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SYSTEMATIC APPROACH OF THE PREPARATION OF POPULATION IN THE FRAME OF A CHANGING DEFENCE SCHEME

Absztrakt / Abstract

Az elmúlt időszakban egyre nyilvánvalóbbá válik, hogy a megszorodó, jellegükben átalakuló és intenzitásukban mindinkább romboló katasztrófa-helyzetek hatékony kezelése és a következmények felszámolása összetett és bonyolult folyamat. E folyamatban a hivatásos mentőerőkre hárul a munka legnagyobb része, de a jövőben szerepet kell vállalnia benne a településeknek, és az ott élő állampolgároknak és a civil szervezeteknek is. A szakemberek egyöntetű véleménye, hogy sok katasztrófa eleve megelőzhető lenne, ha a lakosság rendelkezne a megelőzéssel kapcsolatos legfontosabb ismeretekkel. A bekövetkezett katasztrófák kezelése is hatékonyabb ott, ahol az állampolgárok megfelelő veszélyhelyzeti, önmentési felkészítést kapnak. Felmerül a kérdés, hogyan, mi módon lehetne a felkészítési mutatókat javítani, milyen célcsoportokat lenne célszerű kialakítani a felkészítésre, és azt milyen módszerekkel lehetne végrehajtani.

It has become more and more obvious that recently there have been a growing number of catastrophe situations, their nature has changed and they have become more and more destroying regarding their intensity; managing them and eliminating their consequences is a complex task. Nowadays, the majority of it is done by regular rescue forces, but in the future settlements and citizens, and also civil organizations are expected to be involved in it. Experts unanimously claim that a lot of catastrophes could be prevented if citizens could master the major concepts of prevention. Also, managing of existing emergencies is more efficient, if citizens have been prepared thoroughly to tackle such situations and have been trained to self-rescue. It is a debatable question, how to raise the efficiency of preparation, what target groups to form for preparation, and what methodology to use to reach this goal.

Kulcsszavak/keywords: *katasztrófavédelmi felkészítés, célcsoport, felkészítési tartalmak, felkészítési módszerek ~ preparation for Disaster Management, target group, preparation contents, preparation methodology*

INTRODUCTION

"Catastrophes are like ghosts closed in a bottle: they are just waiting for an irresponsible or ignorant person to get the cork out." we claim quite often, and seemingly, nowadays it proves to be true, as not only the number of catastrophes has raised, but also their character has changed. Consequently, the defence system should follow these changes in order to be able to protect the population and their assets; rescue operations and methods should be altered, the most suitable equipment and methods should be deployed.

"Are we aware of the basic knowledge which enables us to save our and other's lives while the regular rescue team is on the way to arrive?"¹

The defence sphere could be well-prepared, however, all efforts could fail, if the population is not trained to realize the dangers around them and to react on them, and also for avoiding them, or, in case of a catastrophe, to follow a proper behaviour. The flood in Borsod in 2010, the Kolontár catastrophe, and also extreme irregularities in weather, occurring day by day, or any other catastrophe situations has shown us that the knowledge and skills of how to survive are not at all innate, and this way we are exposed to nature forces and civilization. European countries, including Hungary undertake the responsibility to spread the knowledge, namely, to prepare the population for emergency situations.

During the Cold War, preparatory operations took place with an aim for protecting against nuclear war, in an exaggerated rate and measure, but the whole country, including all production areas were covered.

After the years of the democratic transformation the social and economic changes took place very fast, and priorities got passed on from the previous tasks to new areas. Thus, defence and preparations of the population were not at all an issue of major inters, on the contrary, the concepts, framework and methods of preparations were not even our lined neither from a strategic point of view nor from a tactic one.

At operational level, organizations and bodies, either official or civil and humanitarian ones, conducted individual preparation practices. Ordinarily, it was not synchronized at a national level.

Nowadays, there is a raising demand for a synchronized, centralized preparation system that would overlap organizations and ministries. Meanwhile, however, until it comes alive, the responsibility and duty will fall onto official defence organizations, which means that themselves, along with civil bodies and organizations around them, should transfer this special knowledge, through coordinating the preparation activities. Each preparation force means the concept of preparations in a little bit different way, and it sometimes results in duplication, and in other cases in alternative methods in practice.

