



Article

Emergency Management in Resolving an Emergency Situation

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Abstract: Experience gained from NATO operations shows that the basis for an effective solution to a crisis is a combination of a comprehensive political, civilian and military approach. The cooperation of all stakeholders is thus a basic prerequisite for the effective resolution of crisis situations. These aspects and stakeholders include emergency management. This paper deals with civil-military cooperation in times of emergency caused by the COVID-19 pandemic in the Czech Republic. It qualitatively evaluates the findings resulting from the questionnaire survey focused on the state of crisis preparedness of the Army of the Czech Republic and the functionality of emergency management in cooperation with rescue work with other teams of the rescue system. The questionnaire was carried out at military units in all regions of the Czech Republic; organizational units of the Ministry of Defence with nationwide competence, which were directly involved in securing measures related to the declaration of a state of emergency due to the COVID-19 pandemic in March—May, 2020; Operations Command, which currently manages operations in the Czech Republic designed to manage the consequences of a pandemic; and members of the Ministry of Defence participating in the activities of the Strategic Command and Control Group. A total of 21 stakeholders took part. The experience in managing the consequences of the COVID-19 pandemic have shown that armed forces around the world have an irreplaceable position in dealing with nonmilitary crises. The conclusions and recommendations obtained from the research survey are the content of this paper.

Keywords: civilian-military cooperation; emergency management; emergency preparedness; rescue system; state of emergency; threats

1. Introduction

The various threats and disasters with local and national impacts (e.g., terrorist attacks by small groups or individuals, migration waves, climate change, political change) which significantly affect the normal functioning of society are becoming more and more intense. This fact requires, hierarchically, from government officials, crisis management authorities, the rescue system, security and armed forces, and from the population itself, preparedness to deal with crises and dangers. Crisis management deals with the individual phases of preparedness and solution ([Svarcova et al. 2016](#)).

Large-scale natural disasters include e.g., a forest fire on 1 May 2016 in the Canadian province of Alberta near Fort McMurray, which caused very dry weather ([Government of Alberta Home 2016](#)). Another example of the cause of emergencies are industrial accidents caused by human factors, failures of technological or technical equipment or even the influence of natural elements. The accident of the Fukushima Daiichi nuclear power plant in Japan in March 2011, which occurred as a result of the earthquake that triggered the tsunami, can be mentioned ([Acton and Hibbs 2012](#)). The current threat to society, not only social and economic, is terrorist attacks, the motives for which vary considerably.

They include a fragmented group of political, religious, criminal or psychotic reasons. These motives are not static, they evolve or disappear over time in response to the development of a given political or socio-economic system. Given the total number of victims and injuries, the largest terrorist attacks in Europe took place in 2004 in Madrid, Spain (191 victims, 2050 injured; ([Carresi 2008](#))), in 2005 in the United Kingdom in London (56 victims, 700 injured; ([Hines et al. 2005](#))), in 2011 in Oslo, Norway (77 victims, 151 injured; ([Solid et al. 2012](#))). The success of the intervention of rescue system subjects is influenced, among other things, by geographical differences (accessibility to the extraordinaly event site), population density, experience from cooperation exercises and differences in the responsibilities of individual security forces in dealing with an emergency ([Rehn and Solid 2013](#)). More than ever, successful management depends on the most rational use of all available resources of the rescue system as a whole. It is in such a situation that the importance of rational communication and teamwork according to the principles of emergency management and communication becomes apparent ([Urban and Hoskova-Mayerova 2017](#)).

Current and future threats, including threats to health, force countries to review, modify and implement plans for large-scale emergency situations or crisis situations including those in the field of public health. Previous plans often focused on managing the consequences of situations associated with specific diseases (e.g., influenza pandemics, SARS, MERS, Ebola) or other health threats ([Kelly and Cowling 2011](#); [Napoli et al. 2014](#); [Napoli et al. 2015](#)). Significant efforts are therefore now being made to improve crisis plans, methods and amendments to legislation.

The framework for the coordination of preparedness and response planning is set out at an EU level in Decision No 1082/2013/EU on serious cross-border threats to health, which also serves to strengthen the capacity for monitoring, early warning, evaluation and response to health emergency situations. Under the EU program, support is provided through professional training and exercises, as well as by facilitating the sharing of experience, guidelines and processes across EU countries ([LA 2013](#); [Kroupa et al. 2011](#)).

