998 (ratified for the RA on 11 March 2003) on “Co-operation among the governments of the Black sea economical co-operation participating countries in the field of prevention of natural and technological disasters and their liquidation”, as well as additional protocol on “Co-operation in the field of assistance during emergency situations and immediate response during natural and technological disasters” with the main purpose to co-operate for prevention of emergency situations, reduction and liquidation of possible impacts.

14) Convention signed on 10 April, 1972 (ratified for the RA on 7 June, 1994) on “Prohibition of production and accumulation of weapons having bacteriological (biological) and poisonous substances and their destruction” the main purpose of which is to prohibit accumulation, transportation, keeping and removal of bacteriological and poisonous materials, weapons, equipment and other measures with the aim to reduce risk of possible hazardous situations.

15) Convention signed in Geneva on 18 May, 1927 (ratified for the RA on 15 May, 2002) on “Prohibition of military or any other hostile use of means having influence on the environment”, the main purpose of which is to exclude damages caused by military or any kind of other hostile use of means having influence upon the environment, biota, earth-crust, hydrosphere, atmosphere or the space to reduce risks of possible risks of emergency situations.

16) Convention signed in Basel on 22 March, 1989 (ratified for the RA on 30 December, 1999) on “Taking control over trans-border transportation and removal of hazardous wastes”. One of the main purposes of the Convention is to reduce dangers threatening human health and the environment.

17) Agreement signed on 22 January, 1993 among CIS participating countries on “Co-operation during natural and technological emergency situations”, the main purpose of which is

to co-operate in the field of prevention of emergency situations, reduction and liquidation of possible impacts.

18) Agreement signed in Yerevan on 11 March, 2005 on “Technical and financial co-operation between the governments of the RA and Switzerland to contribute ES response system in Armenia”, the main purpose of which is to retrain the emergency situations response forces to reduce risk of damages caused by emergencies.

Annex 2.

LAWS ON DISASTER RISK MANAGEMENT IN ARMENIA

Laws regulating management of disaster risk management and prevention of emergency situations, reducing and liquidation of possible impacts in Armenia are as follows:

The field is regulated by:

1) RA law on “Protection of population in emergency situations” defining basis and organization of population’s protection in emergency situations, rights and responsibilities of state government and local authorities, enterprises, offices, organizations, as well as officials and civilians.

2) RA law on “Fire security” defining legal, economical and organizational basis of fire security in the RA.

3) RA law on “Hydro-meteorological activity” regulating public relations in the field of hydro meteorological activity in the RA, defining legal basis of hydro-meteorological activity and is directed to provision of hydro-meteorological security and providing information to the public, bodies of state authorities, juridical and physical persons to receive information on hydro meteorological phenomena and processes.

4) RA law on “Seismic protection” defining main Articles of organizing seismic protection in the republic and relations connected with it.

5) RA law on “Protection of civil population” defining principles of civil protection, rights and responsibilities of state government and local non-government bodies, organizations, RA citizens, people without citizenship and foreign citizens in the field of civil protection.

6) RA law on “Rescue forces and status of the rescuer” regulating basis and rules of establishment and operation of rescue forces, rights, responsibilities, social guarantees and well-being of the rescuers taking part in rescue and immediate emergency-rehabilitation works.

7) RA law on “State regulations of technical security provision” defining legal, economical, social basis and system of the technical security in the republic and regulating relations regarding provision of technical security.

8) RA law on “Armenian Rescue Service” regulating the main activity principles of the authorized government body in the field of emergency situations and civil protection, namely, Armenian Rescue Service, services, positions and titles, rules and conditions of being taken into service, rules to appoint to a position and awarding with titles, the employees’ rights, obligations,

responsibilities, legal and social guarantees, other peculiarities connected with the service and main relations in ARS.

9) RA law on “Divisions of Civil protection” regulating rules and competence of recruitment, preparation, military use of divisions of civil protection in the republic, as well as organizational basis and operational principles.

The field is connected with:

1) RA law on “Safe use of nuclear power with peaceful purposes” regulating state regulations on the use of nuclear power, security of nuclear settlements, ion radiation sources, management of radioactive wastes, physical protection of objects using nuclear power, other relations connected with the nuclear damage, its compensation and use of nuclear power with the purpose to protect the personnel, population, environment and RA security interests.

2) RA law on “Protection of atmospheric air” to provide freshness and improve quality of atmospheric air, reduce and prevent chemical, physical, biological and other harmful influences on the atmosphere, regulate public relations in the field, as well as consolidate legality.

3) RA law on “Plants sanitary” regulating relations in the field of plants sanitary between the authorized state government body and the physical and juridical persons acting in the territory of the Republic of Armenia.

4) RA law on “Provision of sanitary-epidemic security of the RA population” defining legal, economic, organizational basis of provision of sanitary-epidemic security of the RA population, as well as all the guarantees foreseen by the state, which exclude influence of harmful and dangerous factors of the environment on the human organism and provision of favorable conditions for present and future generations’ vital capacity.

5) RA law on “Wastes” regulating collection, transportation, preservation, processing, removal, reduction and other processes connected with wastes, as well as legal and economic basis of prevention of negative influences upon human health and the environment.

6) RA Code on the “Lithosphere”, according to which principles and rules on use of the lithosphere in the territory of Armenia, as well as relations concerning use of the lithosphere are defined, etc.

Annex 3.

DECISIONS AND OTHER LEGAL ACTS ON DISASTER RISK MANAGEMENT IN ARMENIA

Prevention of emergency situations, reduction and liquidation of possible impacts – disaster risk management in the republic on the level of decisions of the RA government:

The field is regulated by:

1) Decision No 1253-N of 18 September, 2008 on “Approving the program of creation an active influencing system upon atmospheric hazardous phenomena in the territory of the RA and on providing money from the state budget”.

2) Decision No 1925-N of 3 November, 2005 on “Approving rules of warning population about emergency situation in the territory of the RA”.

3) Decision No 1953-N of 30 December, 2004 on “Preparation to react upon nuclear and (or) radial accidents in the RA”.

4) Decision No 2328-N of 22 December, 2005 on “Approving the plan of protecting population during nuclear and (or) radial accidents of the Armenian Nuclear Power Station (plan of external accidents of the Armenian Nuclear Power Station)”.

5) Decision No 1631-N of 11 November, 2004 on “Approving the technical regulations of means of personal protection”.

6) Decision No 1494-N of 29 October, 2004 on “Defining rules of providing information to government bodies and population”.

7) Decision No 1064-N of 29 July, 2004 on “Defining rules of creation and operation of a permanent control system for radial, chemical and bacteriological situations”.