In the present study, further on, I challenge proposing a concept for the preparations for a forecoming catastrophe, for its requirements, the target groups to be prepared and for its content and methodology.

¹ Júlia Hornyacsek-Veres: Theoretical and Practical Questions of Preparing the Population for Emergencies, Vol. 1., ZMNE, Budapest, 2005. p.3.

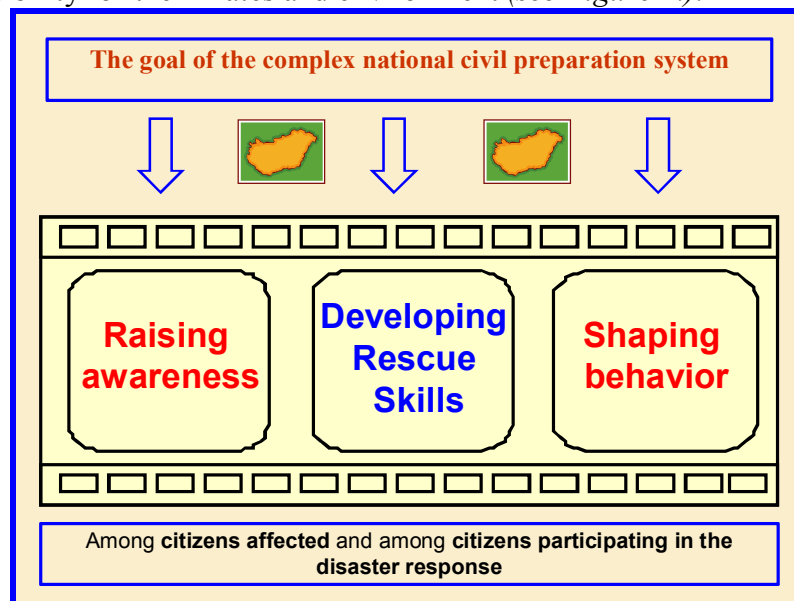
CONCEPT, AIM AND PURPOSE OF THE PREPARATION OF THE POPULATION FOR A FORECOMING CATASTROPHE

The preparation of the population is a broad concept, it covers everything which is transferred towards them by the various elements of the defence sphere, for their protection. To be able to define the methods of *catastrophe-related preparation*, primarily its concept should be defined, as there is no unified interpretation for it in this area.²

Here I propose a concept for the preparation of the population for a forecoming catastrophe as follows:

Preparation of the population for a forecoming catastrophe is *a system of activities*, in which the population is *preparing* to tackle danger situations either above or below a catastrophe threshold and skills are *building up*, with the help of which citizens can successfully rescue themselves, their mates and assets. *Furthermore*, the defence knowledge and rescuing skills in eliminating catastrophes are *establishing* in the civilian population.³

The *basic aim* of the preparation of the population is to *familiarize* danger situations with a broad range of citizens, suffering from the harmful effects of an emergency, or being threatened by one, and also familiarize these hazardous situations with the civilian population being involved in the rescue operations, the behaviour and action patterns to follow, and the ways of rescuing themselves or others, and their assets. It is also important to make the population *realize* that they can also cause emergencies. Furthermore, there is an *indirect aim* to establish the security culture of citizens, and to enhance their sense of social responsibility, e.g. the responsibility for their mates and environment (*see Figure 1.*).



1. figure. Direct and indirect aims of the preparations
Prepared by Dr. Júlia Hornyacsek, 2010.

Population means "the total number of the inhabitants of a given area or settlement".⁴ For further investigations I have to define the concept of population in the frame of the

² Formerly, the preparation of the population belonged to the sphere of civil defence, and BM Decree 13/1198 was provisional about it. Along with changes in the provisions of law this topic has been approached in a different way.

³ Wording of the author

⁴ Szilvia Csábi, 2003.

preparations. Regarding the above, it is obvious that here the concept of population means something different from what commonsense suggests.

From the point of view of preparations the concept *population* is the total number of Hungarian and non-Hungarian citizens living in Hungary, who are exposed to dangerous effects and who need to be prepared for emergencies and for actions to be taken in these situations. Citizens can be ranked in a lot of ways according to their gender, age, occupation, field of interest, level of danger, and their preparation should be adjusted accordingly.