The Decision contributes to the crisis preparedness of EU countries by sharing best practices and experience in preparedness and response planning. It can also be seen as an instruction to member states in drawing up national preparedness plans for various types of public health threats, such as influenza pandemics or chemical accidents, natural disasters or disasters caused by intentional actions ([Navrátil et al. 2019](#); [Otrisal et al. 2018](#)). It also supports the interoperability of national plans through coordination mechanisms, analysis and communication tools ([Riccardo et al. 2016](#)).

Crisis preparedness in general ([Svarcova et al. 2015](#)), on a national scale, can be understood as the ability of a system to have an early response to danger with adequate capacity of competent forces and resources. Such forces and resources, as part of resolving an emergency situation caused by a natural disaster or threat, with a national impact, also include rescue teams, which include both civilian and military units ([Tušer and Jánský 2020b](#)). The harmonization of civil-military cooperation in response to life-threatening and health-threatening situations is an essential aspect for the successful management of emergency situations in a given country.

If the harmonization of cooperation is successful and the process of resolving the emergency situation is coordinated, there is no waste of energy or material and financial resources. Properly implemented risk management leads to significant savings in the state budget.

The amount of savings can be quantified only after the end of the intervention in an emergency or after its completion. The greatest financial savings occur if there is good planning, and the coordinated decision-making of all responsible persons can completely prevent an emergency. If it is not possible to prevent the emergence of extraordinary event, then at least minimize their consequences.

The essence of emergency management is a systemic and coordinated approach to the application of preventive measures and emergency management. Emergency management is implemented at all levels of state management and administration through emergency management bodies (CMB) with their working bodies for crisis planning and management (i.e., security councils, crisis staff). The manifestation of CMB's systemic approach to emergency management is the elaboration and

subsequent use of crisis and emergency plans. The Security Council's analyze the risks and the state of preparedness, and take decisions on preventive measures ([Tušer and Navrátil 2020](#)). Decisions of security councils are made to prepare for imminent danger. Crisis staff, in turn, deal with specific situations in real time.

The article responds to the identified shortcomings in civil-military cooperation in the Czech Republic during a state emergency or disaster. A study of the current situation revealed that in the case of a longer-term deployment of the above-mentioned forces, financial and legislative support is required for the acquisition of property and services for consideration. In the Czech Republic, there are no financial limits, procedures and areas of responsibility of individual actors in the acquisition process of public contracts for the acquisition of property and services for consideration in a state of emergency. Ineffective deployment of the forces and resources (F&R) of the Army of the Czech Republic (ACR) to perform tasks in crisis situations of a nonmilitary nature due to the insufficiently legislated regulated way of requiring the ACR F&R and inconsistency (asynchrony) of information flows for all components of the rescue system.

The structure of the paper is as follows: Section 2 describes used methods; Section 3 is the essential section of the paper as it summarizes the received results. In Section 4 the key measures to overcoming the found shortcomings are mentioned and the Conclusion section summarizes the paper as well as mention the limitations and possible future trends in our research.

2. Materials and Methods

Experience in managing the consequences of floods and other natural disasters, and experience in managing the consequences of the COVID-19 pandemic has shown that armed forces around the world have an irreplaceable position in dealing with nonmilitary crises. This is why it is essential that modern armed forces have a type of force whose primary activity is precisely to prepare for crisis situations of a nonmilitary nature. For these cases it is necessary to have types of forces designed to defend the territory and other types of forces that will perform humanitarian tasks of civil protection.

In ([Tušer and Jánský 2020a](#)) were the results of a study dealing with civil-military cooperation during the COVID-19 pandemic in the Czech Republic, and the preparedness of the Army and other units of the Integrated Rescue System (IRS) for effective cooperation in case of an emergency situation. The aim was focused on the quantitative processing of the obtained results. To determine the current situation, the method of a multicriteria evaluation of the ACR's capabilities was chosen. The evaluation criteria formulated in the research questionnaire also included open-ended questions (Appendix A) concerning the level of crisis preparedness of the forces and resources of the Army of the Czech Republic (ACR). These questions required a qualitative approach to crisis preparedness assessment, and the conclusions drawn from them are the content of this paper.

Questions from the crisis preparedness of the ACR included the following areas:

- I. Human Resources
- II. Technical Security of Allocated Forces
- III. Command and Control of Allocated Forces
- IV. Planning the Deployment of Forces and Resources (F&R) of the ACR.

