22. EMERGENCY MANAGEMENT EXPERIENCE IN CROATIA

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INTRODUCTION

What can endanger us, what is the highest hazard to us? How are these hazards distributed around the globe? Does the human treat to the nature higher than the nature treat to human? Can we with proper actions decrease these hazards? In which activities should be necessary to invest to obtain proper citizen protection? How to stop the worst crises - endangers of humans, goods and environment: the wars?

Ordinary man many times puts himself these questions and trays to find the answers. The answers can be different on the mentioned questions. Always present interests even more make difference in answers. In one part of the world there are some hazards in another are other. In the countries of former socialist world on the stage is destruction of former countries which has resulted like in many other countries with economy interesting natural resources often armed clashes which have endangered humans in these areas and threat to spread to the whole globe. Environmentalists in developed countries sometimes think only about hazard which is a result of human activities (if they are not endangered by war) and overlooked facts that nature can endanger them very high (droughts, earthquakes, floods...).

To replay at least to some of the above mentioned questions we tried to shown what are the primary hazards and how to withstand to them on example of one small European country Croatia. Generally speaking it is possible to make the array of some factors to survive for the people on some area. These factors are not essentially dependent of the state rules and are not essentially changeable in time, but sometimes in parts of the globe they are not fulfilled and endangers inhabitants in the case of the war or in peace (because natural phenomena or technology accidents). These factors are physical safety, to have roof over head, to supply food, and to have energy.

The inhabitants, goods and environment can be exposed to different hazards. The source of these hazards (Figure 1 Types of crises in Croatia) can be natural phenomena; technology or human work and the war like most danger human activity. In the war practically all so call induced technological accidents can be happened. Almost all mentioned kind of hazards can have for consequence apparition of epidemic. The primary interest of the protection and rescue systems is rescue and protection of human life and for these activities a high degree of organization is necessary.

WHAT ENDANGERS THE INHABITANTS IN CROATIA

In the recent Croatian history (from the year 1991) the war- aggression on Croatia and frequent threat of war are the highest risk for inhabitants of this small old European country.

WAR: Damages caused by the war in Croatia (a country of 4.8 million inhabitants and an area of 56.5 thousand square km.) are estimated at about $30 billion US$. In the war about 14,000 people were killed, and about 30,000 people were injured. The number of refugees and exiles from the Serbian-occupied parts of Croatia and from the neighboring country Bosnia-Herzegovina was about 520,000 in March 1984. About one third of the territory of Croatia was occupied by Serbian forces.

PEACETIME CRISES: In addition to war damages there are also usual peacetime damages; drought (42%), thunderstorms & hails (26%), and earthquakes (17%); fires (6%); floods (6%) and in addition to these, there are also potential industrial risks which are generally most frequent topic of environmental protection in the western democracies. These peacetime

damages are estimated (12 years statistics) at more than $800,000 per day ($300 million/year). This is very high amount for a small country. Damages of Natural Disasters 1981 to 1992 are shown on Figure 2. Shown are damages from natural disasters (considered as peacetime crises) in Croatia in the 12-year period 1981 - 1992. These damages are dominantly influenced by the fact that there was no efficient protection system in Croatia. The highest damages are from events that are prolonged (such as drought) but are not too attractive for mass media attention. These damages are in direct connection with those of agriculture. Our intent is to increase agricultural production in the future. One primary development for Croatia is the necessity to build new irrigation systems for fertile land and assure their storm & ice protection.

COMPREHENSIVE EMERGENCY MANAGEMENT:

Extraordinary experience (war) and everyday influence of nature and technology have shown to us that are necessary to establish very good emergency management organization. Emergency management (preparedness) for natural and man made disasters, like one necessary human activity for decrease damages, need be based on the factors: hazard analysis, authority, organization, communication, resources and emergency plans.