Preparation of the population, as a system:

Summarizing the results of the research done in this field, one can say that it is a complex system of actions, which has also subsystems. These are as follows:

- subjects of preparations;
- providers of preparations;
- preparation material, its content and layout;
- periods of preparations;
- preparation tasks;
- preparation methods;
- conditions of preparations.

Legal background of the preparations

Different defence organizations transfer different information towards the population, as each of them executes the preparation upon their own special field. Their activities are defined by the provisions of law. The frames of the present study do not make it possible to discuss all of them, so here I present the two provisions covering *civil defence* and *Disaster Management*.

There are several provisions of law concerning the preparations, but this activity is only specified in *BM Case "13/1998.(III.6.) About the requirements of civil defence preparations"*. The case includes the preparations by civil defence organizations formed upon obligation and participating in eliminating catastrophes, the requirements on civil defence exercises, the key concepts of organizing a civil defence exercise, the knowledge to be transferred in a civil defence basic training, and the knowledge of civil defence professional training. It also contains the civil defence preparation of a wider range of the *population* and of the employees of civil organizations, their requirements and contents.

Plants producing or processing hazardous materials are ranked as high or low threshold ones, depending on the amount of dangerous materials processed. "A given plant could mean a risk for the population living in its sphere of operation, thus people have the right to get to know the potential hazardous effects, the methods of tackling them, and the behaviour patterns to follow in case of a serious accident."⁵ A building permit can be issued only by the Disaster Management permit of the central organization of a regular Disaster Management body. Both a low and a high threshold plant make a plant-security analysis and send it to the authorities.⁶ The authorities announce the mayors of the hazardous settlements on conducting the permission procedure for a new plant producing or processing hazardous materials, through sending them the security analysis.⁷ The concept of external defence plan contains

⁵ Dr. Imre Varga, 2005.

⁶ Law 2011. CXXVIII. on Disaster Management and the Modification of Related Laws, Chapter

⁷ 7. ib. id.

the set of the defensive methods and measures to be taken for the protection of the population".⁸

The mayor makes an external defensive plan for the protection of the population in the area. Within a given time from the receipt of the security report, he announces it publicly, together with the security analysis, e.g. he informs the population on the dangers in the settlement and on the actions to be taken in case of an accident. He is made certain on the applicability of the plan in defence exercises. For this, those who live in the area should be prepared.

Since the Cold War is over, the threat for a global nuclear war has been reduced to minimum, but the world has remained the same instable. The number of local conflicts, asymmetric tools deployed by non-state armed forces, terrorists, extremist groups have grown considerably. Chemical, biological, radiological and nuclear (CBRN) weapons and carrier systems keep spreading and have been developed globally. Nowadays, nuclear terrorism means a significant danger beside power plant accidents.⁹

Government Decree 165/2003(X.18) on the order of informing the population in case of a nuclear and radiological emergency claims that a Population Information Plan should be prepared on national, sectoral and county levels.

"The Population Information Plan is prepared in the interest of the population and contains all the concepts, methods and tools of supplying information upon which informing will be successful. Its aim is to win the citizens' confidence and also build on it, to establish efficient information supply in the period of prevention, and to protect the health of the citizens in case of an emergency."¹⁰ The Plan should contain the fundamentals of radioactivity, its effects on humans and the environment, different types of nuclear and radiological emergencies and their consequences, precautions for the protection of the population, and tasks of the citizens in case of emergency.¹¹

REQUIREMENTS ON THE PREPARATIONS

In the frame of the Disaster Management system the tasks aimed at the protection of the population have an important role (see Figure 2.).