As was mentioned in ([Tušer and Jánský 2020a](#)) "A questionnaire survey (allocation of points to individual sub-questions) was conducted at military units in all regions of the Czech Republic and at all organizational units of the Ministry of Defence with nationwide authority, which directly participated in securing measures related to the declaration of a state of emergency due to reduction and management of the consequences of the COVID-19 pandemic. Further questionnaire surveys were conducted at the Operations Command, which currently manages operations in the Czech Republic designed to manage the consequences of the pandemic, and with members of the Ministry of Defence participating in the activities of the strategic command and control group. A total of 21 respondents cooperated".

The main goal was to determine the functionality of processes, find the main problems, name them, describe them and find possible solutions to the identified shortcomings. Improvement was ensured as soon as possible by formulating proposals for improvement and putting them into practice immediately.

3. Results

This section presents the results obtained using the questionnaire method on the open questions. Given that the questions were answered only by specialists and experts in the field, it is possible to consider their answers as relevant and based on them propose research questions for further investigation or directly propose measures to improve the current situation.

The answers to the open questions (highlighted in italics in the questionnaire—see Appendix A) revealed the following findings on the individual criteria:

I. Human Resources (Criterion A)

Criterion A consists of the number of allocated forces (personnel quantity), the preparedness of the allocated forces to perform tasks (quality) and the preparedness of the commanding officers of the allocated forces.

According to the majority of the respondents, the amount of forces and resources (F&R) of the ACR allocated on the basis of the Planned Assistance Agreement is sufficient. Some respondents expressed interest in greater involvement of the ACR in joint activities with the IRS. However, the increase in the number of forces is linked to an increase in the number of professional soldiers, or an increase in the number of members of the active reserve of the armed forces. For the successful implementation of the increase in the amount of F&R of the ACR allocated for the benefit of the IRS and regions of the Czech Republic, it is necessary to identify the risks and capabilities of primary units of the IRS. The positioning of detachments of the ACR is determined by the dislocation of the parent (providing) crew ([Procházka and Procházková 2018](#)). At present, the positioning of individual detachments is not uniform for the entire territory of the Czech Republic.

According to the respondents, the preparation of allocated units (executive elements) for the implementation of rescue and liquidation work does not take place rather than takes place. The ACR does not currently have a professional unit to carry out humanitarian civil protection tasks ([Otfísal and Florus 2014](#)). Part of the humanitarian tasks of civil protection can be taken over by the corps of engineers of the ACR, but these activities are not the main type of activities of this type of corps.

In order to increase the level of preparedness of the allocated units themselves, it would be appropriate to include in the training programs of all types of forces the issue of nonmilitary operations in the Czech Republic and abroad. At present, education and training in nonmilitary operations are sidelined at the expense of training the main activities of individual types of forces ([Malachová et al. 2017](#); [Oulehlova et al. 2015](#)).

In order to increase the level of preparedness of commanding officers of allocated forces, it is appropriate to include training in nonmilitary operations in the career training of officers at the tactical and operational level, for example in courses for lower and senior officers, or in the Master's study program, Management and use of the Armed Forces at the University of Defence ([Bekešiené et al. 2009](#); [Oulehlova et al. 2017](#); [Tušer 2020](#)). For the training of officers at the strategic level, I propose to include this issue in the General Staff course. Within these types of education, it would be appropriate to use the capacity of the Center of Simulation and Trainer Technologies at the Training Command—Military Academy to train the decision-making process of commanders at all levels of command ([Urban and Urbanova 2011](#)). Scenarios with the outbreak of a nonmilitary crisis situation in the Czech Republic and the subsequent deployment of the F&R of the ACR would involve all levels of command in the decision-making process.

II. Technical Security of Allocated Forces (Criterion B)

Criterion B deals with the capabilities of transport equipment, special equipment, and the capabilities of the parent units of the allocated detachments to ensure material and logistical support.

Investments in transport and special equipment are needed to improve the current state of criterion B. Some respondents stated that the current transport and heavy special equipment is technically obsolete and it would be appropriate to modernize or replace it with new equipment. In the case of purchasing new equipment, it is necessary to ensure the retraining of the operator for this type of equipment. This problem concerns both transport equipment and special heavy equipment intended for earthworks, ensuring the access of roads and rescuing vehicles, with the exception of special equipment for chemical and veterinary detachments, which currently does not require extensive modernization.

From the point of view of logistics, military units are able to provide allocated detachments for a weekly cycle. However, in the case of a longer-term deployment, financial and legislative support is required for the acquisition of property and services for consideration. The laws do not set financial limits, procedures and areas of responsibility of individual actors in the acquisition process of public contracts for the acquisition of property and services for consideration in states of crisis ([Kudlák et al. 2020](#); [Potůček 2020](#)).

