Computational algorithm as a possible support of emergency communication

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Abstract: Article reflects the need of evaluation of emergency preparedness and responsiveness of emergency plans in the case of emergency and also new threats to influence societal security and continuity of the development of communities, especially municipalities with extended powers (MEP) and their local administrative offices. The attention is focused on education and exercises like a crises readiness tools and especially on the emergency communication using computational algorithm support within the scope of transferring priority communication. The article also serves to defining specific future indicators which will be able to assess the state of preparedness of the administrative district of MEP during crisis situations and also will offer new approach to crisis readiness.

Key-Words: crisis, preparedness, emergency plan, municipality, population protection, readiness

1 Introduction

Security environment is a phenomenon which consist of never ending process of developing new approaches for ensuring the protection at different levels. Hand by hand of new threats go also new steps how to avoid harmful effecting and how to set protection rules that would determine new background of ensuring protection and prepare the population for new challenges. For the need of this article is the attention focused on municipalities which are defined like the lowest autonomous complex (community) with the power to make decisions about most of items in the administration district of the municipality, in the Czech Republic are these municipalities called municipalities with extended power. There are two aspects how to perceive the security and its protection. First of them presents that ensuring the protection of community is in the hands of state where the state over takes the whole responsibility for preparedness, implementation and potential consequences like a result of harmful effecting of extraordinary event.

2 Difficulties in crisis preparedness process

The attention is focused on the evaluation the municipality's readiness to deal with extraordinary events [5]. Within the scope of security background in the czech conditions is the attention put on all levels of the public administration. There are prepared crisis plans for the government level, regional level and also for local level, but in the last mentioned level, there is still a place for research, because of relatively new legislative regulation. This regulation defines what should municipalities do for ensuring their protection from the point of view of law, but there has not been implemented some crisis preparedness evaluation yet. By the idea how to evaluate the crisis preparedness there is a gap which could be fulfil by defining specific indicators which could serve like a measure of crisis readiness of municipality. These indicators according specific rules should be able to say where we could put out attention during preparedness process, which steps we should avoid and which items of preparedness process we should focus on.

Crisis readiness system can by define like a process with many points of view which contain different areas of research, such as crisis communication, education, approaches from other countries, financing etc. Some areas will be described in following subsections.

2.1 Crisis communication

Probably the most important part of crisis management is its communication. From the point of view of sharing information communication and

transfer information unique rule. It is known that without connection there is no command. The communication among security services in the Czech Republic is carried out by three main telecommunication companies which offer services during normal life, but also especially during the duration of crisis situation for the integrated rescue system (IRS). There are three basic parts of integrated rescue system in the czech conditions, it is about the Police of the Czech Republic, the Fire Brigade of the Czech Republic and the Medical Rescue Service and there are many other additional services for the activity support of the main rescue services. The connection during crisis situation is realized not only among mentioned rescue services but also among the state bodies and other parts of public administration involved into the crisis management of particular event. Priority connection is offered by the telecommunication companies maximum of 30 000 numbers. These mobile numbers could be preference to the exclusion of the other normal numbers. In the crisis management process it means that people with the main priority and importance have priority in connection to the other bodies before the other users from the public. There are also some basic rules that should be accepted in the case of crisis communication:

➢ To provide only some and precise information;
➢ To present only short messages (10 sec or 10 words);
➢ To repeat the message;
➢ To use the visual support materials;
➢ To balance out negative by positive information;
➢ To use only positive formulation of the speech;
➢ To take a look on the nonverbal communication.

For the preparing and transfer the information should be also respected the STARCC principle, where the information should be:

➢ Simple;
➢ Timely;
➢ Accurate;
➢ Relevant;
➢ Credible;
➢ Consistent.

2.2   Education

Another very important part of the crisis management process is education especially towards people responsible for the preparing process and realization of all necessary steps during crisis situation and at all level of the public administration, it means at the government level, regional level and local level [2,3]. All these levels must be first of all effectively connected and integrated with educated people. Education for the need of crisis readiness is implemented in the specific programs where responsible workers have to go through before they start their job. There are specific programs concerning to their branch and their job's needs. All these steps of education are involved and controlled by the Conception of education for the crisis management. As a support of this conception there are specific modules which serve to offer the necessary information to the responsible staff.

MODULE A - Cross section of crisis management
MODULE B - Basic of crisis management
MODULE C - Crisis management at the no-military Situations
MODULE D - State defense
MUDULE E - Population protection
MODULE F - Economy protection
MODULE G - Internal security and public order
MODULE H - Economic measures for crisis Situations
MODULE I - Integrated rescue system
MODULE J - Crisis management in the health sector.