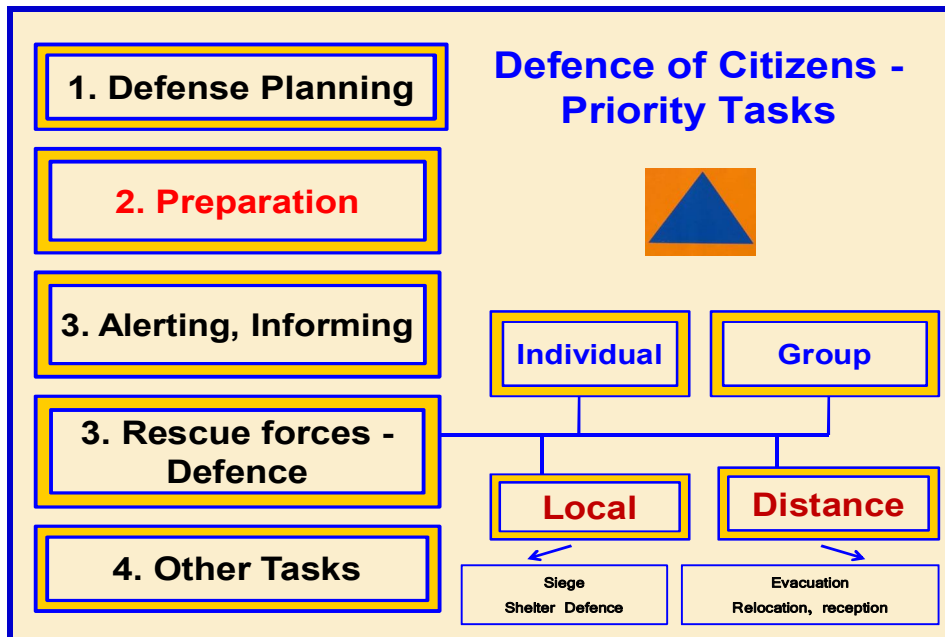
Executing preparation tasks is inevitable for the protection of the population. European countries manage this issue on a national level, but they also consider EU, NATO and UNO recommendations and action plans, and they form a new preparation framework and methods in the spirit of new challenges. Consequently, Disaster Management preparations differ for country to country so they meet different requirements. I analysed the Hungarian practice and collected these requirements.

⁸ Gov. Decree 2/2001(I.17.) About Protection against Major Accidents Hazards Involving Dangerous Substances 16§ (2) and modifications

⁹Rezső Pellérdi, 2007.

¹⁰ Gov. Decree 165/2003. (X.18.) About the Order of Informing the Population in Case of Nuclear or Radiological Emergency (Appendix 1., P.1)

¹¹ The discussed provisions of law are before a modification, supposedly, however, there also will be provisions of law after the modifications, which would claim the concepts, framework and contents regarding preparations.



2. figure. Prioritized tasks for the protection of the population
Prepared by the author

Requirements on the preparation of the population:

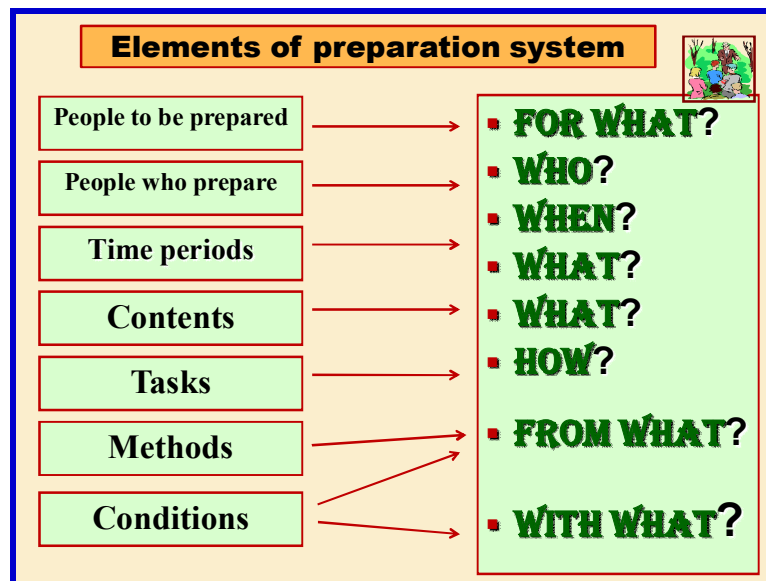
- The new system of the preparations should answer to new challenges, the emerging new and also the conventional emergencies, it should mix the useful elements of previous population-preparation systems with the new ones.
- The contents of the preparations should meet the country's level of insecurity and also the local conditions. It should detail emergency information on civil defence, fire-fighting, Disaster Management from the point of view of emergencies below a given catastrophe threshold.
- It cannot infract the existing provisional background or the opportunities, framework or principles offered by the modified rules of law.
- The preparation for facing catastrophes is expected to fit into the organizational structure, directing system, operational features, power and equipment capacity of Hungary's Disaster Management scheme.
- It should create and also take advantage of the concept of volunteering. Its methods should meet the needs of the target groups to be prepared, the local conditions and the affordable financial resources.
- The rule of "not anybody for anything" should apply, i.e. each target group should be prepared for the hazards in which they can possibly be involved, and to such measure and rate, which is necessary and also satisfying (possibly following a module scheme).
- It should meet the requirements of the Modern Era regarding its tools: it cannot be confined to giving lectures and handing out leaflets, but it should also include new preparational methods.
- It should save expenses, and it should comply with the preparation activity of the other components of the defence sphere.