III. Command and Control of Allocated Forces (Criterion C)

Criterion C consists of a system of command and control, a system of notification of ACR units and facilities, and means of communication.

Apart from minor nuances, the respondents stated that the command and control system allows for a flexible response to emergency events and crisis situations. In rare cases, when the command and control system is not able to react flexibly to the situations that have occurred, the majority of the commanding officers of the ACR have built up a high capacity for improvisation and adequate response to ad-hoc problems through training and continuous education ([Urban and Urbanova 2012](#)). The verification of the command and control system in nonmilitary crisis situations takes place within NATO and the EU using simulation and trainer technologies, and is not linked to the actual maneuver of forces and resources. This training is sufficient to test the command and control system of the allocated forces. There is no maneuver of real F&R of the ACR during simulation exercises. For a deeper examination of real capabilities of the command and control system for the deployment of the F&R of the ACR in crisis situations of a nonmilitary nature, it would be appropriate to involve a real maneuver of these F&R in these exercises.

The notification of military units and facilities upon receipt of a request from a superior level allows for an immediate response, is flexible and there is no delay. However, in order to increase the effectiveness of the deployment of F&R of the ACR to perform tasks in crisis situations of a nonmilitary nature, it would be appropriate to make legislative changes in the way the F&R of the ACR are required and to set a uniform information flow for all units of the IRS.

IV. Planning and Deployment of F&R (Criterion D)

Criterion D deals with the prepared planning and management documentation and its level, standardized operational procedures for military facilities, and the frequency of exercises performed according to these procedures ([Adamonienė 2018](#)).

According to the respondents, this is the most fulfilled criterion with the least weight. Each of the interviewed respondents stated that their facility has developed standard operating procedures for activating the F&R of the ACR in nonmilitary crisis situations. Nuances then occur in the frequency of revisions of this documentation and in the frequency of training to perform tasks in nonmilitary crisis situations. For some military units, this revision is planned at least once a quarter or more often, for other units completely randomly, and for some about once a year. For the planning and deployment of the F&R of the ACR in nonmilitary operations in the Czech Republic, it is important to identify the risks for which the F&R of the ACR will be predetermined and prepared. For the planning

and deployment of the F&R of the ACR, it is also necessary to take into account the place and role of the ACR as a secondary unit of the IRS, which is activated in case the primary units of the IRS are exhausted or in the event of a large-scale emergency.

In its activities, the ACR has long been using a sophisticated system called Lessons Learned for gaining knowledge and evaluating experience, which is usually applied after the end of each job, training, foreign operation or operation in the Czech Republic for the benefit of the IRS and regions of the Czech Republic. The aim of this system is to learn from every activity that is carried out at all levels of the ACR, so that in the future the errors that occurred in the activities of the ACR or were revealed in the subsequent retrospective analysis are not repeated. The result of this process is the acquisition of the best practice ([Hošková-Mayerová 2016](#); [Bekesiene and Hoskova-Mayerova 2018](#)). The current system of deployment of the F&R of the ACR in favor of the IRS and regions of the Czech Republic was set on the basis of experience with deployment of F&R of the ACR in rescue and liquidation work in managing the consequences of floods in 1997, 2002, 2009, 2010 and June 2013 ([Talhofer and Hošková-Mayerová 2019](#); [Petráš 2020](#)). Measures to manage the COVID-19 epidemic in the Czech Republic, in the implementation of which the F&R of the ACR participated, revealed gaps in the current way of command and control of the allocated F&R of the ACR for the benefit of the IRS and regions of the Czech Republic, which were not detected by activities in favor of these institutions in the past. It can be assumed with certainty that at all levels of command and control of the ACR, the evaluation of the deployment of the F&R of the ACR is already underway or will take place in the near future using the Lessons Learned system. On this basis, measures will be proposed to improve the current situation and gain best practice.

4. Discussion

The ACR primarily performs tasks related to ensuring external security in the event of a military crisis. The ACR is established for this activity, and preparation for this type of threat is its main task in time of peace. The forces and resources of the ACR are involved in the management of crisis and emergency situations of a nonmilitary nature in the regions of the Czech Republic as a secondary unit of the IRS upon request by eligible applicants, according to concluded cooperation agreements or regulations of the government of the Czech Republic.

In the initial phase of the outbreak of the COVID-19 pandemic, the shortcomings of the current system of providing cooperation of the ACR to the primary units of the IRS and other eligible applicants for providing cooperation were revealed. These shortcomings are mainly caused by nonuniform operational procedures within all units of the IRS, and the nonuniform way of requiring the cooperation of the F&R of the ACR, which are not specified in the cooperation agreements.

