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OPEN PARTIAL AGREEMENT ON THE PREVENTION OF, PROTECTION AGAINST, AND ORGANISATION
OF RELIEF IN MAJOR NATURAL AND TECHNOLOGICAL DISASTERS

**METHODOLOGY AND PLAN FOR ACTION
AIMING TO DEVELOP AND HOLD
NATIONAL AND MUNICIPAL “CAMPAIGNS”
ON INFORMING AND WARNING THE POPULATIONS
ABOUT EMERGENCIES**



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1. INTRODUCTION

In the 20th century around two billion people, that is the third part of the total mankind, were found to be any how affected by natural disasters. Between 1990-1999 the number of victims from disasters made some 188 million, during that period around 31 million people suffered losses due to armed conflicts; developing countries account for 90% of deaths caused by natural disasters.

One of the severest disasters experienced at the end of the last century was the Spitack earthquake 7 December 1988, that took more than 25 thousand innocent lives, destroyed tens of cities and settlements and damaged a significant part of the economic potential that led to marginality of industry for almost one-third of the Republic territory.

In last decades that have elapsed, the mankind came to understanding that natural hazards transform into natural disasters mainly due to the high vulnerability of society.

And although the scientific and technical knowledge in disaster reduction area has advanced enormously, however the vulnerability of societies from natural disaster, especially in the developing countries continues to increase in a tandem with growing populations setting in disaster prone areas.

Unfortunately, although the recognition of the need and ability to reduce risk have increased, more resources are dedicated to respond to the disasters.

However, the large number of recent catastrophes, triggered mostly by the vulnerability to natural disasters highlighted once more the essential need to focus resources and attention to reducing risk and vulnerability.

In January this year, at Kobe, Japan the Second World Conference on Disaster Reduction aimed to reducing risks and vulnerability of states and communities against natural hazards was held. Some 168 governments adopted “the Hyogo Framework for action 2005-2015: building the resilience of nations and communities to disasters” that set of goals and priority actions to address that urgent challenges of our time and launched historic efforts to strengthen the priorities of the international community.

The most significant priorities are:

- mainstreaming disaster risk reduction and risk management into national planning practices and sustainable development and the linkage of the relevant goals to the Millennium Development goals;
- viewing disaster risk reduction as national and local priorities with a strong constitutional base to implement them;
- providing resources by the relevant sections of the national and local (municipal) budgets to manage and reduce disaster risks;
- highlighting, assessment and monitoring of risks;
- holding of regular campaigns on informing all layers of the population and the usage of early warning (prevention) systems, whose messages should be opportune and clearly understood by all those at risk and inform on what should be done when warned;
- establishing regional cooperation links to reduce trans border disaster risks;
- using knowledge and developing skills to establish a culture of the disaster risk reduction and sustainable development;
- engaging communities into disaster risk reduction;
- enhancing preparedness to disasters and setting up effective response systems.

2. NATIONAL AND MUNICIPAL “CAMPAIGNS” ON WARNING AND INFORMING THE POPULATIONS IN EMERGENCIES

2.1. For the Republic of Armenia which is a landlocked country, in a small territory of which exists the likelihood of almost all types of natural and man-made disasters (including, major earthquakes and radiological accidents) informing the populations about existed risks and its training in the skills of adequate behavior and behavior when warned about a specific disaster which is real or seems imminent becomes vital.

Developing and holding the national “Campaign” on warning and informing the populations on emergencies at central and municipal levels as well as developing and regular holding both: the national «Campaigns»” and municipal “Campaigns” regards the threats of specific disasters deem to be one of the most effective steps in the above direction, with taking into account the conditions shared by Armenia and the Southern Caucasus region in general.

Proceeding from the above, the European Interregional Center for Training Rescuers (Yerevan, Armenia) has developed a Project:” National Campaign on warning and informing the populations of the Republic of Armenia about emergencies at central and municipal levels (as a basis for setting up a regional system to inform and warn the populations of the Southern Caucasus and neighboring states about trans boundary emergencies)”.

This paper suggests a pilot Project of a methodic aiming to organizing and holding the National Campaign. Within this Project’s development, the expertise accumulated by countries such as the Netherlands, Sweden and the Czech Republic was used.

The paper quotes the grounds for a priority to implement the Project in the Republic of Armenia. Simultaneously with taken into account the specifics of the Southern Caucasus region, it has been shown that this goal goes afar beyond pure national frameworks and acquires a significant regional nature.

The paper quotes short- and long- term Project goals; historical backgrounds; key elements; Project implementation phases: planning, preparedness implementation and assessment.

As a result of the National Campaign:

- each family in the Republic of Armenia will be informed about possible risks threatening its neighborhood and will know how to respond when warned and informed about imminent hazard or in the case of a specific disaster;
- the local (municipal) authorities will be prepared to inform people about emergencies as well as they will ensure improved disaster reduction preparedness in the case of a specific disaster;
- it is the first wide- scale Campaign on civil protect that will lay the grounds for regularly holding of such campaigns each 2, 5-3 years;
- a warning and informing system for the populations of the Republic of Armenia should serve the basis for developing an adequate regional system for the Southern Caucasus countries whose goal is to warn and inform the populations of the region about trans boundary emergencies;
- the National Campaign’s organization and holding method demonstrated in this Project can be submitted as an important compound for setting up municipal, national and regional early warning systems in other concerned states.

2.2. The National Campaign Project was submitted to the Council of Europe’s EUR-OPA Major Hazards Agreement and gained its approval. Currently preparatory work aiming to further polishing and implementing the Project has been started by the European Center for Training Rescuers jointly with the Emergency Management Administration of the Ministry of Territorial Management of the Republic of Armenia under support of the Council of Europe’s EUR-OPA Major Hazards Agreement.

In particular, several clauses of Phase 1-“Project planning” have been launched. Some information material assigned to be used in both: ”The National Campaign and local “Campaigns” as well as the material that can underlying the development of an adequate document to be used by the municipality while holding such campaigns has been developed.

The booklets, brochures and leaflets with enclosed instructions to be distributed for each family envisaged by Phase 2 of the Project (“Preparation”) have been developed.

3. CONTENTS OF THE NATIONAL “CAMPAIGN “PROJECT: BASIC STRUCTURAL ELEMENTS

Below are quoted the contents and basic structural elements of the Project.

3.1. Historical pre-conditions

They have been quoted in depth in the National “Campaign. With purpose of saving a place we are not going to discuss them here.

3.2. Aims and objectives

3.2.1. Short term.

- Organization of a nation-wide Campaign on warning and informing of the populations about emergencies in order to keep the population of the Republic of Armenia informed on possible risks (ecological, industrial, nuclear, transport) threatening each particular country region and about what to do when warned on an imminent hazard and in the case of a particular disaster;
- As local governance bodies are the first who must protect the population, this Project has to be implemented at the both: central and municipal (local) levels. Leaders of local governance bodies, heads of schools, hospitals, polyclinics, industrial enterprises, offices and mass media are called to be engaged into the development and realization of this Project.