THE COMPLEX SYSTEM OF PREPARATION

"The trouble that we are aware of and that we prepare for in advance can be overcome, even if with difficulties."

Livius -

The preparation procedure could comply with the above requirements, if it is regarded and operated as a complex system, which has various subsystems or elements. I summarized these in Figure 3. and I analyze them in detail in the present subsection.



3. figure. Elements (subsystems) of the preparation system
Prepared by the author

The groups of subjects: the target groups

It became obvious from the mistaken preparation practice of the 80's that it is impossible to prepare the population of the whole country at the same time, therefore a region can operate successfully, if the target groups of the population are well defined and the level, the course, the priorities of their preparation are set. But what is defined as a target group?

The target group of preparations: a segment of the population to which the given preparation activity refers to and whose size, composition, directions would define the contents, methods and tools of preparations. Upon analyzing the preparations throughout the country and also evaluating the observations of my own preparation exercise I grouped the population on the basis of their *role in the social division of labour* and of their *involvement or tasks* in possibly occurring catastrophes, in this way I assigned target groups as follows:

I separated three major target groups *upon their social division of labour*, and I also assigned further subgroups, whose preparations should be conveyed in different forms and contents.

I rank the following population as “employees”:

- subordinates of a civil defence organization ;
- non-subordinates of a civil defence organization, but being prepared at their place of work
- non-subordinates of a civil defence organization, and not being prepared at their place of work;
- those getting in relation with an emergency while performing their duties;
- subordinates of ministries, state management and their bodies.

I rank the following population as “unemployed”:

- students;
- pensioners, housewives;
- unemployed citizens.

I rank the following population as others:

- tourists;
- migrant workers;
- employees of foreign agencies;
- inhabitants of law-enforcement agencies;
- the handicapped, the sick, orphans, etc., treated in institutions.

The following target groups are advisable to form upon *their involvement in catastrophes and their tasks*:

- top managers and subordinates of ministries, law and order protection bodies, organizations of national authorities;
- area and local managers of defence directorates, leaders of local governments (mayors, town-clerks), and further groups that would encounter catastrophes upon carrying out their duties;
- leaders of voluntary, charity and civil organizations;
- leaders and subordinates of civil-defence organizations;
- a broader range of population, who are endangered by catastrophes, but who are not prepared in any other way as they do not belong to any of the above mentioned groups. Naturally, this group can be ranked according to various points of views (age, education, field of interest, state of health, etc.) so preparations could vary.