The following are key to overcoming the above-mentioned shortcomings:

- setting up information flows;
- identification of specific responsible persons;
- determining the area of responsibility of these persons;
- a uniform system for receiving and evaluating requirements;
- specify the system of requirements of the F&R of the ACR, which are not listed in the cooperation agreements, and acquaint all eligible applicants with this system.

Due to the large scope of operations coordinated by the Ministry of the Interior through the Operations and Information Center (OIC) of the IRS, the ACR could not comply with all requests for the provision of F&R of the ACR that it received. The deployment of the F&R of the ACR took place only if the given application was forwarded to the relevant OIC of the given region. This then analyzed the application and only then passed it on to Permanent Shift of the Joint Operations Center of the Operations Command (PS JOC OC). This caused unnecessary delays in the deployment of the required F&R of the ACR. The nonuniform system of requiring F&R of the ACR also caused problems in securing transport by military means.

Recommendations for the Harmonization of Civil-Military Cooperation

As a measure it is proposed:

1. To create a working group composed of members of the primary and secondary units of the IRS and regional representatives, the output should be standardization and optimization of processes from the request of the F&R of the ACR at the regional level to the actual deployment of the F&R of all units of the IRS.
2. Legislative measures to remedy the current inconsistency.
3. Legislative amendment to the Public Procurement Act, or related legislation or a decree laying down precise rules for the acquisition of property and services for consideration in states of crisis.

It is therefore necessary to specify exactly who can award public contracts in the event of a state of crisis, who can be a supplier of materials or services (e.g., purchase of protective equipment), what can be purchased, the financial and time scope of these contracts, for what purpose public contracts can be performed, and the exact procedure how, in the event of a state of crisis, to proceed with the acquisition of property and services by public tender, or by directly contacting the supplier.

The implementation of risk management at state or public administration entities, or even in the armed forces and security forces, obtains data for decision-making processes, minimizes the costs of dealing with negative impacts on the mission of the entity, increases the efficiency (prosperity) of their activities, etc. The identified shortcomings in civil-military cooperation in the Czech Republic during the state emergency or disaster criteria presented in the article negatively affect all the above-mentioned aspects, including the caused financial costs and losses. These are the current risks in the Czech army:

- Force education and training is suppressed in nonmilitary operations.
- Insufficient material and logistical capacity for more than a week during the crisis. In the case of a longer deployment, financial is necessary and legislative support for the acquisition of property and services for consideration.
- In the Czech Republic, there are no financial limits, procedures and areas of responsibility of individual actors in the acquisition process of public contracts for the acquisition of property and services for consideration in crisis situations (state emergency).
- Ineffective deployment of the ACR F&R to perform tasks in crisis situations of a nonmilitary nature due to insufficiently legislatively regulated way of requiring the ACR F&R and inconsistency (asynchrony) of information flows for all components of the rescue system.

There are no identified risks (types of emergency situation and disaster) for the planning and deployment of the ACR F&R in nonmilitary operations in the Czech Republic, for which the ACR F&R will be predestined and prepared. Measures to manage the epidemic of the COVID-19 disease in the Czech Republic, in the implementation of which the ACP F&R also participated, revealed gaps in the current way of command and control of the allocated ACP F&R. At the same time, shortcomings in the related legal norms became apparent.

5. Conclusions

The first measure is of a systemic nature, its application would lead to the unification of procedures of all units of the IRS, the establishment of a uniform system of requiring the deployment of F&R of the ACR and thus to the increase in the level of flexibility in responding to events in crisis situations. Part of this measure is also a proposal to complete the issue of acquisition of property and public contracts for consideration in the event of declared crisis situations. In the Czech Republic, until the declaration of a state of emergency associated with the outbreak of the COVID-19 pandemic, individual ministries (Ministry of the Interior, Ministry of Health) did not make extensive purchases. This area is not sufficiently covered by legislation.

Both the experience in dealing with the consequences of natural disasters, and the experience in managing the consequences of the COVID-19 pandemic have shown that armed forces around the

world have an irreplaceable position in dealing with nonmilitary crises. For this reason, it is essential that modern armed forces in the Czech Republic and in the world also have a type of force whose primary activity is precisely to prepare for crisis situations of a nonmilitary nature. Being prepared and ensuring the management of crisis situations, setting the conditions for the renewal and development of the affected areas, is a basic principle of emergency management.