8) Decision No 633-N of 22 April, 2004 on “Defining rules of developing civil protection plans”.

9) Decision No 1725-N of 11 December, 2003 on “Defining rules of organization and co-operation of search and rescue services in the RA”.

10) Decision No 1532-N of 13 November, 2003 on “Defining rules of creation, preparation and operation of civil protection organizations”.

11) Decision No 1304-N of 16 October, 2003 on “Defining rules on receiving information and warning on emergency situations in the RA”.

12) Decision No 390-N of 3 April, 2003 on “Defining rules of water use with anti-fire purposes”.

13) Decision No 384-N of 10 May, 2003 on “Defining rules of establishment, preparation and operation of civil protection services”.

14) Decision No 384-N of 13 March, 2003 on “Defining the list of the objects of special and general importance in the field of seismic protection”.

15) Decision No 134-N of 30 January, 2003 on “Defining rules of preparation of the RA governmental and self-government bodies and organizations in the field of emergency situations and civil protection, as well as on education of the population”.

16) Decision No 679 of 25 October, 2000 on “Approving rules of providing population with means of personal protection”.

17) Decision No 592 of 28 September, 2000 on “Approving rules of population’s sheltering”.

18) Decision No 706 of 31 December, 1999 on “2002-2004 program on reduction and liquidation of ES impacts and protection of population”.

19) Decision No 746 of 13 December, 1999 on “Approving rules of population’s evacuation from the hazardous area”.

20) Decision No 429 of 10 June, 1999 on “Complex program on seismic risk reduction on the RA territory”.

21) Decision No 392 of 7 June, 1999 on “Approving the program on seismic risk reduction in the territory of Yerevan”.

22) Decision No 589 of 19 September, 1998 on “Approving rules on fire security in RA forests”.

23) Decision No 152 of 29 May, 1997 on “Regulations of activities of the RA government during an intensive earthquake or its threats”.

24) Decision No 97 of 8 December, 1995 on “Regulations of import, export of RA hazardous and other wastes and transit transportation through the RA territory”.

25) Decision No 533-N of 3 March, 2007 on “Approving rules of identification and rendering harmless of radioactive substances”.

26) Decision No 1945-N of 7 March, 2006 on “Approving rules of structure and safe exploitation of swimming attributes”.

27) Decision No 531-N of 15 May, 2008 on “Establishment of a “staff of the Ministry of Emergency Situations”, approving RA MES Statutes and structure of the staff”.

28) Decision No 634-N of 19 May, 2005 on “Establishment of a “staff of the Ministry of Emergency Situations”, approving RA MES Armenian Rescue Service Statutes and structure of the staff”.

29) “Conception on prevention of rock falling in the territory of the RA” was approved by the 17 Article of the record No 8 of the RA government session in February 2009.

30) RA decision No 320 of 27 September, 1996 on “Organization of education of the subject “Civil Protection and basics of emergency situations” in the RA education system”.

31) RA decision No 248-N of 13 March, 2008 on “Approving rules of immediate assistance to the population during draughts and other natural and technological disasters”.

32) Many other decisions.

The following RA government decisions are related to the field:

1) Decision No 76-N of 25 January, 2005 on “Defining rules on ES regimes for use and preservation water resources, and rules on setting minimal amount of drinkable water provided to the population, as well as compensation of damages caused to the water system manager”.

2) Decision No 1343-N of 18 August, 2005 on “Approval of the decision on provision of fire security of the RA civil aviation”.

3) Decision No 1219-N of 18 August, 2006 on “Approval of norms of radiation security”.

4) Decision No 1403-N of 22 September, 2006 on “Defining rules of prevention of ES outside the territory of the RA, involvement of rescue forces in reduction and liquidation of possible impacts”.

5) Many other decisions.

The following orders and other acts with a state registration regulate or are concerning ES prevention in Armenia, reduction and liquidation of possible impacts, namely ES risk management field:

1) Order No 524-N of 27 May, 2003 of the Head of ES Department by the RA government on “Approving rules of fire security”.

2) Order No 978-N of 31 October, 2004 of the Head of ES Department by the RA government on “Approving rules of state registration of fires and their impacts”.

3) Order No 101-N of 1 August, 2005 of the Head of Civil Aviation Central Department by the RA government on “Approving rules of activities of the airplane personnel during ES-s”.

4) Order No 24-N of 3 February, 2006 of the Minister of RA Urban Development and norms approved by that order on “Approving “RACPII-6.02-2006 “Seismic-proof construction: Planning norms” construction norms”.

5) Armenian Standard 233-2004 “Security during emergency situations: main conceptions, terminology and definitions”.

6) Armenian Standard 201-2000 “Security during emergency situations: Technological emergency situations”, etc.

Annex 4.

COMPETENCES OF DIFFERENT BODIES DEFINED BY RA LEGISLATION ACTING IN THE SPHERE OF DISASTER RISK MANAGEMENT TO PREVENT EMERGENCIES, REDUCE AND LIQUIDATE POSSIBLE IMPACTS

The following competences are given to the RA government in the field of ES prevention, reduction and liquidation of possible impacts in the field of emergency risk management in Armenia:

1) In accordance with Article 12 of the RA law on “Protection of the population in emergency situations”:

- A. manages protection of the population in emergency situations
- B. approves programs of reducing and liquidating ES impacts, protection of population and controls their implementation

- C. defines rules of carrying out state researches of objects and processes, projects and solutions that may be a possible cause for ES
- D. provides warning of the population and information during emergency situations
- E. announces a disaster zone and defines its territory, as well as organizes works of providing maximum assistance and material resources to that territory
- F. approves the rule of assessment and compensation of the damage caused to the population in the result of an ES
- G. approves the rule of creation of funds and their use, financial, food, medical and material provisions with the purpose to provide assistance to the suffered during an ES submitted by the authorized body, etc

2) In accordance with Article 24 of the RA law on “Fire security”:

- A. implements the state policy directed to the fire security
- B. approves and finances the republic’s targeted programs
- C. plans and executes the state budget in the part of fire security, including expenses of providing fire protection
- D. defines the list, volume of issuing and providing fire technique production for the state needs, etc.

3) In accordance with Article 10 of the RA law on “Hydro meteorological activity” the RA government carries out the general state management of the hydro meteorological activity in the republic and:

- A. provides implementation of the state policy in the field of hydro meteorological activity
- B. approves programs of hydro meteorological works of state importance
- C. is the customer of hydro meteorological works of republican importance

4) In accordance with Article 7 of the RA law on “Seismic protection”:

- A. approves state programs on seismic risk reduction
- B. defines list of objects of special, important and general meaning
- C. defines rules of issuing licenses for seismic evasion works, etc.