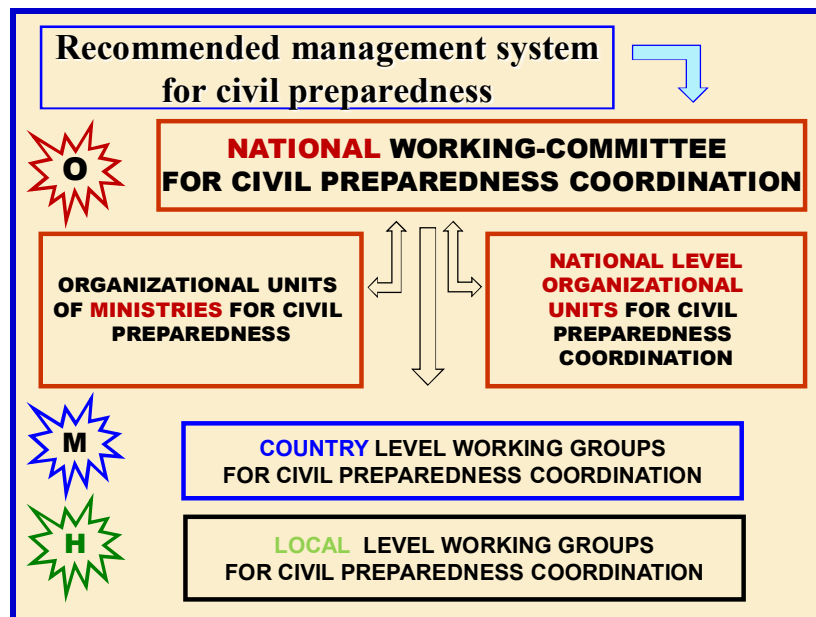
The groups of providers

The task of preparation providers is to convey knowledge towards subjects. The activity of preparation providers fall primarily on regular authorities in Hungary - unlike a number of European countries -, but more and more civil organizations and institutions join this procedure, thus a so called "mixed" preparation scheme is beginning to take shape in Hungary, in which volunteers, alliances, etc. participate in the preparations of the population beside the regular authorities of Disaster Management. The preparation activity is coordinated by the mayors and the leaders of defence organizations, in which they receive a major professional support from the county directorates of Disaster Management, and, at local level, from the office managers of civil defence agencies. At this point, the scheme is becoming "mixed", as volunteers and mayor-supporters, who are naturally civilian population, but undertook to be trained as providers, can join this activity.

There is no separate national, county or local organizations for coordinating the preparation activity: the defence system operates through the coordination and orientation of the defence organizations of the given level. I have analyzed the practice followed in the

neighbouring countries and the possibilities of the national preparations scheme, I have also conducted an efficiency analysis concerning orientation, and I have concluded that catastrophe-related preparations could be more efficient in the future if all knowledge and power of preparations would be concentrated; this is now represented by partner organizations parallelly (see Figure 4.).

It would be advisable to set up a national coordination committee, and also coordination teams at county and local levels, which would define the concepts, framework, tasks and people in charge of the given preparations level, the distribution of affordable resources, the preparation of providers, etc.



4. figure. Elements (subsystems) of the preparations scheme
Prepared by the author

Preparation material, its contents and layout

Preparation content depends on the level of emergency of the given area, and also on the target groups to be prepared. The present study does not challenge discussing the preparation contents of every target group, therefore here I make a suggestion on the preparation of a broader range of population involved.

A "broader range" of population means citizens, who do not get involved in catastrophes through practising their vocation or fulfilling their duties, who are not members of civil defence organizations, but who are endangered by catastrophes. Obviously, the most of the population belongs here, that is why here I mean the concept "broad range". Naturally, the above group of citizens should be ranked according to their age, field of interest, state of health and, occasionally, occupation.

The *contents* of the preparations should be set to the *emergency specifications of the given settlement*. Their preparation serves the aim best in a *module scheme* as not everybody should be prepared to every task. Modules should carry, complex knowledge arranged centrally and deepened according to the local level of emergency. What *contents* would be probably needed by the population after an analysis of their emergency situation?

On the basis of catastrophe statistics and emergency managing practice, these are as follows:

- kinds of catastrophes, danger zones, behaviour rules to follow in emergency;
- alarming, scheme and methods of supplying information;
- physical and psychological effects of catastrophes;
- preparations for rescuing, rules and regulations of participating in a rescue action;
- Disaster Management and its collaborators;
- charge, discharge of civil defence;
- establishing civil defence organizations, rules of exertion;
- alarming the population, kinds of population defence and their roles;
- supporting bodies, organizations;
- fire-fighting, fire-prevention knowledge, first aid;
- opportunities of self-orientation, ways of asking for help, self-defence;
- localities, current issues, damage analysis, etc.

There are several ways to pass on this knowledge, and each of them needs special tools.¹² Tools and materials should always match contents.

Preparation periods

There is a professional debate on whether preparation is an activity of prevention. My point of view is that preparations have to be conveyed not only before catastrophes, but also during them, but in a special form, "embedded" in defence tasks. On the basis of this, I rank preparations according to periods:

Preparations in the preventive period

It means that the preparation activity is conveyed before an emergency, in a preventive period. Here the population is not only trained to obey the mechanisms of actions during an emergency. Beyond this, they should be given support in building up their skills in self-defence, as well as they should be made realize how to avoid causing emergencies themselves.

Preparations during emergency

It means that the preparation procedure is done in immediate danger or during an occurring emergency. If the preventive-period preparation scheme worked well, it is much easier to perform preparation during emergency. Most frequently it takes place in the form of information service. A unified information service guideline should be formed for various emergencies and catastrophes, which are actualized by Disaster Management specialists along with defence agencies in case of an occurring emergency, and information material and methods are worked out according to the specialities of the occurring emergency in order to inform and prepare the various target groups of the population effectively.

