

BASIC PRINCIPLES OF PLANNING AND IMPLEMENTATION OF RAPID RESPONSE FORCES IN THE EVENT OF A DESTRUCTIVE EARTHQUAKE

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Summary: In the aftermath of a destructive earthquake, in order to provide operative and effective assistance by the rapid response forces (rescue, police, traffic police, security facilities, medical, anti-epidemic, fire, water and sewerage, electricity, gas, telephone, etc.), to the minimizing victims, the possible material losses, it is necessary to apply the following principles, which are based on the 1988 Spitak earthquake lessons: 1. Develop specific action plans based on seismic risk assessments and risk maps. 2. Plan to achieve high efficiency within 3-5 days of the earthquake, when there are great opportunities to save lives and prevent secondary consequences of the earthquake. 3. Make plans taking into account the conditions of extreme action (most unfavorable conditions of the year and day, lack or absence of means of livelihood, losses of rapid response forces, etc.) and the maximum possible consequences of the earthquake. 4. To ensure the coordinated actions of more than 10 rapid response forces, that is, to make complex plans. 5. Make complex plans simple and accessible so that they are feasible for outside forces. It is necessary to distinguish between the actions of the rapid response forces before the earthquake (preparatory phase) and immediately after the earthquake (rapid response phase).

Keywords: Destructive earthquake, rapid response forces, losses, operative and effective assistance.

Introduction. The purpose of the rapid response is: provide prompt, effective assistance to victims and reduce potential losses, especially in the first 3-5 days [1-3]. These include forces for: life support (water supply and sewerage, electricity, gas supply, electronic communication -telephone, heat supply), providing non-emergency assistance to the population (rescue, medical, fire), establishing order (law and order, protecting important facilities, regulating vehicle traffic), bury of the dead, prevention of epidemics (anti-epidemic) [5]. To achieve this you need:

A. Before the earthquake.

1. Identify and assess vulnerable areas and objects [4],
2. Develop earthquake action plans,
3. Develop a crisis management system,
4. Create information systems,
5. Accumulate resources for task implementation,
6. Develop response mechanisms,
7. Educate the population, local self-government bodies and local authorities, conduct training exercises to minimize losses and to mitigate or localize the secondary effects of an earthquake.

B. After the earthquake [5, 6].

1. Receive operative information about the disaster situation,
2. Cooperation between rapid response forces,
3. Cooperation of actions with the local authorities,

4. Carrying out priority actions, including search and rescue; pre-medical and medical care; Disaster survival (food, water, temporary shelter; restoration of means of communication; infrastructure; providing information; provision of logistical means; order, security etc.) and prevention of quake secondary effects or localization.

The socio-economic and political situation of the disaster zone, the scale of the disaster, the level of readiness of the population and local authorities, rapid response forces, and local customs should be taken into account when planning and carrying out operations [5, 6].

Action plans should be included and corrected:

1. Gathering information,
2. Adjustment of plans,
3. Search and save,
4. Evacuation and Migration management,
5. Organization of emergency medical care,
6. Disaster life support,
7. Restoration of media,
8. Establishment of order,
9. Establishment of an information service,
10. Organization of material and technical supply.

When carrying out operations, it is necessary to take into account the forces, means, material and technical supply system (roads, railways, airport, etc.).

The structure of action plans. The final goal of the developed methodology is to draw up a comprehensive plan for the operational and effective actions of the rapid response forces in a devastating earthquake. A comprehensive plan means a plan of mutually agreed and joint actions of all rapid response forces (services). To achieve this goal, it is necessary first to draw up a plan for each service and according to a single structure using a unified approach, and then coordinate these plans from the standpoint of mutual actions. This way of drawing up a comprehensive plan is more effective and focused. A structure for drawing up plans for services is proposed, consisting of the following sections: general data about the service (address, means of communication, the same for its facilities), the potential of the service (number of specialists and basic equipment), seismic resistance of buildings, including its facilities and equipment, the possibility earthquake redeployments, emergency supplies (electricity, water, fuel, etc.), vehicles, priorities, actions after a devastating earthquake, data on coordination with other services, etc. Action plans of the services are drawn up by their specialists with the help of seismologists. The role of a seismologist is important in compiling a forecast map of the consequences of an earthquake, in determining the seismic resistance of buildings of service facilities and in predicting the situation that may develop after an earthquake. Of a certain complexity and importance is the compilation of the priority tasks that arose immediately after the earthquake and their implementation. It should be taken into account that all urgent actions should be aimed at saving lives, preventing or localizing the secondary consequences of an earthquake, life support and the establishment of law and order.

Special attention should be paid to the important factors that threaten the life support of the city. They can radically change the situation in the city. Therefore, when defining the operational objectives of the actions of the services, one must start with these factors.

When drawing up schedules for the implementation of specific tasks, it is advisable to start them simultaneously, because in all three areas of work are very important. For example, it is difficult to say which is more important in rescue work or fire prevention, etc.

In the plans, much attention should be paid to the issues of attracting the forces and capabilities of services that came to the rescue from outside. It should be borne in mind that the plan is drawn up for them as well, but they do not know the city, the current situation, the location of important objects, etc.

Whenever possible, plans should be drawn up both in the national language and in Russian and English.

Importance of international and interstate agreement on relief in severe earthquakes. Managing international and other rapid response forces is an important issue for seismic risk management. Many states

located in seismic active regions are not able to independently provide rescue operations and eliminate the consequences of a strong earthquake. Therefore, it is necessary to solve this problem with the involvement of the forces and means of other states and international organizations. For this, it is necessary to create a number of prerequisites, including: to become a member of international organizations to unite the national civil protection forces; conclude an agreement with neighboring states on mutual assistance in case of earthquakes, etc.

Some of the most common mistakes in compilation and implementation. An analysis of the results of a survey of specialists from the municipal services of Armenia and Georgia concerning their activities after the Spitak (1988) and Racha (1991) earthquakes, as well as world experience, showed that the main reasons for the low efficiency of the actions of the rapid response services are as follows: a) significant errors in predicting the possible consequences of a strong earthquake, including large-scale destruction;

b) shortcomings and difficult implementation of action plans, especially comprehensive plans; c) failure (death or injury) of part of the service personnel; d) lack of the required amount of equipment, equipment and material resources; e) blockages of streets and traffic jams, leading to a change in the usual routes of action; f) forced separation of service employees from their duties; h) irrational distribution of external rapid reaction forces in the area of large destruction, etc.

Results and discussion: In the event of a devastating earthquake, rapid response forces need to have specific action plans aimed at reducing casualties, preventing or localizing secondary consequences, ensuring the livelihood of the population of the destruction zone and establishing order. In order to make these plans, it is necessary to follow certain principles: to be applied immediately after the earthquake and to be planned especially for the first 3-5 days; take into account the possible consequences of the earthquake and the emergency situation; rely on the potential of the rapid response force, taking into account the possible loss of manpower and equipment; plans should be mutually agreed upon by all forces - complex plans should be drawn up; plans should be agreed with local self-government and state bodies; be simple and workable, including for outside forces.

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