5) In accordance with Article 10 of the RA law on “Civil protection”:

- A. carries out CP general management
- B. provides implementation of joint state policy in the field of CP
- C. defines rules of conducting CP events
- D. approves CP development programs and controls their implementation
- E. defines the list of territories in the CP group according to the level of the hazard
- F. defines rules of development, preparedness and operation of the CP services and units
- G. approves the rule of carrying out a state research of the objects, processes, projects and solutions
- H. approves the rule of warning and informing the population
- I. carries out other competences defined by the RA legislation

6) In accordance with Article 9 of the RA law on “rescue forces and status of the rescuer” the RA government defines rules of activity of the rescue forces, and according to Article 10, makes

decisions on involvement of the rescue forces in works of ES prevention, reduction and liquidation of possible impacts outside the territory of Armenia.

7) In accordance with Article 10 of the RA law on “State regulations of providing a technical security” the RA government defines the rule of investigations and registration, and according to Article 20 defines the list of particularly hazardous industry assets subject to obligatory insurance, in accordance to Article 22 – limited amounts of dangerous substances and rules of accrediting of juridical persons and private entrepreneurs to have competences of conducting technical surveys.

8) In accordance with Article 7 of the RA law on “Safe use of nuclear power with peaceful purposes”:

- A. provides implementation of scientific-technical, investment and structural state policy
- B. organizes events to protect population, personnel of objects using nuclear power and environment from harmful influence of ion radiation
- C. organizes events directed at the preparation of state government bodies and enterprises involved in the accident reaction national system of possible ES in the objects of nuclear power and liquidation of their impacts
- D. organizes a system of control over radiation situation in the RA and defines rules of operation of government bodies involved in the system
- E. organizes physical protection of the objects using nuclear power
- F. approves security norms and rules, etc.

9) In accordance with Article 5 of the RA law on “Protection of atmospheric air”:

- A. defines normatives of limited acceptable density of substances polluting the atmospheric air and limited acceptable levels of physical harmful influences
- B. defines rules of development and approval of normatives of limited acceptable density of substances polluting the atmospheric air and limited acceptable levels of physical harmful influences
- C. organizes monitoring of the atmospheric air state
- D. defines the rule of protection of the atmospheric air, etc.

10) In accordance with Article 4 of the RA law on “The substances decomposing the ozone layer”:

- A. approves the list of substances decomposing the ozone layer
- B. defines general amounts (quotas) of import of substances decomposing the ozone layer
- C. approves defining rules of private amounts of import of substances decomposing the ozone layer
- D. adopts sub legislation acts on import, export and transition of substances decomposing the ozone layer, etc.

11) In accordance with Article 4 of the RA law on “Plants sanitary”:

- A. provides implementation of the state policy
- B. defines the rule of state registration of plants protection measures
- C. defines forms of rules to conduct investigations of plants protection measures and conclusions of imports and exports of plants protection measures and fertilizers
- D. defines and nullifies quarantine on plants, etc.

12) In accordance with Article 5 of the RA law on “Providing sanitary-epidemic security to the RA population”:

- A. implements state policy of providing a sanitary-epidemic security to the population
- B. develops state programs directed to the prevention of diseases, liquidation of consequences of accidents, natural disasters and mass diseases of the population and investments in the scientific-technical achievements in the field of prevention of intoxications
- C. organizes hygiene upbringing and education among population, provides necessary information on sanitary-epidemic situation through both national and local bodies, etc.

13) In accordance with Article 5 of the RA law on “Food security”:

- A. coordinates works in the field of promotion and regulation of food production
- B. through its authorized body, develops and implements state targeted programs on provision of food security
- C. collects and analyzes information on provision of food of a vital importance to the population, as well as forecasts situation in providing food security and implementation of events to prevent food crisis, and in case of such a crisis, implementation of events directed at liquidation of consequences, etc

14) In accordance with Article 7 of the RA law on “Wastes”:

- A. provides development and implementation of the state policy in the field of use of wastes
- B. provides introduction of rare waste technologies, mechanisms of promotion of wastes collection and elaboration
- C. defines the rules of registration, emergence, removal (destruction, rendering harmless, settlement) and elaboration, rules of licensing and licensing activities of processing of dangerous wastes, rendering harmless, preservation, transportation and settlement
- D. defines lists of hazardous and prohibited wastes, border crossing transportation and removal of wastes
- E. carries out international co-operation in the field of wastes use
- F. carries out other competences foreseen by other laws of the RA.

15) Carries out other competences defined by the RA legislation.

The following competences are given to the authorized bodies in the field of ES risk management to prevent ES, reduce and liquidate possible impacts in the Republic of Armenia:

1) Ministry of Emergency Situations of the Republic of Armenia:

- A. In accordance with Article 13 of the RA law on “Protection of population during emergency situations”
 - develops programs to prevent emergency situations, reduce and liquidate possible impacts and protect population and provides implementation of those programs,
 - establishes and accumulates financial, food, medical and material provisions and funds to provide assistance to the victims of ES, provides their purposeful use
 - organizes state investigations of objects, projects and solutions being a possible cause for an ES
 - organizes qualification of rescuers and training of population on basics of protection of population during emergency situations in accordance with the rules defined by the RA government

- coordinates and controls the activity of the republican executive, state government, territorial and local self-government bodies, enterprises, offices and organizations in the field of protection of population
- Organizes warning and awareness of population during emergency situations, etc.
- B. In accordance with Article 11 of the RA law on “Hydro-meteorological activity”:
 - implements the state policy in the field of hydro meteorological activity, takes part in development and implementation of state programs
 - formulates the RA national hydro meteorological system
 - provides the RA state bodies and local authorities, armed forces, population and other users with hydro meteorological manuals, factual and forecasted extremely immediate information on hydro meteorological phenomena and processes
 - provides unity and confrontation of methods, calculations, foreseeing, data on observation of hydro meteorological phenomena in the field of hydro meteorological activity
 - organizes and carries out works of active influence upon hydro meteorological and geophysical and other phenomena for the security of economy and population, etc.
- C. In accordance with Article 8 of the RA law on “Seismic protection”:
 - has responsibility for the assessment of seismic hazard and risk, reduction of seismic risk
 - coordinates the works carried out in the field of reducing seismic risk in the RA
 - approves forecasts of a possible intense earthquake in the territory of the RA or outside of it in a dangerous distance for the republic
 - approves maps of various scales of seismic risks and seismic evasion of the RA territory, its thickly populated regions, seismic micro evasion of objects with special and general importance
 - approves experimental assessment of seismic risk of territories of objects with special and general importance
 - takes part in the operative assessment of vulnerability of buildings and houses to reduce seismic risk in highly hazardous zones
 - according to the defined rule issues licenses for works of seismic evasion, etc.
- D. In accordance with Article 11 of the RA law on “Civil Protection”:
 - develops CP plans and programs, provides their submission for approval and organizes their implementation
 - coordinates and controls activities of government bodies and organizations in the field of CP
 - organizes preparedness of the government bodies and training of the population
 - organizes state examination of special, important objects, as well as objects, processes, projects and solutions presenting danger from the viewpoint of CP
 - coordinates and controls accumulation process of financial, food, medical, material and other provisions, funds for distribution to the victims and targeted use
- E. In accordance with Article 10 of the RA law on “State regulations of providing technical security”:
 - development and implementation of the state policy to provide technical security
 - development and implementation of state programs in the field of providing technical security
 - co-operation with international organizations, other state government bodies and economic subjects in the field of technical security
 - defining requests submitted to the technical security certificate
 - co-operation with government bodies or other structures authorized with inspectoral or controller competences in the field of works security according to the labor legislation

