

REFERENCES FOR CREATING A SCENARIO FOR MANAGEMENT OF EMERGENCY SITUATIONS

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***Abstract:** Emergency situations are those events which, by their appearance and development, prevent the maintenance of a security environment conducive to daily activities and their removal is a complex process that involves the use of various quantitative and qualitative resources in a coherent managerial framework. Emergency management provides for certain stages starting from the identification of the situation, planning, organizing and coordinating the mode of action, training of the resources and personnel involved and the final evaluation of the event. In order to solve these emergencies, there are specialized structures that intervene and restore the state of normality. When the recorded situation or event exceeds a certain magnitude and the structures fail to cope with the negative effects, they request the support of the army. The main military structures required in the case of natural disasters are the combat engineers structures, which have the necessary equipment and training. Carrying out risk scenarios and action plans in such situations are essential in the article, emphasizing the usefulness of creating variants of framework scenarios that will be fully or partially replicated in the specific training exercises.*

***Keywords:** combat engineer structures, emergency situations, scenario, remove snow, plan of action, intervention team*

1. GENERAL CONSIDERATIONS

Emergency situations are those events which, by their appearance and development, prevent the maintenance of an environment of safety and security of the population (Crăciun, 2006). These situations inevitably occur, having small or complex sources of initiation, but which lead to disastrous effects if their occurrence is not eliminated or diminished, in terms of the possibility

of manifestation. Also, these events involve dysfunctions in several areas and on several levels, among which those that concern the daily activity of the population, but also affections on the environment.

In order to prevent these situations, it is necessary to have this special category of human activity domain management, emergency management, which has the role of identifying, planning, organizing, coordinating, training and evaluating the entire activity (Crăciun, 2006).

This essential procedure in maintaining the state of normality requires specialized structures that will act efficiently to carry out the mission successfully and to eliminate the risk of population exposure. These structures must be permanently prepared, available for any intervention and with a high level of operability, desired to be accomplished by using the practical-application methodologies specific to the scenarios.

Given that combat engineer structures have missions such as force protection, road sustainability, fortifications, but also that they have specific equipment for support missions, their role extends to population support in case of emergency. Therefore, combat engineer structures are required for natural disasters such as floods, snowfall, bridge construction or road rehabilitation.

2. EMERGENCY MANAGEMENT AND INVOLVEMENT OF SPECIALIZED STRUCTURES

Emergency management represents, a set of activities and procedures that plan, organize, coordinate, train and evaluate the intervention in the event of a natural or artificial factor, which affects the smooth running of daily life (Tabără, 2014). The involvement of decision-

makers, institutions and public structures empowered to identify and monitor the sources of risk is essential in resolving the emergency situation. Also, the evaluation of the information and the situation, the elaboration of forecasts, the establishment of the action plan and its implementation in order to restore the situation is an extremely important factor. The supervision process is necessary to evaluate the dynamics of the situation. Monitoring also includes the knowledge of the type, magnitude and intensity of the event, in order to have the correct image of the evolution and social involvement, but also to determine how to impose measures to resolve the event (Crăciun, 2006). The management of these events requires the implementation of a procedure for identification, registration, organization and evaluation. In order to avoid the impact of these emergencies, communication and civil assistance is an essential factor.

Most human activities, regardless of their nature, are accompanied by risks that can with some probability produce a disastrous effect. Also, a number of natural phenomena such as floods, fires, earthquakes, landslides, avalanches, tornadoes, lightning strikes, contribute to the creation of negative effects on the normal state of society.

At national level, the terms and conditions regarding the management of emergency situations appear in the Government Emergency Ordinance. 21/2004 regarding the National Emergency Management System, approved with the subsequent modifications and completions, here finding the legal basis for identifying, managing and resolving emergency situations.

In addition to the emergency response structures, which are subordinated to the General Inspectorate for Emergency Situations, there are structures within the Ministry of National Defense that participate, especially the combat engineer structures.

Since the establishment of the combat engineer branch, it has intervened in numerous missions that targeted natural disasters (floods, snowfalls, fires, etc.).

3. MATERIALIZATION OF A FRAMEWORK SCENARIO FOR THE COMBAT ENGINEER STRUCTURES IN A EMERGENCY SITUATIONS INTERVENTION

Generally speaking, the scenario represents the means that provides the forecasting, planning and organizing of the integrative training, necessary to achieve the performance standards specific to the management systems and subordinate

structures, destined to exclude the possibilities of manifesting destabilizing vectors for the Romanian society: dangers, threats, armed aggression or of a different nature (Udeanu, 2011). From the typological point of view, the scenarios and especially those applied in the military field can be classified according to the spatial and temporal area of the hypothetical actions, amount of forces and means involved, the hierarchical level of the leadership and the objectives of the training process (Udeanu, 2011).

Also, particularly for the military field but with many elements that can be taken for conceptualization in other fields of activity from the field of security and public order, the scenario represents a hypothetical institutional-operational framework conceived on the basis of an action-contraction situation and plays a role in checking the training level of the troops.

A strategic scenario is broad and has several operational scenarios, which in turn have several tactical scenarios. The complexity of a tactical scenario also shows the complexity and numerous options for verifying the capabilities of forces. A tactical scenario is based on several hypotheses, and the hypotheses are followed by several variants. A tactical scenario is made for a peace situation and aims at training or for a war situation and aims at the commander's conception for

carrying out missions as efficiently as possible (Udeanu, 2011).