3.2.2. Long-term.

- Acquisition by the population of the Republic of Armenia of the required knowledge and fundamental skills in properly reacting when warned about an imminent hazard and in the case of specific risks. Achieving this goal requires the recurrent holding of the nation-wide Campaigns;
- usage of the experience, gained in training of the population of the Republic of Armenia in skills of behavior in times of disasters, shared by the Southern-Caucasus countries and adjacent states at organizing the similar Campaigns in neighboring countries with taking into account their specific geographical and ecological-climatic conditions;

- basing on the Armenian expertise development of a regional informing and warning system for the populations of the Southern Caucasian countries and adjacent states about trans boundary emergencies;
- profound mitigation of consequences and reducing of losses which likely to be caused by trans boundary emergencies.

3.3. Key elements

- A broad support to the Campaign from:
 - National Government;
 - Regional and Local governance bodies;
 - Schools, universities, hospitals, factories and enterprises, etc;
 - Mass media.
- It is very important to ensure trust of the population in the actions undertaken by the Government, administrative bodies at all levels and information published;
- Repetition;
- Knowledge and experience sharing.

3.4. Master plan - 4 phases

3.4.1. Phase 1: Planning

- Study tour (acquaintance with the experience gained by the Netherlands, Sweden, Czech Republic, other concerned states of the European Union and other countries);
- Analyses of a present state of the national warning and informing system for the populations;
- Development of methodological documents on preparing and holding the “Campaigns”;
- Draft Policy-plan for course identification;
- Consultations with representatives of other ministries and departments concerning the set up goals;
- Consultations with representatives of the regions, informing the governors and mayors;
- Consultations with non-governmental organizations;
- Review of the “Self-protection in schools and other educational establishments” Project;
- Panel discussions;
- Pilot Researches. Preliminary planning;
- Integration of efforts made by some regions and municipalities;
- Investigation of the people’s feedback to these plans;
- Study of mass media;
- Study of local enterprises’ capacities;
- Final preparation of the Plan to determine the particular course;
- Review and confirmation of the Plan from the Government.

3.4.2. Phase 2: Preparation

- Preparation of developing and testing materials (brochures, advertisements, TV and Internet head-pieces and etc.). Each country region has to be provided with a special regional brochure, containing information about all possible risks present in this particular region and about what should be done in the case of a disaster. Each family

should have the above brochure. Co-ordination of this process. Ongoing investigation of the public feedback to this brochure; explanatory work;

- Preparing logistics;
- Preparing media;
- Preparing surveys;
- Notificating mediators.

3.4.3. Phase 3: Implementation.

- Press conference. Advertisement of Campaign goals , mechanisms of its realization, briefing with the representatives of mass media, local governance bodies and the people;
- Sending of message, addressing the population (house by house, on the radio, by TV and Internet, etc.);
- Answering questions;
- Reviews.

3.4.4. Phase 4: Campaign assessment.

- Surveys. How did people remember; how did they study skills in behavior in emergency situations, what to do they think about it? How successful was the material advertised by TV and press. What is the most convenient way of remembering the material: through TV, Internet, brochures or press?
- Report about how effective the Campaign has been ;
- Recommendations for repetitions.

3.5. Collaboration with other national and international organizations

The National Campaign's development and organization are supposed to be implemented through support of the Council of Europe's EUR-OPA Major Hazards Agreement, the Partnership for Peace Process, corresponding structures of the European Union, the International Strategy on Disaster Reduction and relevant organizations from the Netherlands, Czech Republic, Sweden and other states that have the interest in the mission.

Bi-and multi lateral consultations in order to seek new windows for developing and implementing the Project are crucial.

As an initial step towards implementing a working program supported by the Council of Europe's EUR-OPA Major Hazards Agreement or the Partnership for Peace Process it is deemed expedient to envisage in 2006 (if it is not possible than in 2007) the holding in the Republic of Armenia of a regional Conference on "Challenges for early warning and informing at central and municipal levels the population of Southern Caucasian countries and neighboring states about trans boundary emergency risks" within the context of pooling the of experience acquired by the Netherlands, the Czech Republic and other state-members of the European Union with taking into account the specific geographical and natural-climatic conditions of the region.

Correspondent specialists from Georgia, Azerbaijan, the Russian Federation Turkey, Greece and other interested member-states of the Council of Europe's EUR-OPA Major Hazards Agreement and the European Union jointly with professionals from the Netherlands, the Czech Republic and Sweden are encouraged to participate.

Later it is necessary to initiate a process of the joint development of the Program on holding of the above Campaign.

At the next stage it is suggested through experience gained by the Republic of Armenia to run the adequate national “Campaigns” in the Southern Caucasus countries and in other neighboring states.

3.6. Programme duration and implementation schedule

The duration of activities envisaged by this program is two years.

- The First Stage (Planning) will last 1 year;
- The Second Stage (Preparation) will last 8-12 months;
- The Third Stage (Implementations) will last from 2 - 2.5 months.

Basing on the already developed national “Campaign” “Project it is expedient to coordinate the development and implementation of the national “Campaign” in the Republic of Armenia with relevant bodies of the Council of Europe’s EUR-OPA Major Hazards Agreement, the Partnership for Peace process, the European Union, the International Strategy on Disaster Reduction and with other international organizations and countries who have the interest in the mission.

If a decision is positive, during 2006-2007 there could be performed preparatory work for holding a “Regional Conference” and at the same time there could be implemented some preparatory procedures for the “Program” to be jointly developed and the “National Campaign” in the Republic of Armenia in 2007-2008 to be launched.

3.7. Expected outcomes

The expected outcomes have been briefly quoted in section **2.1.** in the present paper.

4. PRINCIPALS UNDERLYING THE INFORMATION OF POPULATIONS ABOUT DISASTERS

4.1 Under the Law of the Republic of Armenia of December 2, 1998 “On protection of the populations in emergencies”:

- warning the populations and governance bodies about a threat or establishing emergencies is deemed one of the main events aiming to protect the populations in emergencies (Article 5, clause a) (N1));
- warning and informing the populations in emergencies is ensured by the Government of the Republic of Armenia (Article 12, clause d) (N4));
- making the problems concerning civil protection in emergencies public is one of the civil protection principals (Article 6, clause b) (N2));
- every citizen of the Republic of Armenia has the right, in order established under the legislation of the Republic of Armenia, to be compensated for losses caused by emergencies; as well as to be provided precise information about emergencies; a risk that such events are likely to occur and the extent to which he/she has been protected (Article 19);
- organization of training the populations is one of the preventive measures aiming to protecting the populations (Article 4 clause i) (N 6));

- the empowered body is responsible for warning and informing the populations in emergencies (Article 13 clause i) (N6));
- local governance bodies are responsible for warning the communities in emergencies (Article 16 clause f) (N5));
- training the populations on emergency related problems is carry out in order established by the Government of the Republic of Armenia (Article 20).