- F. In accordance with Article 7 of the Statutes approved by annex 1 of the decision No 531-N of the government of the Republic of Armenia on 15 May, 2008 on “Establishment of a “staff of the Ministry of Emergency Situations”, approving RA MES Statutes and structure of the staff” the goals and objectives of the Ministry are:
- development of state policy on civil protection and protection of population during ES and coordination of implementation
 - coordination of rescue, accidental-rescue, fire-fighting and priority immediate accident-rehabilitation works
 - organization and coordination of state examination of objects, things, processes, projects and solution being a possible cause for ES
 - development of the state regulating policy of Civil Protection and evacuation processes of population in ES and coordination of implementation of the works
 - organization and coordination of events preventing ES and liquidating the impacts within its competences
 - formulation and management of state mobilization reserves
 - protection and service of the state reserves
 - implementation of events to reduce seismic risk
 - providing implementation of regime and special observations, investigations and forecasts of hydro meteorological phenomena
 - coordination of works of active influence upon atmospheric phenomena
 - coordination of implementation of ES humanitarian response activities
 - coordination of the activities of state government and local self-government bodies, organizations, as well as international rescuers acting in the RA territory in the field of ES and CP, etc.
- G. Competences defined by other laws of the RA and other decisions of the RA government

2) Armenian Rescue Service of the RA MES:

A. In accordance with Article 5 of the RA law on “Armenian Rescue Service”, the objectives of the ARC are as follows:

- rescuing and protection of human lives and health during ES and conflict situations (wars)
- Organization and implementation of rescue, accident rescue, immediate accident-rehabilitation and fire-fighting works
- Coordination and control over activities of state government and local self-government bodies and organizations acting in the field of CP and protection of population during emergencies and providing awareness on these issues
- Development and provision of implementation of plans and programs on ES prevention, reducing and liquidation of possible impacts, CP, protection of population
- organizing training of population on protection of population during emergencies and CP
- Identifying phenomena causing ES and organization and implementation of event to prevent ES and liquidate possible impacts, etc.

B. In accordance with Article 7 of the Statutes approved by annex 1 of the decision No 634-N of 19 May, 2005 on “Establishment of a “staff of the Armenian Rescue Service”, approving RA MES Armenian Rescue Service Statutes and structure of the staff” the goals and objectives of the Service are as follows:

- Rescuing and protection of human lives and health during ES and conflict situations (wars)
- Organization and implementation of rescue, accidental rescue, immediate accidental-rehabilitation and fire-fighting works

- Coordination and control over activities of state government and local self-government bodies and organizations acting in the field of CP and protection of population during emergencies and providing awareness on these issues
- Development and provision of implementation of plans and programs on ES prevention, reducing and liquidation of possible impacts, CP, protection of population
- Establishment and accumulation of financial, food, medical, material and other supplies, funds for distribution to the victims of ES and conflict situations (war) and targeted use
- Provision of the state anti-fire service and implementation of state fire control, etc.

C. Competences by other RA laws and decisions of the RA government.

3) “National Service for Seismic Protection” Agency of the RA MES

A. In accordance with Article 7 of the Statutes approved by Annex 3 of the decision No 531-N of the government of the Republic of Armenia on 15 May, 2008 on “Establishment of a “staff of the Ministry of Emergency Situations”, approving RA MES Statutes and structure of the staff” the goals and objectives of the Agency are:

- Provision of seismic risk monitoring in the territory of Armenia
- Seismic hazard and risk assessment of the territories
- reduction of seismic risks
- Assessment of the raised seismic level
- Assessment of other secondary hazards connected with the seismic hazard

B. Competences by other RA laws and decisions of the RA government.

4) National Reserves Agency of the RA MES

A. In accordance with Article 7 of the Statutes approved by annex 1 of the decision No 1337-N of the government of the Republic of Armenia on 11 August, 2005 on “Approving Statutes and structure of the Agency of State Reserves of the RA MES” the goals and objectives of the Agency are:

- Implementation of state programs and tasks on accumulation of material values in the state reserve
- in accordance with the RA regional administrative division, allocation of appropriate material values to the organizations of the state reserves system, organizations implementing guarding for creating state warehouses
- implementation of technical policy, inculcation of the modern payments of science and technique and leading experience, creation and exploitation of organizations and offices in the system of the agency, provision of high technical-economic indicators of activities of organizations in the field of mechanization and autoimmunization of processes requiring long hours of working, etc.

B. Competences by other RA laws and decisions of the RA government.

5) “Armstatehydromet and State Service for Monitoring”

A. In accordance with Article 9 of the Statutes of the SNCO approved by point 2 of the decision No 1872-N of the government of the Republic of Armenia on 28 November, 2002 on “Armenian State Service of Hydro meteorological and Monitoring” SNCO, subjects and objectives of the Service are:

- implementation of common state programs directed to the protection of population and economy from dangerous hydro meteorological phenomena, reduction of damages threatening to lives and properties of the civilians, conducting monitoring of the conditions of the environment
- Implementation of regulated activities relevant to international standards of hydro meteorological observations and monitoring of the environment

- Implementation of hydro meteorological and environmental monitoring projects of state importance in the territory of the RA
 - preparation and communication of operative information on factual and forecasted sharp changes of hazardous hydro meteorological phenomena and processes threatening life and health of population, country's economy and environment
 - Implementation of programs of hydrometeorology and environment monitoring of international and regional importance, participation in formulation and development of common global and regional systems of information sharing
 - Analysis, assessment and forecast of climate in the RA and its change, as well as submitting suggestions to different interested organizations on vulnerability of various spheres of economy under the influence of the climate changes
 - Specialized hydrometeorology service with the aim to raise security, regularity and efficiency of aviation flights, etc.
- B. Competences by other RA laws and decisions of the RA government.