Under emergency management we assume all such crises conditions which can endangers inhabitants (hazard to life and health), goods and environment on a great scale. In all the phases (there are four phases in time cycle) to fight with crises it is necessary to engage mutual work of many organizations (military troops, medical organizations, fireworks, humanitarian organizations, policy and justice, etc.) and many different kinds of experts. These activities need to be managed by a group of experts (programming part of emergency management system) from state or county highest level administration.

In comprehensive approach in emergency management many different kinds of experts are needed. Usually the practice in the World is double use of military and civil segments (military in peace, civil in war) in defense and protection of inhabitants, goods and environment in crises. This assure: high efficient actions in crises, better use of resources in both segments, lower expenses because are no double baying of equipment and building of facilities, etc. By us like everywhere in the World there are many organizations which need to be bearers of many operative activities. Essential in problem of protection and rescue by us is necessity of binding all these organizations in comprehensive and efficient emergency system (everywhere this is task of emergency management agency – programming part of emergency system which is expert organization of government in case of crises).

For the every kind of crisis conditions there is an array of the specific activities - measures need to be taken in all phases of the emergency management process. All these activities necessary are analyzed in details for every kind of crises. Management analysis in different crises needs to make groups of experts of many educational backgrounds dependent about the kind of crises. Generally speaking in establishing emergency management system there are need to take into account segments which need to be analyzed by groups of experts for specific subjects (war, natural phenomena and technological accidents).

Comprehensive emergency management means all kind of crises in which people can be endangered, goods and environment, and is consequences of war and natural phenomena or technological accidents in peacetime. Former concept of emergency management (sometime called civil defense) have been usually based on preparedness for civilians defense in war and have not be appropriate. Solving the problem of protection and rescue in crises that are not in direct connection with war has resulted in concept of comprehensive emergency management. This concept has three mutually dependent components:

1. All types of crises: It is usually that different kind of crises - catastrophes: natural phenomena, technological and war need similar emergency management in the case

they happened, that similar strategies of emergency management's can be used for all kind of crises.

2. Partnership in emergency management: Responsibility for emergency management and resources for actions need close cooperation on all levels of government, private sectors, voluntary and humanity organizations and population.
3. Life cycle of crises: Catastrophes usually act not only one day. Usually they last long and have life cycle of occurring which need to be followed by many emergency management actions which included strategies of decrease of hazards - mitigation, preparedness, action in the case of occurring and recovery from consequences of catastrophes.

Before World War II emergency management often has been only preparedness. This primary role has been only defense from the enemy attack, but preparedness is only one phase in emergency management. Society needs to take care about crises also before their occurrence and need help in recovery process after crises. Like results of recent methodology four phases of emergency management have been defined: a) mitigation, b) preparedness c) action and d) recovery. Every phase cam from previous and make some conditions for next. Activities in one phase can be covered with some in previous. The preparedness became in action in the time of catastrophe occurring. The action turns into recovery in different time in dependence of the area influence and kind of damage. Similarly the recovery starts mitigation, the motivation to prevent or reduce occurring of next accidents. At least, phases of crises have no beginning or end. The treat recognizing can motivate mitigation similarly like real catastrophe.

Under the mitigation we assume all activities by which are moved or reduced probabilities of accidents occurring (crises). The mitigation also includes long term activities, which reduce consequences of crises the frequency of occurring, is non-reducible.

The preparedness includes all activities which follows a mitigation phase in which need be established all necessary for action in non-reducible crises. The governments, organizations and individuals in the preparedness phase make plans for life rescue, decrease of damage in the case of crises. By preparedness measures intent is to improve action in case of crises.

The action is the response on crises. It assumes all activities that are taken in case of crises. By this activities intent is also to reduce probability of secondary damage and make faster recovery process (return in status before crises).

The recovery - renovation includes all activities to return all into normal or better status than before crises. By the short-term recovery intent is to return essential function to obtain minimal life standard. By long-term recovery we assume return in previous status and can take many years after crises.