4.2. At a first glance proceeding from the above Law referring to the protection of the population “in emergencies” and not “against emergencies” (it is a theme for a separate discussion) in most of the reviewed Law clauses, we can speak about warning and informing the populations “in emergencies”. Although the Law provides the preventive measures aimed to protect the populations (Article 5, clause a) included) here we can speak about warning the populations and governance bodies on “a threat of emergencies situations”; but Article 19 ascertains the right of every citizen to precise information about “a threat of establishing an emergency situation” and about the extent to which he/she has been protected.

For the clauses: a) of the first part of Article 5 and d) of the first part of Article 12 to be exercised, the government of the Republic of Armenia under its decision of October 26, 2003 N1304-N set “ Order for receiving information and warning on emergencies establishing in the territory of the Republic”.

This document regulates the receiving of information and warning messages not only about emergencies but and about threats prefiguring their happening.

Although, the problems and mechanisms concerning the development, coordination and conveying information to the populations in the case of large-scale calamities; development of specific information material for the population and control over conveying it to the users; preparation and submitting information to national and international press and other mass media structure are not available with this document’s coverage.

4.3 To summarize it up: the Project “Informing the populations about disasters” is aimed to ensuring the awareness of every citizen of what he/she should do in the case of an imminent disaster.

And this goal can be achieved only provided that the following below conditions are met:

- informing the populations about risks;
- early warning on an imminent disaster;
- training the populations in the skills of adequate behavior when informed on the disaster that is real or seems imminent.

Let us view now, with taken into consideration the above stated, the basic principals underlying informing the populations about disasters.

- Governance bodies bear the prime responsibility for informing the populations about disasters. Enterprises and establishments must inform about threatening risks associated with their products and production process. However it is governance bodies at all levels that will transmit this information to the populations. This responds to the requirements of the relevant Directives of the European Union basing on with currently within the frameworks of the National Program a process of harmonizing the legislation of the Republic of Armenia has been launched. These Directives, inter alia, can be made applicable to informing about nuclear power plants and those installations where some hazardous substances are produced, used in production circles or stored;

- the national Government bears responsibilities for warning and informing the populations in large-scale disasters;
- it is municipalities that are first in charge of forwarding information about disasters to their citizens as well as for carrying out relief operations at disasters;
- the Project of “Informing populations about disasters” should provide an access to information for almost 100% of the citizens. The holding of only “municipal” or exceptionally “national” campaign” prevents from achieving this goal. The combination of municipal and national “Campaigns” enabling mutual support and effectiveness raising is needed. There is also another reason for doing so. In order to ensure stronger citizens’ faith, the informing the populations on disasters should include real risk situations likely to occur in their neighborhood and in close vicinities. This goal can be achieved only through running “municipal” and not “centralized” Campaigns. But in order the populations should be informed about risk levels and real imminent disasters and be provided clearly cut messages and developed necessary information material- the better and qualified risk analyses; getting to the core of the problem and enabling participate of relevant professionals and mass media, especially TV broadcasting- are crucial. A national approach is called to achieve this goal;
- the National Government- in our case represented by the Emergency Management Administration of the Ministry of Territorial Management of the Republic of Armenia- must facilitate and support municipalities’ activities aiming to developing and holding local “Campaigns» on warning and informing the populations about disasters. Informing the population should cover all possible types of risks. Thereby the effectiveness and efficacy to inform about risk will be enhanced.

Dissemination of disaster related information is linked to the three phases:

- preventive phase - ensures the awareness of people about existing risks and about what to do in the case of an imminent disaster;
- acute phase - relates to a real disaster situation;
- recovery phase - includes the period of time lasting for several days after the disaster.

The present paper (Project) is focused on informing in the preventive phase

5. INFORMING THE POPULATIONS ABOUT RISKS AND WHAT TO DO IN THE CASE OF AN IMMINENT DISASTER: ENSURING DEVELOPING AND IMPLEMENTING NATIONAL AND MUNICIPAL “CAMPAIGNS”

5.1. Preparatory activities

They should address the establishing of the conditions ensuring the holding of national and municipal (local) “Campaigns” on warning and informing the populations about emergencies.

5.1.1. Forming a Project Committee and a working group consisting of 3-5 full time people, having their own budget and a plan for actions should initiate launching of the Project. By order of the Head of the Emergency Management Administration of the Ministry of Territorial Management, the Project Committee could be staffed from the relevant personnel of the Emergency Management Administration as a structure of the Ministry with involvement of other specialists.

In order to ensure a broader support to the Project as well as to practice a principle that informing about disasters is one of the most immediate functions incumbent on the municipalities,

the setting up of supporting consuler structures is crucial. In particular, by order of the Minister of the Territorial Management a Consultation Committee could be established covering: relevant officials from the Emergency Management Administration; two-three heads of the local governance bodies (mayors of cities and heads of rural settlements found to be most vulnerable to disasters; the Head of a National Information service; representatives of ministries and departments engaged into warning and informing the populations about disasters and two-three representatives of a business world. The need for setting up a team dealing with consultations on technical issues of information dissemination is recognized.

The Project should envisage some organization-technical procedures (if they have not been carried out beforehand) such as:

- developing and improving monitoring systems for emergencies typical of this particular region;
- establishing centers specializing in monitoring system data capture and processing;
- setting up uniform control tower posts;
- establishing around o'clock crisis management centers;
- updating communication and warning systems, through sustaining their constant readiness to functioning;
- reconstruction of territorial automatic warning and informing systems and development of a centralized automatic warning and informing system.

A brief analyses in the Republic of Armenia of a present state of the Project of an organization-technical provision system aiming to better developing and implementing the Project of “Informing the populations about disasters” has been quoted in section 7 of this paper. And in meanwhile let's touch upon other preparatory arrangements necessary to implement national and municipal “Campaigns” on warning and informing the populations about emergencies.

5.1.2. It is expedient to conduct selective surveys among randomly chosen groups of the populations in the Republic allowing to clarify what the populations' knowledge's about what is going on in the sphere dealing with informing the civilians about disasters; whether the populations aware of the risks level present in their neighborhood; whether they know the meaning of signals produced by sirens and other warning mechanisms ; to what extent these people have been informed and trained to be able to respond adequately if warned about imminent specific disasters?

The need for practicing such questionnaires also in the municipalities responsible for regular informing their citizens about disasters or in the municipals that under “Plans for actions in emergencies” have comparatively not long ago conducted commando-headquarters exercises (municipal or regional ones) is recognized.

Although the Law on “Mass media ” provides that in emergencies mass media must convey messages announced on behalf of the President of the Republic and by the body empowered by the President to do so to the populations; however, the new arrangements with diverse radio- and TV broadcasting companies enabling strict regulate the relationships with authorized state management bodies within national “Campaign's” development and implementation are needed.

The duties incumbent on a community leader under the Law on “Protection of the populations of the Republic of Armenia” regards informing his/her populations in emergencies, will dictate the necessity of delegating the corresponding powers to the regions and municipalities. Bearing this purpose in mind, the adequate arrangements with regional or local radio-TV broadcasting companies are crucial.

To this end, the populations irrespective of the kind of an imminent disaster, must be aware that it is necessary to tune to only one radio station channel, be it local or regional; or to one particular TV channel (the first public channel of Armenia).