6) "National Technical Safety Center":

A. In accordance with Article 18 of the RA law on "State regulations on provision of technical security" has the following competences:

- Development of technical regulations defining technical security requests, scientifically approved categories of danger, classification of industrial hazardous objects
- Implementation of technical security examination and providing appropriate expertise conclusions
- running the register of industrial hazardous assets
- Risk analysis and assessment of industrial hazardous assets aimed at classifying them according to hazard level
- Implementation of technical examination and registration, etc.

B. In accordance with 9 Article of Statutes of the "National Technical Safety Center" SNCO approved by the 2nd Article of the RA government's decision No 2334-N of 29 December, 2005, the main goal of the Center's activity is organization and implementation of technical security measures in hazardous industrial assets working (with the exception of those being prepared, conserved, disassembled) in the RA, except from nuclear and energy locations, objects of processing of radioactive substances, aviation, automobile and railway transportation, as well as objects of military importance

C. Competences by other RA laws and decisions of the RA government.

According to definite types of possible disasters, various authorized bodies are given the following competences:

State Commission of Nuclear Security Regulation by the RA government:

A. In accordance with Article 17 of the RA law on "Safe use of nuclear power with peaceful purposes":

- carries out security assessment and organization of works in the field of use of nuclear power, objects and equipments and conducts examination
- organizes and conducts surveys with the purpose to raise security in the field of use of nuclear power
- conducts assessment of examination of nuclear and radial accidents occurred during exploitation of objects using nuclear power, and in case of necessity conducts an additional examination according to the rule defined by the RA government, establishes database on violations
- Once a year submits a report to the RA government on the nuclear and radial security of the objects important from the viewpoint of nuclear power security

- controls preparedness of the licensed persons to possible accidents
 - during the accidents assesses situation in objects using nuclear power and, based on forecasts of its possible changes, submits recommendations to the RA government, the state government body authorized for issues of emergency situations in the RA on taking necessary protection measures
 - conducts state registration and control over nuclear substances, ion radiation sources and run of state register of radioactive wastes
 - In accordance with the Convention on "Operative awareness about a nuclear accident" conducts international operative warning about nuclear accidents and serves as a central body of communication responsible for information sharing during accidents
 - conducts radial monitoring and control of the environment, etc.
- B. In accordance with Article 8 of the Statutes of the State Commission of Nuclear Security Regulations approved by 1 sub point of Article 2 of the decision No 866-N of the RA government on 17 July, 2008, the goals and objectives of the commission are the state regulations in the field of using nuclear power with the purpose to provide security to population and personnel, protect the environment and RA security advocacy
- C. Competences by other RA laws and decisions of the RA government.

Ministry of Nature Protection:

- A. In accordance with Article 7 of the Statutes approved by 1 sub point of Article 2 of the decision No 1237-N of the RA government on 8 August, 2002, the goals and objectives of the Ministry are:
- within its competences defined by the RA legislation to prevent and reduce harmful influences upon the RA environment, atmosphere, waters, soils, lithosphere, fauna and flora, specially protected areas of the nature, as well as formulation and management of state policy on sensible use and rehabilitation of natural recourses
 - to provide state management of prevention and reduction of harmful influences upon the environment, atmosphere, waters, soils, lithosphere, fauna and flora, specially protected areas of the nature, sensible use and rehabilitation of natural recourses
 - To provide registration, investigation and definition of limitations of objects and elements having harmful influences upon the environment
 - To provide with ecologically secure management conditions for hazardous chemical substances and wastes produced and used in the RA
 - To provide state examination on the influence upon the environment
- B. Competences by other RA laws and decisions of the RA government.

Ministry of Agriculture

- A. In accordance with Article 8 of the Statutes approved by 1 sub point of 2 Article of the decision No 1516-N of the RA government on 5 September, 2002, the goals and objectives of the Ministry are:
- contribution to seed-growing of agricultural cultured plants and cattle-breeding, fighting quarantine diseases and most harmful organisms, organization of cattle epidemics events, implementation of quarantine limitations
 - within its competences defined by the RA legislation implementation of monitoring of RA agricultural lands, development of state policy of melioration of agricultural lands, planning and implementation of programs, submitting recommendations to the RA government on effective exploitation of agricultural lands
 - state management of nature preservation, protection, reproduction and use, planning and implementation of programs, implementation of events of fire security of the territories of the forest fund, reveal and prevention of forest fires, fighting against pests and diseases, etc.

- B. In accordance with 1 Article of the decision No 931-N of the RA government on 16 August, 2007, the RA Ministry of Agriculture was recognized as a state government authorized body in the field of organization and implementation of prevention and liquidation events of harmful influences of rivers foreseen by the Water Code of the Republic of Armenia. Currently, the program “Protection of living areas, territories of economical value and property of population from the risk of flooding and mudflows” has been developed by the Ministry of Agriculture and agreed with the interested Ministries and in the nearest future will be submitted for the approval of the RA government. The program will plan and regulate directions of protecting from floods and mudflow risks, necessary events and other relations.
- C. Competences by other RA laws and decisions of the RA government.

Ministry of Urban Development

- A. In accordance with Article 7 of the Statutes approved by “A” sub point of Article 2 of the decision No 1294-N of the RA government on 25 July, 2002, the goals and objectives of the Ministry are:
- engineering protection of urban development, agriculture, construction and territories within the framework of complex programs of the RA socio-economic development, providing development of long-term programs and state policies in the field of design of apartment-communal public utilities, mapping of territories and formulation of settling systems, territorial planning and development, distribution of directions and supremacies of their targeted use, production capacities, organization of engineering-transportation and other substructure.
 - provision of organization and coordination of works carried out in the direction of engineering-investigating, engineer protection of territories, investigation of technical conditions of exploited buildings and structures, certificating
 - Coordination of recovery works in disaster zones
 - Provision of development of the RA territorial mapping and settlement projects, and after the approval of the mentioned project with a defined order, control over the implementation of requests, etc.
- B. The RA Ministry of Urban Development is the responsible authorized body in the field of landslide disasters. In accordance with Article 19 of the 1st protocol of the RA government’s session held on 11 January, 2007, the viewpoint “Management of landslide disasters in the Republic of Armenia” and “Terms of implementation of conducting events in 131 most risky landslide areas in the Republic of Armenia coming from the “Management of landslide disasters in the Republic of Armenia” viewpoint” met to approval. According to Article 2, the Minister of Urban Development of the Republic of Armenia was assigned, according to the defined order, to submit legislative, program and organizational-structural recommendations coming from the viewpoint to the discussion and approval of the RA government.
- C. Competences defined for other governmental bodies during private cases of emergency situations.