2.2   Exercise

Among the most important parts of crisis preparedness is necessary to mention how all these steps of readiness written on the paper are able to be implemented and realized in the life. For this reason there are practiced some exercise with should show how the plans and especially responsible people and other additional staff are prepared for managing the crisis situation. There some national and international exercises serving already for this verification, exercise such as:

➢ CMX/CME;
➢ ZÓNA;
➢ BLANÍK;
➢ ROPNÁ NOUZE;
➢ ZDROJE.

These exercises serve to verify not only communication among responsible rescue services and bodies but also among the companies responsible for specific issues, that is why there are involved f.e. nuclear power station, Government of the Czech Republic, Ministry of Internal Affairs, Ministry of Defence, many other subject responsible

for the critical infrastructure protection [1,3]. At the moment there is realized the exercise of Active Reserve of the czech army, exercise CMX 2016.
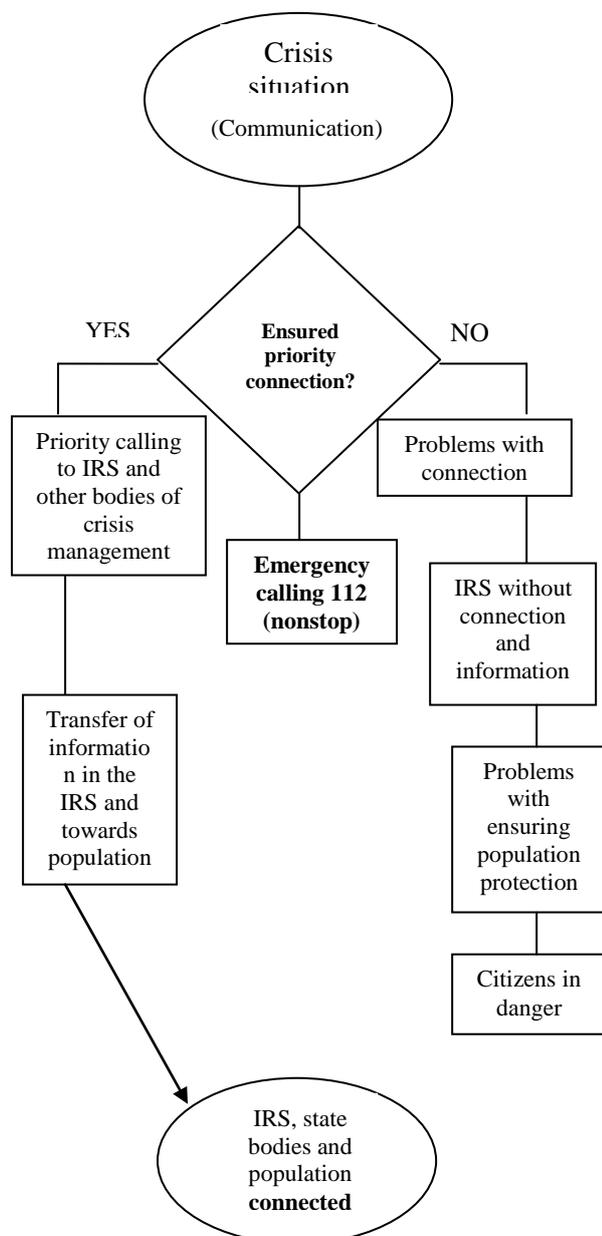

Fig. (1) Algorithm of transfer priority information during emergency communication [3,4]

3 Responsible Management

As a result of mentioned information is possible to say the that the attention is necessary to focus on the basic statements of preparedness process, f.e. education, communication, financing and many other areas is impossible to establish quality and responsible crisis management staff and the we could not expect some sufficient and adequate

results. Responsible management accept responsible access to the item – to be prepared! Within the scope the global ensuring the community protection has to be the attention focused not only on the protection from the national point of view but, and what is more important, the attention should be a part of awareness of citizens, where each of us should have the information about the fact, why we should be prepared, what should be prepared and for which situation we should be prepared. If there will be implemented the wisdom of this needs among citizens and government, then we can expect sufficient results and adequate crisis readiness.

4 Conclusion

Many publications about crisis preparedness are describing what we should do and many people say that they know what to do before and during crisis situation. This article shows only a part of the view to the crisis management problems concerning especially to crisis communication but many other items are described in specific research we are involved in. It is very important if the awareness of the need of crisis readiness will be part of our everyday's life and via quality information about readiness we can be adequate prepared for recent and future threats.

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