5.1.3. The same simple basic scenario of actions undertaken by the populations when warned about an imminent disaster is expedient for holding the both: national and municipal “Campaigns”. The “Project Committee” has to be empowered to view and recommend this **basic scenario** message consisting of:

“When siren sounds” enter the nearest building immediately; close all doors and windows, turn on the radio and or TV and wait for further instructions”.

In Armenia every one has to act, by pursuing this plan. One of the main reasons for chosen this simple scenario is that it can be made applicable for almost all types of disasters, having the potential to occur in Armenia.

Here one must once more summarize the following:

- as it has been mentioned in clause 4.3. of the present paper, **the “Informing the populations about disasters” Project is aimed to the awareness raising of every citizen on what he/she should do in the case of an *imminent* disaster;**
- **in this way the Project is focused on warning the people in preventive phase.**

In this phase the people have to be informed on what they should do in the case of an imminent disaster; on methods used to warn them on a real disaster; on what is to be done in a situation when a disaster seems imminent.

But information should be also conveyed to people in an acute disaster phase (real disaster situations). We are going to speak about it below, in the section dealing with “Warning the populations in an acute disaster phase”.

Unfortunately in cases of earthquakes it is still prematurely to speak about early warning. As to a burst of reservoirs dams and turning on local sirens, than in these cases there are no obvious contradictions to the scenario of actions undertaken by the populations. First of all where effective monitoring systems are available, it deems actual to carry out early (preliminary) warning of the civilians living in the settlements situated in a close proximity to reservoirs’ inundation zones. If we speak about an acute disaster phase, being launched unforeseen and involving local sirens to start immediate evacuation, that it is a quite different type of a scenario which has to be mainstreamed with regional (municipal) information material (leaflets, cards containing instructions, booklets, brochures, broadcasting texts for local (regional) radio and TV shows) being developed basing on main (national) information material and representing their options that have been better concretized and adjusted to local specific features.

In parallel with the basic scenario (message) the developing **a motto** and **an emblem** adequately consistent with national and local “Campaigns” are required.

In our case the appropriate **motto** can be: **“Who is warned that one is protected.**

If you are aware what to do in the case of disasters, you will save your own life and the lives of your dependents”.

The circumstance, that central aspects of national and municipal “Campaigns” comprise a basic scenario, while a motto and an emblem are the same- can promote these “Campaigns” to be mutually supported and enhanced.

5.2. Support to and stimulation of municipalities

Section 4.3 of the present paper has demonstrated that one of the Project's basic principals deals with responsibilities of municipalities for conveying information about disasters to the citizens. The next basic principal of the Project is support and stimulation of these municipalities' activities by the Ministry of Territorial Management (see clause 3.3. of the present paper). With bearing this in mind the following steps are to be undertaken:

5.2.1. *Establishing an information center.*

The need for establishing the information Center responsible for developing, publication and dissemination of material, as well as for answering all questions asked by municipalities, other governance bodies, enterprises, establishments and all other layers of populations concerning the Project of "Informing the populations about disaster", including about national and local "Campaigns" is recognized. All mass media means could be involved into information dissemination process. At the same time the publishing of a special "**News bulletin**" that should contain all actual information regards the Project of "Informing the populations about disasters" as well as holding of national and local "Campaigns" is crucial.

This bulletin intends for the use of local authority bodies, information structure employees, heads of rescue subdivisions, representatives of government bodies engaged into showing relief at disasters. It should be printed in 2-3- copies each year.

Apart from publishing a special "News bulletin" it is expedient to issue **a reference book: "Informing the populations about disasters"**, the first part of which should contain information on a disaster preventive phase providing the knowledge on available risks and about what should be done if a threat is real (in the case of a imminent disaster). The second part of the reference book should be devoted to information on an acute phase (real disaster situations) and about how to adequately proceed in this situation. The third and the last part of the reference book should contain information on a recovery phase- the period of time lasting first several days after the disaster.

As it has been mentioned in clause 5.1.1. section 7, the present paper quotes a summarized analyses of a present state in the Republic of Armenia of the organization-technical provision system aiming to enhancing the developments and introduction of the Project "Informing the populations about disasters"; *ibid* quoted are the grounds for the given Project to be updated and implemented in the Republic of Armenia; as well as considered are the structures available in the Republic, in particular the information center "Emergency channel" created and operated under the aegis of the Emergency Management Administration. This structure, given that some transformations are required, could assume the functions such as those of the mentioned "information center," operating in the preventive phase as well as could serve a base for deploying the "National center for informing the populations" to coordinate information flow for the populations in an acute disaster phase.

5.2.2 *Meetings with mayors and other leaders of local governance bodies.*

The meetings with mayors and other leaders of local governance bodies are important events aiming to supporting the municipalities to be better prepared for holding the local campaigns. These meeting are justified only if some particular information, material intends to be used by municipalities while preparing and holding local "Campaigns", has been developed. It could be the first part of the reference book-"Informing the populations about disasters" containing information on preventive disaster phase; methodological material concerning local "Campaigns" preparation

and holding procedures; samples of national and regional brochures; as well as booklets and cards with instructions to be distributed for each family.

5.2.3. Meetings with information structure employees and representatives of state governance bodies involved into relief operations at disasters.

After meeting with mayors it is expedient to organize the meetings with employees of territorial and municipal information structures and representatives of state management bodies engaged into relief operations at disasters. The specific problems dealing with information provision for developing and holding the national and municipal “Campaigns” and tasks set for relevant state management bodies while developing and holding such “Campaigns” need to be addressed. The information material that could be used by local “Campaigns” needs also to be demonstrated.

5.2.4. Information material required to developing and holding national and local “Campaigns”.

Information material intends to developing and holding the both: national and local “Campaigns”. This kind of material should be collected through information sources concerning:

- risks present in the Republic, region and in the populated areas;
- possible scenarios in the case of specific disasters;
- methods and mechanisms used to warn the populations about disasters;
- how to behave when warned about an imminent disaster (in a preventive phase) and in circumstances when a disaster is real (in an acute phase) as well as how to proceed in a recovery phase.

Although as it has been already mentioned above, information material in most the cases refers to a disaster preventive phase (at an imminent treat).

The material through all mass media means available is developed aiming to informing, training and warning the populations. It could be TV films, national TV and the radio broadcastings, articles and announcements published in national and regional press, special bulletins, reference books, TV advertisements, other announcements and ect.

Information material intends for the direct use by national and local “Campaigns”, including the material that should be distributed for each family could represents itself leaflets, cards with instructions booklets, national and regional brochures, texts for national and local regional radio and TV broadcasting, posters for internal and external purposes . The main scenario (the message) is called to play a key role while developing the above material.

The mentioned material to be used for local “Campaigns, including the material assigned to be distributed for each family” is developed at national level and is acquired by municipalities.

5.2.5. Special targeted groups.

This category of population selected among all layers of the civilians is of particular attention by national and municipal “Campaigns”.