Ministry of Territorial Administration

- A. receives information by defined rule on territorial policy of the RA government from the RA republican executive bodies, territorial administration and local self-governmental bodies,
- B. conducts coordination of elaboration, discussion and approval activities of social-economic development of RA regions and Yerevan city
- C. co-operates with international organizations implementing targeted programs of RA regional and community importance

- D. conducts legal control over implementation of the community leader's own competences and those ordered by the state, as well as the competences of the community council
- E. carries out competences defined by the RA legislation during formation and implementation of RA community budgets
- F. conducts legal control over the decisions adopted by the Mayor of Yerevan and regional authorities (Marzpets) and in case of necessity submits recommendations to the RA Prime-Minister on identifying the decisions as invalid
- G. participates in preparation works of the national water project
- H. participated in annual and long-term works of calculation of demand of usable water
- I. ensures functions of management of state stocks provided to State Water Committee in the organizations implementing water trade activities
- J. defines limitations and norms of zones maintaining water soils and their water echo systems
 - a) controls
 - use and maintenance of water systems defined by law and relevant to technical conditions
 - implementation of requests defined by law and other legal acts in the process of irrigation and drinkable water supply and water use
 - sanitary protection of water systems and protection of inalienable zones
 - effective use of water systems, renovation works, as well as normative proportions of water losses in the systems
 - b) Develops the Concept of migration policy based upon analysis and assessment of migration situation, identification of changing trends
 - c) Implements programs directed to shelter issues of refugees and forcedly displaced persons in tight living locations, and also construction of various objects of social importance and employment contribution
 - d) In the result of internal displacements of population, analyzes and assesses migration situation, main trends of development in the territory of the republic
 - e) Jointly with relevant bodies of state government and local self-government bodies develops and implements programs directed to resettlement, improvement of demographic situation
 - f) Other competences.

Ministry of Health

- A. Develops standards and criteria on assessment of the quality of medical assistance and organization of medical assistance
- B. Provides health organizations with organizational and methodological support
- C. Through hygiene and epidemics department (service) carries out control over sanitary norms and rules, development of hygiene and anti-epidemics measures conducts control over them, organization of hygiene examination of factors having influence upon population's health and environment, organization of sanitary-hygienic and anti-epidemics events to prevent infectious and massive non infectious diseases and intoxications
- D. Development and implementation of targeted programs directed to improvement of the population's health, reduction of disablement and mortality
- E. Organization of public awareness and health education, development and implementation of programs in that direction

F. Development of programs on keeping mother and child health and implementation of events

G. Organization of events directed to the primary medical assistance to population in case of emergency situations

H. Collection, analysis and assessment of information on health system and health conditions of population

I. Organization of a state control over medicine produced in the republic and imported into the republic and over their quality and state registration of the medicine

J. Within its competences, coordination of activities of regional health organizations (health services of territorial administration bodies)

J.a. Other competences.

Other competences defined for governmental bodies in separate cases of emergency situations.

The RA republican executive bodies (Ministries, bodies by the government) have the following competences in the field of prevention of ES in the RA, reduction and liquidation of possible impacts and ES risk management”

1) In accordance with Article 14 of the RA law on “Protection of the population during emergency situations”:

- A. Organize protection of the personnel working within their system during emergency situations
- B. Organize the activity of subject enterprises, offices and organizations in emergency situations
- C. Provide protection of the population within their competences and with that purpose establish necessary specialized units, etc.

2) In accordance with Article 25 of the RA law on “Fire security”:

- A. Establish fire guard services and organize their activity, develop purpose targeted programs and organize their implementation, within their competences organize development of fire security normative documents and other acts on fire security and approve them
- B. Develop and carry out events providing fire security
- C. Carry out and participate in anti fire advocacy and training events of the civilians on fire security
- D. Carry out fire-fighting and accidental-rescue works connected with them.

3) In accordance with Article 12 of the RA law on “Civil protection”:

- A. Organize protection of the personnel working within their system
- B. Establish CP services
- C. Organize planning and implementation of CP events
- D. Organize stable activity of the organizations of the system

4) In accordance with Article 8 of the RA law on “Safe use of nuclear power on peaceful purposes”:

- A. Develop security norms and rules agreeing them with the regulating body
- B. Develop and carry out events focused on providing security to the objects under their subordination, events directed to provision of fire, technical, sanitary and ecological security of the objects using nuclear power

- C. Develop and carry out events directed to provision of physical protection of objects using nuclear power
- D. Provide preparedness of enterprises subject to them in the field of implementation reacting and protection events of the objects using nuclear power
- E. Organize and carry out control over radial situation in the objects using nuclear power and in observation points
- F. Etc.

5) In accordance with decision No 2328-N of the government on 22 December, 2005 on "Approving the plan of protection of the population during nuclear and (or) radial accidents of the Armenian Nuclear Power Station (Plan of external accidents of the Armenian Nuclear Power Station)" according to the Statutes objectives, terms were preserved for providing protection of population during nuclear and (or) radial accidents.

6) In accordance with the defined rule of the decision No 1064-N of the government on 29 July, 2004 on "Defining rules of creation and activity provision of a system of a permanent control over radial, chemical and bacteriological situation", they are involved in the republican system of permanent control over radial, chemical and bacteriological situation and they are given appropriate competences

7) In accordance with the program approved by the decision No 429 of the government on 10 June, 1999 on "Complex program of seismic risk reduction in the RA" the executive bodies must organize events with the purpose to reduce seismic risk.

8) Other terms approved with other legal acts.

The following competences are given to Regional Administrations in the field of prevention of emergency situations, reduction and liquidation of possible impacts and disaster risk management:

1) In accordance with Article 15 of the RA law on "Protection of population during emergency situations":

- A. Organize protection of the region's population during emergency situations
- B. Participate in implementation of prevention of ES, reduction and liquidation of possible impacts, as well as operative events foreseen by appropriate state programs
- C. Involve local authorities and population in work of prevention of emergency situations, reduction and liquidation of their possible impacts
- D. Give orders to territorial services of the republican executive bodies on ES prevention, reduction and liquidation of possible impacts and protection of population
- E. Are responsible for providing protection of population of the region
- F. Carry out other competences defined by the RA legislation regarding protection of population

2) In accordance with Article 13 of the RA law on "Civil Protection"

- A. Organize and manage implementation of CP events in the territory of the region
- B. Take part in CP events foreseen by state national plans and programs
- C. Involve local authorities, organizations and population in implementation of CP events
- D. Establish regional CP services and forces
- E. Give orders to territorial units of the state management republican bodies to carry out CP events

- F. Carry out evacuation of the region's population, material and cultural values
- G. Carry out sheltering of the region's population and provide with means of personal protection, etc.