The limiting factor for the scope of the entire investigation was the prohibition of personal contact within the Ministry of Defence, issued as a measure to prevent the spread of the COVID-19 epidemic. Personal contact with the respondents was necessary for the correctness and completeness of the questionnaire, so it was possible to obtain only a limited number of respondents at that time. Due to this fact only a limited number of respondents were available.

For the future it will be necessary to extend the sample of respondents. After the end of the COVID-19 pandemic, we plan to first repeat the entire research on the basis of the same questionnaire, and if all conclusions are confirmed on a significantly larger sample of respondents, we plan to offer our conclusions to those responsible for their inclusion in practice. Moreover, to start research with the primary units of the IRS and in the regions of the Czech Republic with eligible applicants for ACR cooperation. The aim of the follow-up research on the primary units of the IRS and the regions of the Czech Republic should be to specify the real needs and requirements of all participants in emergency management for the F&R of the ACR in emergency management at the regional level.

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Conflicts of Interest: The authors declare no conflict of interest. The authors declare no ethical issues.

Appendix A

The questionnaire subquestions structure was as follows:

Criterion A—Human Resources

A1 indicator sub-questions—Quantity of allocated forces

- In your opinion, is the amount of allocated forces in favor of the IRS sufficient to fulfill the tasks?
- Is the distribution of predetermined detachments adequate for the performance of tasks in the event of emergency events and crisis situations (hereinafter referred to as EE/CS) throughout the Czech Republic?
- Are the time standards adequate with regard to the transport capabilities of the allocated equipment?

A2 indicator sub-questions—Preparedness of allocated forces to perform tasks in favor of IRS

- Is systematic and continuous education and training implemented in connection with specific risks/potential EE/CS mentioned in crisis planning? *If so, how often?*
- Is your department/military facility participating in cooperation exercises with the involvement of primary and secondary IRS units?
- Does the authorized employee periodically re-evaluate/verify/inspect and respond to the current state of knowledge, skills and competencies of employees?
- Is there a quality evaluation system in place? (e.g., internal audit) *If yes, which one?*

A3 indicator sub-questions—Preparedness of control officers of allocated forces

- Is there a systematic and continuous education and training of officers in charge of managing the allocated forces in connection with specific risks/potential EE/CS mentioned in the crisis planning?
- In your opinion, is the training of commanding officers in the field of EE/CS sufficient?

Criterion B—Technical Security of Allocated Force

B1 indicator sub-questions—Transport equipment

- Are the numbers of allocated transport equipment adequate for the performance of tasks in favor of the IRS?
- Is the predetermined transport equipment maintained in proper condition (from the point of view of modernization and operability)?

B2 indicator sub-questions—Special equipment

- Are the numbers of allocated special equipment adequate for the performance of tasks in favor of the IRS?
- Is the predetermined special equipment maintained in proper condition (from the point of view of modernization and operability)?

B3 indicator sub-questions—Material and logistical support

- Is your unit/military facility able to secure the allocated units during a weekly cycle?
- Is your unit/military facility able to secure the allocated units during 30 days?

Criterion C—Command and Control of Allocated Forces

C1 indicator sub-questions—Command and control system

- Does the command and control system allow a flexible response to EE/CS?
- Are there regular inspections and exercises to check the command and control system?

C2 indicator sub-questions—Notification of ACR units and facilities

- Depending on time standards, is the unit and facility notification system effective?
- In case of danger in delay, are military facilities able to flexibly allocate the necessary forces and resources?

C3 indicator sub-questions—Means of communication

- Does the ACR have a sufficient number of connecting means to secure the main and backup voice connection?
- Is there a regular modernization of connecting means and their revision? (In the case of large EE/CS, there is a possibility of network congestion.)
- Is the compatibility of the means of connection between the IRS and the ACR ensured? (telephone, mobile phone, radio connection, connection via operations and information center)
- In the case of a “blackout”, is the ACR able to provide an alternative connection?
- *If so, which ones? How will the transfer of information during rescue work be solved in the event of a large-scale disruption of electricity supplies for a period of approximately three days between the IRS and the ACR?*

Criterion D—Planning the Deployment of F&R of the ACR

D1 indicator sub-questions—Planning and management documentation

- Are there regular inspections of the planning and management documentation at your facility?
- Are the facts stated in the planning and management documentation objectively feasible?
- Based on your experience with the allocation of the F&R of the ACR, is the planning management documentation prepared at such a level as to ensure the effective deployment of the F&R of the ACR for the benefit of the IRS?

D2 indicator sub-questions—Standardized operating procedures (SOP)

- Are SOP for allocating F&R prepared at your department/military facility?
- Is training performed at your department/military facility according to the given SOP?