There are four such groups:

- **school and preschool administration**

It is necessary to highlight that the basic scenario: “when sirens sound-enter the nearest buildings immediately; close doors and windows, turn on the radio and TV

and wait for further information on what to do”- has been actual not only for home, but also for school, office and for conduct in the street;

- **due to the same reasons the management and employees of enterprises and establishments are viewed as a special targeted group too;**
- a special group comprises also people with disabilities who can not neither hear a siren (people with difficulties in hearing) nor act independently being able to pursue the basic scenario (invalids, the severely sick, patients of stationary medical establishments);
- **a special targeted group can also cover** foreign speakers, in particular, employees of foreign embassies, international establishments, firms, other commercial and noncommercial organizations situated in the territory of the Republic. The better way of forwarding information to this group of people could be also the announcements and published material in Russian and in English.

For separated rural communities presenting the national minorities, in particular, the “Yezeeds” to be informed, they should be provided immediate and most important messages in their “mother tongue”.

Information materials that can be used for both: national and local municipal “Campaigns” by each of these particular groups need to be developed. More over, consultations with representatives of these groups enable highlighting, to the extent possible the further measures to be most effective in conveying information to them are crucial.

5.2.6. Municipalities at special risks.

An array of industries producing, using or storing hazardous substances was put into operation in Armenia; there functions an only Armenia nuclear power plant; tens of settlements situated in inundation zones of reservoirs built along mountain rivers in close proximity to their high pressure dikes found to be at risk; in the territory of the Republic is also located a number of other highly risk installations. Tens of municipalities are exposed to the adequate highly risk by enterprises operating either within their territories’ borders or close to them.

Clause 5.1.3. has already considered early warning problems for municipalities, situated in reservoir prone inundation zones in close proximity to their high pressure dikes. From our point of view, it will be expedient to develop three supplementary information modules-one for municipalities at probable radioactive contamination risk; other for municipalities with enterprises where hazardous material are produced, used or stored and the third one for municipalities situated in reservoir prone inundation zones in close proximity to their high pressure dikes. The above municipalities can use these modules to amend the basic information modules.

Norms and mechanism set under the existing legislation of the Republic of Armenia regulate as a whole the prevention of major accident at these installations as well mitigate a damping effect of these accidents for the populations and the surrounding environment.

All together, at present within the frameworks of a Program for establishing bilateral cooperation with the European Union, the activities aiming to bringing the legislation of the Republic of Armenia in line with legislations of other European Union’s states, including in the disaster reduction area have been launched. The harmonization process should undoubtedly cover the integration of supplementary norms, regards the kind of information to be transmitted to the populations by the relevant authorized governance bodies and by municipalities as well as the mechanisms for conveying this information to the populations, into the existing legislation.

5.3. “National Campaign”

5.3.1. Section 2.1. of the present paper highlights the importance of organizing and regularly holding national “Campaigns” on warning and informing the populations about emergencies at central and municipal levels” within the frameworks of the Project:”Informing the populations about disasters”.

Informing the populations of the whole country about existing risks and its training in the skills of adequate perception and behavior when warned on an imminent disaster (about an approaching disaster) and under circumstances of specific disasters when they **occurred is one of the key goals pursued by the national “Campaigns”**.

The second key goal pursued by the national “Campaigns” should be the enhancement of and support to the municipal “Campaigns”.

As section 2.1. of the present paper has already showed, our proposed pilot Project of the methodic for organizing and holding national “Campaigns” demonstrates in details: the grounds for priority for this Project to be implemented in the Republic of Armenia; the regional significant meaning of the Project; short- and long terms goals; key elements; detailed implementation phases: planning, preparedness, implementation and assessment and expected outcomes.

The same Project components but being more summarized, have been quoted in sections 2 3 on the present paper. Section 5 of the present paper highlights a rather broad range of issues dealing with ensuring developing and implementing national and municipal “Campaigns”.

Section 2.4.1. Phase1: “Planning” of the proposed pilot Project of the “National Campaign” among other planning components shows:

- developing a draft Plan to establish the policy and
- submitting this Plan for consideration and approval by the Government.

This paper can serve a basis for such a draft Plan. Although the principle decision by the Government to hold in the Republic of Armenia of the “National Campaign” on warning and informing the populations about emergencies at central and municipal levels is required.

Here one important condition is supposed to be met-by the time the “National Campaign” is launched, a significant number of municipalities should have launched their local (municipal) “Campaigns”.

5.3.2. *Preparedness to holding the “National Campaign”*

Preparedness to holding the “National Campaign” should incorporate all the elements quoted in sections 5.1.and 5.2. of the present paper, including all those being used while preparing the municipal “Campaigns”. However all the requirements of clauses of sections 2.4.1: Phase1 “Planning” and 2.4.2.: Phase 2:”Preparedness of a pilot Project of the “Nation Campaign” need to be met. In particular, apart from preparing all information material necessary, including the regional brochures for each family, the establishing of material-technical base, preparing of mass media and developing of surveys need to be seriously addressed.

Through press - conferences the meaning of the “Campaign” and mechanism aiming to its implementing should be widely advertised.. One should be ready to give comprehensive answers to all the questions that might be asked by press representatives and leaders of local governance bodies.

The preparedness to the “Nation Campaign” will also include: consultations with representatives of ministries and departments concerning the tasks set to them; consultations with representatives of regional authorities; informing the mayors, governors and representative of rural and municipal communities; consulting the NGOs and other involved parties, including mass media; survey of actions undertaken by school administration and the students in schools and in other education establishments; studying the feedback of the populations to these Plans and studying the reaction of press and other actions envisaged under the Phases “Planning” and “Preparedness” of a pilot Project of the “Campaign”.

5.3.3 Special targeted groups.

The “National Campaign” should address all the populations of the Republic with a special focus on the 4 four targeted groups highlighted in section 5.2.5. of the present paper. Within development process, participation of multilateral mass media with a wide - scale involvement of TV and national newspapers are encouraged.

5.3.4. One can enlist the aid of some concerned firms, companies, public and other organizations in dissemination of main messages through, for instance, non financial contributions, like printing relevant wordings on material used for wrapping their goods; through distribution among the members of different public organizations of leaflets with instructions indicating what to do in the case of a disaster

5.3.5. Final comments.

After the “National Campaigns” as well as local “Campaigns” are held, in order the information about impact of such “Campaigns” on the populations to be collected, the questionnaires among the randomly selected groups of the population representatives are need to be practiced. It is necessary to clarify to what extent the people have remembered and mustered the skills in behavior; what they think about this event; how successful the material has been presented by TV, press, through the Internet ;what is the most convenient way for the material to be perceived: through brochures, press , TV and the Internet?

In order to highlight the extent to which the “Campaign” has proved to be effective, the questionnaires’ outcomes collected before and after the “Campaign” needs to be compared. It is expedient to compare also the percentage of the people questioned who are ready to follow the recommendations of the basic scenario in both the cases.

After the ”Campaign” outcomes are analyses and assessed the recommendations for repetitions of such “Campaigns” need to be elaborated.