To highlight that combat engineer structures are best suited for emergency intervention, we discuss the significance of the concepts of combat engineer support defined as a set of measures, works and missions performed by the specialized troops of this branch and combat engineer protection, designating a set of measures, works, and missions carried out by the other categories of branches or structures to carry out their missions under normal conditions (Grecu, 2005).

Much closer in terms of the ideational content of the subject analyzed in the present article, is the opinion (Vladu, 2006) according to which the scenarios are designed to provide the necessary operational framework for preparing the forces structures and to provide the analytical foundation necessary to evaluate the commander's conception, through simulation, in the context of possible real situations.

There are two components based on which the tactical scenarios are realized (Vladu, 2006): the first component is made in text form and includes information or data regarding the general situation, the special situation, the logistical support of the actions, the order of operation (operation plan), timely framing of the events and materials

needed to perform the script and the second component is the graphic one, where the actions that will take place in the tactical field are materialized taking into account the enemy's structure and its own forces.

Developing an appropriate scenario that can be used in the intervention of combat engineer troops in emergency situations is a factor that contributes to the successful accomplishment of the future mission.

A civil emergency situation often encountered in Romania in recent years and especially in the South East is the abundant snow followed by the manifestation or at the same time with other weather phenomena such as strong wind, low temperatures, etc. In the middle of winter, such extreme phenomena cause an imbalance in the population and institutions, threatening and hindering the smooth running of the current activities. Starting from the obligations assigned to the military structures, to intervene in such emergencies, the combat engineers are part of the main intervention force (Popa, 2014). They intervene both with specific machines and with specific tools, one of the missions of the combat engineer structures being to ensure the viability of the roads.

The emergency situation is identified by the structures in the

respective locality (Tabără, 2014). Initially the structures within the General Inspectorate for Emergency Situations intervene and when the situation exceeds the capacity of this type of intervention force, the army's support is requested. The military units receive the request, and from this moment the action plan for the intervention is triggered.

In order to materialize a scenario that includes the two components (text and graph), the premise mentioned above was taken into consideration: the efficiency of the intervention of the combat engineer troops in emergency situations, more precisely in the situation of the presence of a large volume of snow blocking access to a locality affected. This scenario should answer five questions, which are meant to facilitate the action base, these questions being: What, What, Where, When, Who, Why, How. Specifically, the question „What” represents what should be done. The question „Where” refers to where to take action to resolve the situation, and „When” represents the moment when action will be taken and „Who” establishes the responsible structure. „Why” is the reason for acting, and „How” is the mode of action according to the plan developed. The scenario developed using the working method described above is presented in table no.1.

What	Snow removal intervention
Where	Ianca Town, Brăila county
When	Winter, forecast days or on request
Who	IGSU structures, Combat engineer structures from the Ministry of Defense
Why	Aid to the population; Request from local authorities
How	Action plans

Table no.1- 5W1H method for the proposed scenario

The request of the local authorities is sent to the responsible structures. The proposed scenario must be adapted to the real needs of the dimension of the emergency situation, and its construction must ensure that all the requirements are met as best as possible, so as to lead to the resolution of the situation. For this purpose, the scenario construction is combined with a scenario management component (decision-centered). The first step in emergency management is to identify the vulnerabilities and reduce the risk of unwanted events.

In this case, the vulnerabilities that may arise are related to the malfunctioning of the snow machines and the request for a higher volume of physical work or the negative effects of the wind, cold or snowfall on the effectiveness of the human action.

The proposed scenario is concretized as follows: the local authorities request the support of the specialized structures for clearing the roads covered with a dense layer of snow, which blocks the traffic and the daily activities in Ianca city (courses, school, shops, banks, administration).

According to the legal procedures, the structures involved are those within the IGSU, but the scope of the works also requires the structures within the MApN. Thus, the information is transmitted to a military unit nearby, with attributions for such interventions. With the start of the intervention plan, the assembled subunit is properly equipped, loads the materials in means of transport on wheels or on the tracks and prepares the necessary equipment for snow removal. Arrived at the event site the intervention team offers the support of the other structures and collaborates to solve the situation. In general, the team has a variable number of military personnel, which differs depending on the volume of work requested. In order to ensure the continuity of the intervention and the efficiency of the working team, there are scenarios for every possible situation in which the engineers can intervene to support the population, such as floods, the achievement of critical crossing points or the release of a road to ensure the circulation.

4. CONCLUSIONS

Emergency management consists of organizing all resources and procedures to track all aspects of an event that changes the state of normality and how it is resolved. In order to manage and solve such emergencies it is necessary to have specialized and efficient structures, which act regardless of the adverse conditions. These situations can be caused by nature or by man, which does not change the intensity or the magnitude of the event, because most of the times the effects are much greater than expected.

The specialized structures for resolving these emergencies act according to previously established action plans and based on scenarios created for each event. There are procedures and scenarios for each type of event such as: floods, snowfalls, landslides, tornadoes, blizzards or other attacks that threaten the normality of the population.

Starting from the extent of these risk events that may occur, the structures responsible for solving them need support, which is why in most situations, the intervention of the combat engineer structures is essential.

The preparation for the intervention is a factor of appreciation of the state of performance of these types of forces, the method of the scenarios facilitating the achievement of the designed operability level.

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