References

- Acton, James M., and Mark Hibbs. 2012. Why Fukushima Was Preventable. Carnegie Paper. March 6. Available online: <http://www.world-nuclear.org/information-library/safety-and-security/safety-of-plants/fukushima-accident.aspx> (accessed on 16 March 2016).
- Adamoniene, Rūta. 2018. Management presumptions and possibilities of human resources formation. Paper presented at Challenges to National Defence in Contemporary Geopolitical Situation (CNDCGS' 2018), Barcelona, Spain, September 5–6; Edited by Svajone Bekesiene and Sarka Hoskova-Mayerova. pp. 157–66.
- Bekešienė, Svajone, Vytautas Kleiza, and Aleksejus Malovikas. 2009. Military specialist preparation features in nowadays environment. *Intelligent Technologies in Logistics and Mechatronics Systems: ITEMS*, 158–63.
- Bekesiene, Svajone, and Sarka Hoskova-Mayerova. 2018. Decision tree-based classification model for identification of effective leadership indicators. *Journal of Mathematical and Fundamental Sciences* 50: 121–41. [CrossRef]
- Carresi, Alejandro López. 2008. The Madrid train bombings: An analysis of pre-hospital management. *Disasters* 32: 41–65. [CrossRef] [PubMed]
- Government of Alberta Home. 2016. Wildfire Status. Fort McMurray Wildfire. Alberta. Available online: <http://wildfire.alberta.ca/wildfire-status/default.aspx> (accessed on 6 May 2016).
- Hines, Stephen, Alan Payne, John Edmondson, and A. J. Heightman. 2005. Bombs under London. The EMS response plan had worked. *Journal of Emergency Medical Services* 30: 58–60. [PubMed]
- Hošková-Mayerová, Šárka. 2016. Education and training in crisis management. *The European Proceedings of Social & Behavioural Sciences EpSBS XVI*: 849–56, ISSN 2357-1330. [CrossRef]
- Kelly, Ha, and Benjamin John Cowling. 2011. Insights from Europe related to pandemic influenza A(H1N1)2009 have international relevance. *Eurosurveillance* 16: 19899. [CrossRef]
- Kroupa, Lubomír, Pavel Manas, and Rudolf Urban. 2011. Crisis First Respondents Education at EU Level: A Step Forward. Paper presented at 29th International Colloquium on the Management of Educational Process, PT2, New York City, NY, USA, June 28–29; pp. 479–85.
- Kudlák, Aleš, Rudolf Urban, and Šárka Hošková-Mayerová. 2020. Determination of the financial minimum in a municipal budget to deal with crisis situations. *Soft Computer* 24: 8607–18. [CrossRef]
- LA. 2013. Legislative acts Decision No 1082/2013/EU of the European Parliament and of the Council, 2013 on serious cross-border threats to health and repealing Decision No 2119/98/EC. *Official Journal of the European Union*. Available online: https://ec.europa.eu/health/sites/health/files/preparedness_response/docs/decision_serious_crossborder_threats_22102013_en.pdf (accessed on 12 July 2020).
- Malachová, Hana, Alena Oulehlová, and Pavel Kindl. 2017. SIMEX simulation tool—“accident” crisis scenario and crisis management entities’ exercise. In *Communication and Information Technologies (KIT)*. Edited by Barath Julius, Dedera Lubomir and Ockax Milos. Piscataway: IEEE, pp. 83–89. [CrossRef]
- Napoli, Christian, Flavia Riccardo, Silvia Declich, Maria Grazia Dente, Maria Grazia Pompa, Caterina Rizzo, Maria Cristina Rota, and Antonino Bella. 2014. An early warning system based on syndromic surveillance to detect potential health emergencies among migrants: Results of a two-year experience in Italy. *International Journal Environmental Research Public Health* 11: 8529–41. [CrossRef]