Informing the populations about what to do in the case of an imminent(approaching) disaster and developing and improving skills in the populations for adequate behavior, preparing management bodies, including local governance bodies to fulfill the actions being beforehand planned and appropriately adjusted to the types of the emergency situations involved - is a rather time consuming process.

And if rotation of management body personnel, including local governance bodies is factored, than the necessity to repeat the “Campaigns” is obvious. Every municipality is entrusted at least once a year to inform its populations about the methods used to warn about disasters (with taking into account the potential for technical facilities to be updated) and about the main scenario.

At least once in each five years (presumably, with taking into account the dates fixed for next municipal elections) the populations have to be provided wider information concerning the types and levels of risks present in their neighborhood, as well as the “Campaigns” aiming to enhancing the skills to respond when warned about imminent disasters need to be held.

The most effective is the repetition of the combination consisting of national and municipal “Campaigns”.

6. WARNING THE POPULATIONS IN A DISASTER ACUTE PHASE.

The Project dealing with **“Informing the populations about disasters”** (informing in the case when a disaster is imminent described above, refers to the disaster preventive phase. In this phase the people have to be informed how they will be warned on an imminent disaster and about what they should do in this case.

But information should be also conveyed to the people in a disaster acute phase. This kind of information could provide warning messages concerning a possible evacuation or about other actions that have to be undertaken.

One of the recommendations concerning ensuring informing the populations in complex circumstances when a disaster is real deals with either developing new structures and procedures to coordinate information flows at national level or enhancing and further staffing those information structures that should operate in a disaster preventive phase and under normal circumstances.

Functioning in a disaster acute phase of the further staffed and enhanced Information Center on informing the populations has been necessitated by ensuring precise and coordinated actions by some ministries and departments. Specialists-experts and administrative officials from ministries and departments involved into response operations at disasters are directed to the National Center on informing the populations enabling its further completing. These ministries and departments can differ depending on the types of the threatening disasters.

As it has been already mentioned in section 5.2.1. of the present paper, the Information Center “Emergency Channel” operating under the aegis of the Emergency Management Administration was set up in the Republic as the Information Center functioning in a disaster preventive phase. The same Center can serve a basis for deploying the National Center on informing the populations in a disaster acute phase. (see section 7 of the present paper).

Below cited are the main goals of the National Center on informing the populations in a disaster acute phase:

- information developing, coordination and forwarding to the populations on behalf of the National Government in the case of a major disaster;
- developing specific information material for the populations and monitoring its convey;
- preparing and submitting information to the national and international press and other mass media services;
- informing other management bodies about activities fulfilled by the National Government on informing the public and coordinating these information activities with those performed by management bodies at other levels.

7. BRIEF ANALYSIS OF A STATE IN THE REPUBLIC OF ARMENIA OF A ORGANIZATION TECHNICAL PROVISION SYSTEM.

As it has been mentioned in a pilot Project of the “National Campaign” the grounds for updating and implementing the given Project in the Republic of Armenia could be both: the factors quoted in section 2.1. of the present paper and the below backgrounds present in the Republic:

- availability of threats from natural and man-made emergencies typical of the other countries of the Southern Caucasus region or those whose consequences might be of a trans boundary nature and might have a damping impact on territories of the neighboring countries;
- the geo information system -that has been created and is functioning- of predicting main natural and man-made disasters bearing trans boundary nature that likely to occur (earthquakes, accidents in chemical and nuclear hazardous installations, burst of dams and ect.);
- on the base of the Crisis Management Institute there was developed a system for training all segments of the populations including state management and local governance bodies’ officials;
- under the aegis the Emergency Management Administration there was set up and is functioning the Information Center “Emergency Channel”. Under the Program of establishing the Information Center the consolidation of awareness related Programs and the entire information field into one specialized structure has been envisaged.

Viewing the stated above as most significant backgrounds and structural elements of an organization - technical provision system aiming to ensuring introducing the Project “National Campaign”, let us briefly analyze the tasks to be solved with the involvement of these elements in terms of their contribution to planning and preparing of this “Campaign”.

Simultaneously let us touch upon a state of matters in other potential elements of the above system.

7.1. Information Center “Emergency Channel”

7.1.1. The Program of ensuring public awareness entitled **”Communities resistant to disasters”** has currently been developed in the Republic and as far as possible is gradually being implemented.

The Program is targeted for “establishing communities (regions) that have the citizens who are we-informed, capable and ready to cope with disasters of natural, ecological and social natures and for communities (regions) where the sustainable systems for vulnerability reduction are available”.

The Program’s tasks among the others will include:

- increasing awareness of national and local governance bodies, acquisition of knowledge and mustering skills in the area of the protection of the population and territories from emergencies;
- ensuring public awareness and training;
- development of national information policy in disaster risk reduction area;
- formulation, regulation and management of information flows;

- providing the population, mass media and national and local governance bodies with information that they deem complete, timely distributed and reliable;
- creating of the culture of safety in a person.

7.1.2. The setting up of the Information Center “Emergency Channel” (TV broadcasting) under the aegis of the Emergency Management Administration is the best proof of main backgrounds and significant steps that have been undertaken till now in the direction of the Program’s implementation. The Program of setting up of the Information Center has envisaged the integration of awareness targeted programs and an entire information network within the framework of the specialized structure, all links of which could mutually amend each other, could act coordinated and could pursue common policy in the disaster risk reduction area aimed at even most varying audiences.

The “Emergency Channel” Information Center includes the following structures:

- 1. “Emergency Channel” Information Agency**
- 2. “Emergency Channel” INTERNET site**
- 3. “Emergency Channel” TV and Radio broadcasting Company**
- 4. “Emergency Newspaper”.**

1. Information Agency today ensures the reliable and latest information related to emergency situations occurring in Armenia and world-wide.

2. Information and teaching materials are placed on **The “Emergency Channel” INTERNET site**. From here all: the mass media, governance bodies and public establishment have an access to the trustful and useful information. INTERNET site was set up and functions through the supporting efforts from the Institute of Open Society whose Program is approaching its completion date on 30 November 2004. Although, INTERNET site needs to be kept and further developed.

3. “The Emergency Channel” TV Company has been functioning since 1997. Its prepared TV reporting and films are demonstrated by all Republican TV channels. The **UN Armenian Branch** has promotes greatly in the matter of setting up of the TV Company. Although, to our much regret the filming and arrangement equipment provided yet in 1999 has become physically and morally obsolete and can not any more ensure full-blooded work of the Company.

4. Weekly **“Emergency Newspaper”** has been published since May 2003. Almost all the Republic structures, such as: the Prime-Minister, ministries, regional and community bodies, education institutions, establishments and installations have been subscribed to this newspaper. This newspaper has proven to be an extremely trustful information channel in the matter of acknowledging and training people.

7.1.3. The Program of setting up of the Information Center has passed an international expertise. At present basing on the trilateral Agreement between the Emergency Management Administration under the Government of the Republic of Armenia, US Development Agency and UN Armenian Branch there has been carried out repairing- construction work and equipping of the new premises of the “Emergency Channel” Information Center, which undoubtedly will attach more effectiveness to the Program’s implementation.