3) In accordance with Article 9 of the RA law on "Safe use of nuclear power with peaceful purposes":

- A. Provide implementation of demands of the RA law on use of nuclear power with peaceful purposes in the regions
- B. Take part in development of plans of reaction of possible emergency situations in the objects of nuclear power
- C. Organize and carry out events directed to protection of region's population and liquidation of the accident's impacts during radiation accidents.

4) Competences defined with other RA laws and decisions of the RA government.

The following competences are given to the local authorities in the field of prevention of emergency situations, reduction and liquidation of possible impacts and disaster risk management:

1) In accordance with Article 66 of the RA law on "Local self-government of Yerevan city", the mayor of Yerevan carries out the following obligatory competences in the field of CP and during emergency situations:

- A. The mayor is the head of CP
- B. The Mayor carries out competences given to the community leader according to the RA law on "Local self-government" and other laws regulating the field of CP and ES.

2) In accordance with the RA law on "Local self-government",

- A. the community leader carries out the following competences:
 - organizes protection of the lands considered to be the property of the community, forest and water areas, as well as the environment in accordance with Article 45
- B. the community leader carries out the following competences delegated by the state:
 - In accordance with Article 33, takes measures to prevent technological disasters and liquidate impacts of natural and technological disasters
 - in accordance with Article 44, organizes works fighting diseases of agricultural cultured plants, pests and weeds in the community, organizes veterinary services, anti-epidemic events, prevention of cattle diseases and works of keeping agrarian and other rules in the community
 - in accordance with Article 45, defines control in the field of nature protection, organizes events on use and protection of the lithosphere, forest, water and air territories, as well as flora and fauna, provides protection of the lands from watering, flooding, bogging up, pollution with chemical, radioactive substances and production wastes.
- C. the community leader carries out the following voluntary competences:
 - In accordance with Article 36, supports the activity of the CP bodies
 - In accordance with Article 42, supports implementation of sanitary-hygiene, anti-epidemics and quarantine events of the healthcare bodies

3) In accordance with 16 Article of the RA law on "Protection of population during emergency situations"

- A. Organizes protection of community inhabitants during emergency situations

- B. Carries out accidental and recovery events to provide uninterrupted work of the community objects of vital importance during emergency situations
- C. Organizes rescue works in the community
- D. Carries out events to prevent ES and reduce possible impacts in the community
- E. Carries out warning of the community inhabitants during emergency situations
- F. Carries out other competences defined by the RA legislation concerning protection of the population

4) In accordance with Article 26 of the RA law on “Fire security”:

- A. The competences delegated by the state in the field of fire security are as follows:
 - taking measures to prevent fires and reduce possible impacts
 - Support and assist in conducting, organization and implementation works of fire security events
- B. voluntary activities in the field of fire security are as follows:
 - training the population on measures and rules to provide fire security and involvement of the population in works of fire prevention and fire-fighting
 - support public organizations working in fire security
 - organizing public control over provision of fire security
 - providing a necessary regime in case of worsening the anti-fire situation

5) In accordance with Article 9 of the RA law on “Seismic protection”:

- A. Organize the works being carried out in the field of seismic risk reduction in the community
- B. Provide preparedness of the population to intense earthquakes in the community
- C. Support conducting state programs in the field of seismic protection in the territory of the community
- D. Carry out other competences defined by the RA legislation

6) In accordance with Article 14 of the RA law on “Civil protection”:

- A. Organize and carry out civil protection in the community
- B. Carry out activities with the purpose to provide secure works of community subordination objects
- C. Organize planning and implementation of communities CP events
- D. Carry out evacuation of population, material and cultural values, shelter issues of population and provision with means of personal protection
- E. Establish community CP services
- F. Carry out warning of community inhabitants
- G. Establish forces necessary for CP organizing and provide preparedness of those forces, etc

7) In accordance with Article 10 of the RA law on “Safe use of nuclear power with peaceful purposes”:

- A. provide participation of the community inhabitants in the public discussions and analysis of projects of objects using nuclear power to be built in the territory of the community
- B. In case of radial accidents, organize and implement events to protect community inhabitants and liquidate impacts of the accident, etc

8) Competences defined by the RA other laws and decisions of the RA government.

The following competences are given to the organizations acting in the territory of the RA in the field of prevention of emergency situations, reduction and liquidation of possible impacts and disaster risk management:

1) In accordance with Article 17 of the RA law on “Protection of population during emergency situations”:

- A. Carry out protection of their personnel
- B. Support implementation of rescue and immediate works and establish necessary forces to do appropriate works
- C. In accordance with the defined order of the RA government, the objects of special importance provide immediate warning and protection of population living in possible hazardous influence zone

2) In accordance with Article 30 of the RA law on “Fire security”

- A. the organizations have the right to:
 - establish, reorganize and liquidate the fire protection divisions maintained by own means, also according to the agreement with the state anti-fire service
 - submit recommendations to state government bodies and local authorities to provide fire security
 - carry out works to clarify circumstances and reasons of fire.
- B. the organizations must:
 - implement normative acts of fire security, as well as carry out the orders, decisions and other legal acts of bodies protecting from fire
 - develop and take measures in the field of provision fire security, keep anti-fire systems and means in order, including fire-fighting priority means, forbid non purposeful exploitation of them
 - support fire maintenance - fire-fighting, revealing fire causes and conditions, as well as the works directed to finding the guilty in violation of fire security normative acts and in causing fires
 - Immediately inform fire maintenance bodies about the new fires, defects in anti-fire system or means, changes of the road and passageway conditions, etc.

3) In accordance with Article 15 of the RA law on “Civil Protection”

- A. organizations carry out protection of their personnel
- B. establish necessary forces to do rescue and accidental-rehabilitation works
- C. carry out other competences defined by the RA legislation.
- D. organizations having protective, strategic importance for the economy, as well as presenting high danger from the viewpoint of CP form CP services. The list of those organizations is defined by the RA government.

4) In accordance with Article 19 of the RA law on “State regulations of providing technical security”, the person exploiting an industrial dangerous objects must:

- A. define permanent control over keeping technical security requests
- B. with the purpose to exclude and prevent industrial accidents during the whole exploitation of the hazardous objects, provide regular investigations of technological equipments, technical measures, object structures, allocation points, security zones, as well as organize training and qualification of the personnel
- C. develop and implement programs directed at reduction of possibility of technological disasters
- D. support other sections of the technical security system in the field of revealing causes and circumstances of technological accidents and unfortunate cases (accidents)

- E. in case of industrial and technological accidents immediately initiate events foreseen by the technical security certificate, at the same time informing the Technical Security National Center
- F. stop exploitation of the industrial hazardous object or technical means existing in it, exploitation of the technological equipment, in case if the expertise has recorded the threat of a technological accident, etc.