Preparations in the re-establishing period

It is conveyed after warding off a catastrophe or when the emergency is over. Besides the method of preparing the population for an existing or overhanging emergency, the preparation activity of the re-establishing period also has great importance. The population, whose lives are partly or completely deranged, are extremely defenceless. "Reorganizing" life requires fast

¹² Dr. Endre Sztanek, 2003.

and precise information flow, uniform administration, synchronized activities, and it also needs the population to be prepared for being aware of what to do for re-establishment and restoration to happen soon and with minor losses, they should know the losses and the extent of the reversibility or irreversibility of processes.

Methods of preparation

Selecting the appropriate preparation methodology is a crucial point, regarding the successfulness of the preparation. The population's preparation can be done through conveyance of knowledge, skills-developing or mixed-type drills or exercises.

- In *knowledge-conveying courses* "only" knowledge is passed on to the subjects of the preparations, which they accept either in an active or in a passive way.
- In *skills-developing courses* *sub-skills* are drilled which are needed for practicing the necessary rules of behaviour and activities followed or done in case a catastrophe bursts out. E.g. putting on a gas mask, drilling of crawling under smoke level, etc.
- In *mixed-type courses* both knowledge-conveying and skills-development are trained.
- In *exercises* complex practical tasks are solved in hold of the obtained knowledge.

In the following part I present a few population-preparation methods, out of which one can choose the most appropriate one for local conditions, target groups, own personality and financial resources. These are as follows (without aiming at completeness):

- giving lectures, persuasion;¹³
- presentation of Disaster Management equipment;
- organizing a visit to a fire-fighting barrack (introducing the methods of fire-prevention, fire-protection, fire-fighting);
- visiting of fire-fighter museums, and local civil-defence collections, giving lectures;
- preparing and publishing leaflets, educational issues;
- publishing educational material in written or electronic media;
- conducting adult or children competitions on defensive issues;
- organising exhibitions on the preparation of the population;
- participating in the programmes of other defence bodies and connecting their knowledge with catastrophe-related knowledge;
- preparing web-pages with the topic of the preparation of population;
- publishing study books or workbooks on emergency;
- holding lectures, special classes, drills in educational institutes;
- recruiting and preparing volunteering providers;
- founding and operating Security Information Centres (SIC), etc.

The above proposed knowledge can be broadened or narrowed according to the age and composition of the target group, but it is also important to work out appropriate practical tasks to each topic, which than could be practised by the participants.

SUMMARY

¹³ Raymond Hull, 1997.

As a summary, regarding the *purpose of the preparation of the population*, it can be *claimed* that it is one of the most important issues of the Disaster Management activities, which nowadays falls on regular organizations, but well-prepared volunteering providers, mayor-supporters, civil organizations, feeling responsibility towards their community can also play an important role.

Tasks aiming at the protection of the population play a major role in the Disaster Management scheme. Among them the protection of the population is highly ranked during which the population is *prepared* for emergencies below and above a catastrophe threshold, skills are *trained* in them, with the help of which they can successfully rescue themselves or their mates, and their assets in these situations. *Furthermore*, defence knowledge and rescue abilities of the civilian population taking part in eliminating a catastrophe are *established*.

Its *most important purpose* is to *familiarize* the endangered citizens or those suffering from the harmful effects of a hazardous situation, and also the participants of the rescue operations with the emergency situations, the rules of behaviour and acting to follow, the methods of self-rescue and rescuing others and assets. It is clearly seen that it is a complex system of activities, which has various sub-systems. In a sub-system the providers, the subjects, the preparation material, the preparation periods, the preparation tasks and methods appear as further sub-systems. Their specifications are the basis for realising the preparation in a given area. The knowledge should be shaped according to the age range and composition of the target group and it should be conveyed in an appropriate way.

The task and responsibility is huge, only well-prepared specialists are able to cope effectively, who fulfil their duties professionally and with responsibility, and also conscientiously, and who approach the task from a systematic point of view.

"...each affair has its prospects: some, in order to tell them properly, should be seen closely, but others can only be told, if they are regarded from a distance."

Rochefoucauld

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