At present the Information Center ”Emergency Channel” according to the arrangement with the European Interregional center for training rescuers and under support of the Emergency

Management Administration has shifted towards fulfilling corresponding sections of Phase 1: "Planning" of the Project "National Campaign on warning and informing the population about emergencies" at central and municipal levels".

Within the Project, the Information Center studies the potential of press to participate in the processes "Preparedness" and "Implementation" of the "National Campaign". The meeting with participation of the Head of the Information Center "Emergency Channel", press - secretary of the Head of the Emergency Management Administration with journalists organized in press hall of Information Agency "Armpress" was of paramount importance. During the meeting journalists and other mass media officials had an opportunity to acquaint themselves with the "Program of warning and informing the populations in emergencies".

At the same time in weekly "Emergency Newspaper" was published and continues to be published series of articles dedicated to disaster reduction problems including informing and warning the populations.

The article analyzing the most essential steps by the World Conference on disaster reduction, Kobe, Japan 2004 prepared by the Director of European Interregional center for training rescuers and the articles: "Informing as a means of saving lives", and "Prevention starts with informing" published in November and December 2005 newspaper issues, merit a particular attention.

The most prominent event in the above direction was a briefing held on the theme: "The public is focused on informing" dedicated to the 17-th anniversary of the Spitack earthquake. It was the first event organized in a new briefing hall of the Information Center "Emergency Channel". The briefing was held by coordinators of the UN Representative Office in Armenia, the Head of the Emergency Management Administration, representatives of the UN "Children" Foundation and Refugees' Office. The officials from the Republic ministries and departments in charge for the relationships with the public specializing in informing the populations about emergencies, journalists, representatives from international establishments in Armenia were invited to participate. All those who took floor spoke that the best way to cope the disaster is to have the informed and trained populations.

7.1.4. Sections 5.2.1. and 6 of the given paper have mentioned that the Information Center "Emergency Channel" operating under the aegis of the Emergency Management Administration should function as the Information Center in a disaster preventive phase. The same Center can serve a basis for deploying the National Center on informing the populations in a disaster acute phase.

All together, one will have to resolve an array of most pressing issues in the direction of implementing the "Communities resistant to disasters" Program targeted for ensuring public awareness.

Particular, one has to notice the following tasks:

- placing on the "Emergency Channel" INTERNET site the information related to disaster risk reduction issues, concerning concrete Armenian communities enabling every citizen to find the publications regards ensuring community safety and his personnel safety;
- placing on the INTERNET site the operative concrete answers to the questions worrying the INTERNET users on the problems dealing with disaster risk reduction, especially those concerning the community safety and the safety of its citizens;
- involvement of workers from ministries, branches, territorial and local governance bodies in public informing sphere;

- organization of the training of representatives from mass media, journalist faculty students of the higher institutions in special features of informing in emergency situations through workshops and training courses;
- training and providing them with relevant information kits;
- organization of exchange of information, video films, expertise of operating in emergency situations in cooperation with other relevant foreign structures.
- developing and holding on a regular basis the national and municipal “Campaigns» on warning and informing the populations about emergencies

7.2. Viewing the Project on “Self defense in schools and other education establishments”

7.2.1. In the Republic of Armenia the Emergency management Administration is a structure responsible for awareness raising for the populations in disaster reduction area.

The principle players in raising public awareness in the above area **are the Information Center of the Emergency Management Administration and the Crisis Management Institute.**

In the Republic there has been developed and are being realized the **National Programs on raising public awareness** in disaster risk reduction area. **The media are involved** into the process through the Information Center (see also Clause 3.1. of sub Clause 3.1.4. of the present “National Report”). **Teaching in schools** is introduced through approved Programs. (More details on education programs on disaster risk reduction within the public school system of the Republic see Clauses 3.3. and 3.4 of the present “National Report”). The Programs on raising public awareness are addressed to vast majority of the population (schoolchildren included), national and local governance bodies (through their corresponding information services), mass media and finally to establishing the communities, having the citizens who are well- informed, capable and ready to cope with calamities.

The Crisis Management Institute fulfils activities on awareness and training of the public in the following directions:

- training courses and lectures for the top managers of the state management and local bodies (ministers, deputy ministers, governors, vice-governors mayors and etc.) as well as for the managers and specialists of highest risk enterprises;
- training courses for “Instructors in Crisis Management “(in close cooperation with the Armenian Red Cross Society (**ARCS**) for ARCS staff and volunteers;
- elaboration of special training modules, education brochures, posters, booklets for the public use;
- TV broadcasting and programs;
- radio Programs;
- special arrangements, such as: National Drawing competition “Children against disasters” (jointly with ARCS), “Yong Rescuer Competition”, jointly with ARCS and **UN Development Program (UNDP)**, special guest lectures in the country’s outback areas (for local heads, schools and other auditory, who have the interest);
- coordination of teaching “Issues of crisis management” subject within the framework of the National Education System in the Republic of Armenia;
- advanced training on raising the qualification and retraining for teachers and lectures, teaching “Issues of Crisis Management “subject.

Since 1997 the educational programs aimed at disaster risk reduction in Armenian public school system have been implemented. The programs are oriented at teaching children at 7,8,9, 10,11,14,15 and 16 ages. For all mentioned age-ranges there have been developed the

corresponding educational programs. For 14, 15, and 16 years old children there have been developed text books and for the teachers – the methodological teaching aids. For the use of the rest age-grade children there have been developed brochures per each risk type. The organization, coordination of the mentioned activities as well as providing the teachers with teaching aids and their retraining have been implemented by the **Institute of Crisis Management under Emergency Management Administration** under the Government of the RA (EMA).

7.2.2. At the same time since 2000 the **European Interregional Educational Center for Training Rescuers** in Yerevan city, functioning within under the aegis of the Emergency Management Administration, has been involved into experimental teaching of “Safety and Survival” subject in Armenian National after Anania Shirakatzi college in Yerevan city and in school N 2 of the Agartzavan village of the Aragatzotn region, as well as in a number of other municipal and rural schools in Armenia.

The teaching process has been based on using of more than 30 developed thematic brochures, addressing the basis of safe life activity and elements of disaster risk reduction covering almost all types of risks, which children may come across in their everyday activities. The children are taught to recognize risks and prevent them, react properly, muster the skills in administering self- and mutual aid in emergencies as well as elements of the science about risks. This will assist them to create an atmosphere of kindness in their environment and lend confidence in themselves.

At current stage children of 10-11 and 15-16 years old are being involved. About 300 children have participated in experimental teaching.

Armenian National after “Anania Shirakatzi” college in Yerevan city has been included into the “Initiative Pilot Group of schools” within framework of which the European pilot school network involved into risk prevention training has been set up.

The experimental Program is targeted for widespread teaching of “Safety and Survival” subject in other Armenia schools with taking into consideration the expertise gained by the state-members of the Council of Europe EUR-OPA Major Hazards Agreement.