5) Competences defined by the RA other laws and decisions of the RA government

Annex 5:

MAIN STAKEHOLDERS INTERVIEWED AND THEIR CONTACT DETAILS

An interview was conducted with each of the main stakeholders in the field of DM listed below. Among the interviewed Vice-Ministers, Deputy Directors of Services, lawyers, experts, program managers, Heads of Departments, and other persons responsible for this issue were mainly involved.

Ministries Agencies, Organizations	Address	Telephone	Web site
Ministry of Emergency Situations	25 Pushkin str.	(010) 28-42-80	www.ema.am
Ministry of Territorial Administration	Republican Square, Governmental House 3	(010) 52-52-74	www.mta.gov.am
Ministry of Health	Republican Square, Governmental House 3	(010) 54-40-28 (010) 58-24-13	www.moh.am
Ministry of Agriculture	Republican Square, Governmental House 3	(010) 52-02-07	www.minagro.am
Ministry of Education and Science	Republican Square, Governmental House 3	(010) 52-66-02 (010) 52-73-43	www.edu.am
Ministry of Nature Protection	Republican Square, Governmental House 2	(010) 58-53-49 (010) 52-10-99	www.mnp.am
Ministry of Urban Development	Republican Square, Governmental House 2	(010) 58-90-80	www.mud.am
Ministry of Energy and Natural Resources	Republican Square, Governmental House 2	(010) 52-87-04	www.minenergy.am
State Nuclear Regulatory Commission by the Government	4 Tigran Mets Ave.	(010) 56-40-14 (010) 54-39-95	www.anra.am
National Service for Seismic Protection (NSSP)	4 th Davitashen district	(010) 36-21-30	www.nssp-gov.am
NSSP Structures' seismic Resilience Center	4 th Davitashen district	(010) 36-87-24	
Armenian Rescue Service	25 Pushkin str.	(010) 53-28-73 (010) 53-73-12	www.ema.am
Armstatehydromet	54 Leo str.	(010) 53-36-16	
National Reserves Agency	25 Pushkin str.	(010) 53-87-71	
Institute of geological sciences of National Academy of Sciences	24 Baghramyan Ave.	(010) 52-44-26	
Crisis Management State Academy	1 Acharyan str.	(010) 61-74-73	
Faculty of geography and geology of Yerevan State University	1 Alek Manukyan str.	(010) 55-25-93	
"Georisk" scientific research society	24 Baghramyan Ave.	(010) 52-65-17	
Armenian Seismic Construction research Institute OJSC	3 A. Aharonyan str.	(010) 28-13-02	
Seismologists and Earth's Physics Company of Armenia	10/51 Leningradyan str.	(010) 39-26-36	
"Arame Sarafyan Club" foundation	17 /21 Moldovakan str, Nor Norq district	(010) 61-74-73	

Armenian Water Project Institute CJSC	12 V. Vagharshyan str.	(010) 27-76-61 (010) 27-36-60	
Center of Ecology - Noosphere Surveys of RA National Academy	68 Abovyan str.	(010) 56-93-31	
State Commission for Water Management	13a Vardanants str.	(010) 54-09-09	
Garni International Center	24 Baghramyan Ave.	(010) 52-34-66	
Geocom LTD	24a Baghramyan Ave	(010) 56-45-04	www.geocom.am
Armenian Red Cross Society	21 paronyan str.	(010) 53-84-31	www.redcross.am
GTZ	48 Naibandyan str.	(010) 54-60-46	www.gtz.de
World Bank	9 Grigor Lusavorich, 6 floor	(010) 52-48-84 (010) 52-09-92	www.worldbank.org.am
UNDP	14 Petros Adamyan str.	(010) 56-60-73	www.undp.am
SDC	1 Koryun lane, 11 house, 16 apt.	(010) 52-40-88	www.swisscoop.am
OSCE	64/1 Sundukyan str.	(010) 22-96-10 (010) 22-96-11	www.osce.org
Save the Children	2a Agatangeghos str	(010) 56-23-35 (010) 56-22-83	www.savethechildren.org
UNICEF	14 Petros Adamyan str.	(010) 54-38-09 (010) 58-01-74	www.unicef.org/armenia
WHO	9 Alek Manukyan str, AUA Business Center	(010) 51-20-29	www.euro.who.int
World Vision	1 R. Melikyan str.	(010) 74-91-18 (010) 74-91-19	www.wvarmenia.am
JICA	11 Amiryan str.	(010) 53-12-86	www.jica.go.jp
IFRC	21 Paronyan str.	(010) 53-94-43 (010) 53-92-17	www.ifrc.org

Annex 6:

QUESTIONNAIRE

1. Describe the role of your organization in the field of disaster management
2. Subordination and co-operation of your organization
3. The structures under your subordination
4. Your opinion on the current legislative situation in the field of disaster management
5. Lacking points in DM field management
6. The programs implemented by you in the field of DM and appropriate partners
7. Your involvement in the circle of disaster risk assessment (identification, assessment, monitoring, database)
8. Your role in DM circle
 - Mitigation/prevention
 - Preparedness
 - Response
 - Recovery

Annex 7

LIST OF USED ABBREVIATIONS

ADRC	Asian Disaster Reduce Council
ANPP	Armenian Nuclear Power Plant
ARC	Armenian Rescue Service
ARCS	Armenian Red Cross Society
CIS	Commonwealth of Independent States
CMSA	Crisis Management State Academy
CP	Civil Protection
DM	Disaster Management
ES	Emergency situations
GIS	Geographic Information System
GTZ	German Technical Co-operation
IFRC	International Federation of Red Cross and Red Crescent
JICA	Japan International Co-operation Agency
MES	Ministry of Emergency Situations
MOH	Ministry of Health
MTA	Ministry of Territorial Administration
NAS	National Academy of Sciences
NSSP	National Seismic Protection Service
OSCE	Organization for Security and Cooperation of Europe
RA	Republic of Armenia
SDC	Swiss Development and Cooperation Agency
SNCO	State Non-Commercial Organization
SWOT	Strengths, Weaknesses, Opportunities, Threats
UN	United Nations
UNDP	United Nations Development Program
UNEP	UN Environmental Program
UNFAO	UN Food and Agriculture Organization
UNICEF	UN Children's Fund
WHO	World Health Organization
YSU	Yerevan State University