There are applied many activities - measures in the all four phases which are for all type of crises up to specific measures for some kind of crises. For example, some of general measures are:

- In mitigation: land use planning, building codes, inhabitants' education;
- In preparedness: preparedness plans for action, establishing of alert systems, evacuation plans, collection of resources data, and inhabitants' information;
- In action - response to crises: information of inhabitants about necessity of protection, operations participants mobilization, proclaiming of catastrophe / evacuation, temporary law suspension;
- In recovery: temporary housing, damage assessment and loans, reconstruction, information about health and safety of inhabitants.

By us like everywhere in the world there are many organizations which need to be bearers of many operative activities in the protection & recovery system. Essential in problem

of protection and rescue in Croatia is necessity of binding all these organizations in comprehensive and efficient emergency system. Everywhere this is task of emergency management organization (programming part), which is expert organization of government in case of crises. During the war such organization in Croatia was build, but in 1994 all was destroyed. In Croatia today do not exist most important programming part of emergency organization. Because it there is absent comprehensive hazard analysis, authority, organization structure, communication, resources and emergency plan. In the Figure 3 are shown potential structure of emergency organization of Croatia, which need be building again.

It is known what is need to be done in the field of organization, in the field of authority, collecting the data about resources, information & communication and in making plans. Only is necessary will of government to establish system of protection & rescue for inhabitants, goods and environment - on most developed countries models and on experience from country war. Reasons for this establishment are deeply justified

Experience shows that regarding up to date Organization of the United Nations fail in taking proper actions to protect human life and goods in some world crises area. Good example for this statement was UNPROFOR's request to Croatian emergency management organization to protect his 600-700 protection force members in Zagreb (1993) in which there almost have been no war actions. Question was who needs to be protected by whom and from whom? Are the United Nations protection forces sent to Croatia to protect civilians of Croatia or hostile country - does need to protect UNPROFOR? It seems that UNPROFOR headquarters has thinking that host country needs protect them. Because of that UNPROFOR was only additional expense in also without them shaken economy of the country.

CONCLUSION

Many kinds of endangering of inhabitants, goods and environment are present in recent World. Endangering is different from one part to another part of the world and because there are different interest for rescue and protection. The conditions for life in some area are dependent of harmonious use of natural resources - interrelations of nature with population. Interest for use of some natural resources in some part of globe produce conflicts that are the highest hazards for population. There is no efficient mechanism to stop these clashes. Because this every country needs to be trusted in they're own resources for inhabitants, goods and environmental protection from different hazards and make bilateral contacts with countries that have interest for cooperation. For this purpose is most important again to establish efficient governmental programming part of emergency organization like body of professionals - experts in highest-level country administration (president office or government).

SUMMARY

There are many hazards (natural and man made), which can endanger people, goods and environment. In the war about 14,000 people were killed and about 30,000 injured. Damages caused by the war in Croatia are estimated at about $30 billion US$ In addition to war damages, there are also usual peacetime damages caused by natural phenomena. These peacetime damages are estimated at more than $300 million/year. Extraordinary experience (war) and everyday influence of nature and technology have shown to us that are necessary to have own very good emergency management.

Emergency management organization for natural and man made disasters, like one necessary human activity for decrease damages, is based on the factors: hazard analysis, authority, organization, communication, resources and emergency plans. Such organization has been built during the war in Croatia, according USA practices (FEMA, EMI, NATO) but on the beginning of 1994 all was stop. Now is the time to proceed with this job again. It is

known what is needed to be down in the field of organization, in the field of authority, collecting the data about resources, information & communication and in making plans. Only is necessary will of government to establish system of protection & rescue for inhabitants, goods and environment - on most developed countries models and on experience from country war. Reasons for this establishment are deeply justified.

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KEY WORDS
Emergency management, programming part of emergency organization, hazard analysis, authority, organization structure, communication, resources and emergency plans

FIGURES AND TABLES
Figure 1 Types of crises in Croatia
Figure 2 Damages from natural disasters (considered as peacetime crises) in Croatia in the 12-year period 1981 – 1992
Figure 3 Potential structure of emergency organization of Croatia

TYPES OF CRISES