7.2.3. The above brief analyses demonstrate that in the Republic of Armenia within short-term period there were conducted rather comprehensive activities aiming to introducing training into disaster reduction areas. Although the manuals addressing the needs **of all age category students** and corresponding text books for teachers have not been developed yet. The same refers to establishing wide-scale training networks that should have covered all Republic schools. The knowledge has not been transformed into the skills of precise actions undertaken by school administration and adequate behavior of the students if there were real disaster threats typical of a particular settlement.

An individual approach to the Plan for action has failed to be applied. In particular, it concerns the Plans for actions developed for school administration that should be individual, depending on the specific features of the region and concrete school location, types of disasters that likely to occur, constructive characteristics of school buildings and etc.

The Plans for actions if most probable disasters were imminent, being coherent with municipal Plan for actions, in particular in a part dealing with ensuring evacuation of schoolchildren and carrying out regular training exercises pursued by these plans, need to be developed.

7.3. Geo information systems of predicting the disasters, that likely to occur

7.3.1. Referring the problem dealing with establishing and updating the monitoring systems focused on typical natural and man-made disasters it is necessary to note that: one of the priority

directions in the national policy, protection of the population and life support infrastructures from natural and technological disasters is **the development and introduction of up-date effective methods of risk assessment, modeling of dynamics of possible development of disasters and their catastrophic consequences, estimation of the forces and means required to disaster response.**

Throughout the past decades the specialists from the Emergency Management Administration jointly with their partners have created and have been up-dating the “GIS” **Geo Informational Systems** for evaluation of natural and man-made hazards and modeling their possible effects, in line with estimation of the probable damage and losses. **These systems are based on using digit maps of the territory of the Republic of Armenia** of scale 1: 200000, and for separate disaster prone territories and mega cities- of larger scale (1:10000 and even larger).

The digit maps of spreading landslides, mudflows, floods, fire forests as well as of vital installations exposed to natural disasters: hydro-technical, transport joints, magisterial pipelines, hazardous installations and installations of special importance have been developed.

The digit model of a territory of Armenia, covering the layers of borders, roads, residential areas and relief, is used **for earthquake forecast** under the set scenario. To forecast the earthquake effects for big cities like Yerevan, the digit maps of dwellings, ground and hydrological conditions of scale 1:10000 are used.

7.3.2. To use “GIS” effectively requires the raising of awareness of the citizens of all categories. Particular, the training of the managers, responsible for decision making related to risk management issues, is especially effective. The thematic of the training courses covers:

- Factors, generating, as well as reducing the natural hazards and evaluation of the degree, to which these types of hazards pose a threat;
- Playing out the simulation scenarios of natural disasters and proper reaction of the authorities and the population in the event these hazards are imminent.

The exchange of a variety of expertise, particular discussion of the experience accumulated by the Republic of Armenia and countries of the Southern Caucasian region in the above directions to accept the integrated methodology and information basis to manage the probable disasters, the considerable part of which may have trans boundary nature, will promote the coordination of activities, targeted for disaster reduction for all the countries in the Southern Caucasian region.

At availability of the sufficient funds and tangible resources, the activities, carried out in the above directions, could be deepened directed at multirisk approaches, as well as broaden at covering the larger areas of the territory of the Republic and a greater number of residential areas, lines and infrastructure installations sited in highly risk zones.

7.4. Early warning systems. Technical Aspects

7.4.1. The Republic early warning system can be conditionally subdivided into two ingredients:

- An early warning system for the use of the top managers, equipped by telephone communication and around o'clock awareness service of the Emergency Management Administration under the Government of the Republic of Armenia (EMA); and
- An early warning system for the population, equipped by alarm and telephone systems.

7.4.2. The activity of the first ingredient of the early warning system has been adjusted and is currently at sound level.

As for a state of the second ingredient, than, first of all, it is necessary to note, that **an early warning system for the population in place does not cover all the territory of Armenia. The centralized awareness system covers only about 30% of the entire territory of the Republic.** This is caused by some technical reasons dealing, first of all, with transition of the Republic telephone communication system to digit communication. The existing technical assets have become obsolete and do not respond any more to the technical characteristics required by the digit networks.

There is a need to inculcate and improve the early warning systems for the public use in ten specific geographical regions of Armenia.

7.5. Civil protection Plans and command-headquarters exercises, carried out on their basis - are significant backgrounds for holding national and local “Campaigns”

7.5.1. The Emergency Management Administration under the Government of the Republic of Armenia has developed the **Plans of the protection of the population** referring to:

1. Civil Defense (for regions, communities, organizations and ministries);
2. Emergencies of different natures:
 - plans of the protection of the population in earthquakes (separately for each of the ten regions, as well as for Yerevan city, the capital of Armenia);
 - plans of the protection of the population if reservoirs' dams were burst;
 - plan of the protection of the population in the event of radiological contamination around the site of the Armenia Nuclear Power Plant (NPP);
 - plans of the protection of the personnel of the special targeted installations.

Responsibility for carrying out the plans at national level rests with the Emergency Management Administration under the Government of the Republic of Armenia. At regional and community levels these are the territorial national and local governance bodies that have the full responsibility.

7.5.2. A significant mechanism for specifying and updating emergencies' action plans is the carrying out of regular command-headquarter exercises based on these Plans

- Specifically, in the Republic coordinated by the Emergency Management Administration there were carried out the command headquarter exercises on scenarios, presenting the evolvement of an emergency situation caused by devastating earthquakes through Provisions laid down in the Plans.

The exercises were carried out in Shirak, Ararat and Sunik regions (marzes) of Armenia with involvement of the relevant subdivisions from ministries and departments of the Republic, forces and assets of local governance bodies in towns and other settlements of the listed regions.

The exercises were carried out under the guidance and with direct involvement of the Heads of the regions (marzes) and with coordination efforts of the representatives from the Emergency Management Administration and its territorial subdivisions. Basing on the exercises' outcomes the regional Plans were adequately amended and specified.

- In order to adopt on practice the extent to which the National Contingency Response Plan of a probable off design-basis radiological accident at the Armenia Nuclear Power Plant (ANPP) proves to be effective, every 2-3- years in the Republic the stimulation exercises in which participate both the ANPP staff and those national governance bodies (including the territorial governance bodies) and local governance bodies, that complying with the National Plan are assigned to functional duties in the event of a likelihood off design-basis accident at ANPP.

7.5.3. The Plans on protecting the populations in the Republic of Armenia against the disasters that likely to occur and the commando-headquarters exercises carried out on their basis, the expertise gained through plan developing and exercises conducting - are good backgrounds for planning, preparing and holding in the Republic of Armenia national and local (municipal) “Campaigns” on warning and informing the populations about emergencies.

The system of warning and informing the populations in the Republic of Armenia could serve a basis for developing the adequate regional system for the Southern Caucasus countries whose goals should be warning and informing the populations of the region about trans boundary emergencies.

The methodic of organizing and holding the national “Campaign” presented in this Project could underlie the basis for developing municipal, national and regional early warning systems used by other concerned states.