- Napoli, C.hristian, M. Fabiani, C. Rizzo, M. Barral, and J. Oxford. 2015. Assessment of human influenza pandemic scenarios in Europe. *Eurosurveillance* 20: 29–38. [[CrossRef](#)]
- Navrátil, Josef, Veronika Sadovská, and Irena Švarcová. 2019. Health risk assessment of combustion products from simulated residential fire. *Studies in Systems, Decision and Control* 104: 15–23. [[CrossRef](#)]
- Otrisal, Pavel, Vladimir Obsel, Jan Buk, and Lubomír Svorc. 2018. Preparation of filtration sorptive materials from nanofibers, bicomponent fibers, and textile adsorbents without binders employment. *Nanomaterials* 8: 564. [[CrossRef](#)]
- Otrísal, Pavel, and Stanislav Florus. 2014. Současnost a perspektivy fyzické a kolektivní ochrany proti účinkům toxických látek. *Chemické Listy* 108: 1168–71.
- Oulehlova, Alena, Hana Malachova, and David Rezac. 2015. Use of simulation in cooperation training of critical infrastructure entities. Paper presented at Distance Learning, Simulation and Communication 'DLSC 2015', Brno, Czech Republic, May 19–21; pp. 103–12.
- Oulehlova, Alena, Hana Malachova, and David Rezac. 2017. Risks evaluation in preparation of crisis management exercise. Paper presented at Distance Learning, Simulation and Communication 'DLSC 2017', Brno, Czech Republic, May 31–June 2; pp. 143–53.
- Petráš, Antonín. 2020. Cooperation of the ACR in Rescue and Liquidation Work in the Regions (Součinnost AČR při záchranných a likvidačních pracích v regionech—In Czech). Bachelor Thesis, Ambis College, Prague, Czech Republic; p. 72.
- Potůček, Radovan. 2020. Life cycle of the crisis situation threat and its various models. *Studies in Systems, Decision and Control* 208: 443–61. [[CrossRef](#)]
- Procházka, Jan, and Dana Procházková. 2018. *Problems of Mobile Risks in Territory. Safety and Reliability—Safe Societies in a Changing World*. New York: Taylor & Francis Group, p. 1783. [[CrossRef](#)]
- Rehn, Marius, and Stephen Sollid. 2013. Guidelines for mass casualty triage have been established. *Tidsskr Nor Laegeforen* 133: 2029. [[CrossRef](#)]
- Riccardo, Flavia, Martina Del Manso, Maria Grazia Caporali, Christian Napoli, and Jens P. Linge. 2016. Event-Based Surveillance during EXPO Milan 2015: Rationale, Tools, Procedures, and Initial Results. *Health Security* 14: 161–72. [[CrossRef](#)] [[PubMed](#)]
- Sollid, Stephen, Rune Rimstad, Marius Rehn, Anders R Nakstad, Ann-Elin Tomlinson, Terje Strand, Hans Julius Heimdal, Jan Erik Nilsen, Märten Sandberg, and Collaborating Group. 2012. Oslo government district bombing and Utøya Island shooting. The immediate prehospital emergency medical response. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 20: 3. [[CrossRef](#)] [[PubMed](#)]
- Svarcova, Irena, Sarka Hoskova-Mayerova, and Josef Navratil. 2016. Crisis management and education in health. *European Proceedings of Social and Behavioural Sciences* 16: 255–61. [[CrossRef](#)]
- Svarcova, Irena, Bohumil Ptacek, and Josef Navratil. 2015. Psychological intervention as support in disaster preparedness. In *Crisis Management and Solution of the Crisis Situations*. Uherske Hradiste: Tomas Bata University in Zlin, pp. 317–20.
- Talhofer, Václav, and Šárka Hošková-Mayerová. 2019. Method of selecting a decontamination site deployment for chemical accident consequences elimination: Application of Multi-Criterial Analysis. *ISPRS International Journal of Geo-Information* 8: 171. [[CrossRef](#)]
- Tušer, Irena, and Josef Navrátil. 2020. Evaluation criteria of preparedness for emergency events within the emergency medical services. *Studies in Systems, Decision and Control* 208: 463–72. [[CrossRef](#)]
- Tušer, Irena. 2020. The development of education in emergency management. In *Book of Series: Studies in Systems, Decision and Control. Decision Making in Social Sciences between Traditions and Innovations*. New York: Springer International Publishing AG, pp. 169–75. [[CrossRef](#)]
- Tušer, Irena, and Jiří Jánský. 2020a. Civil-military cooperation during the COVID-19 pandemic in the Czech Republic. *Heliyon*. submitted.
- Tušer, Irena, and Jiří Jánský. 2020b. Capacities of the army of the Czech Republic in rescue and liquidation work in the regions of the Czech Republic. Paper presented at 2nd International Conference Challenges to National Defence in Contemporary Geopolitical Situation CNDGS'2020, Vilnius, Lithuania, October 14–16; pp. 162–67.
- Urban, Rudolf, and Sarka Hoskova-Mayerova. 2017. Threat life cycle and its dynamics. *Deturope* 9: 93–109.

- Urban, Rudolf, and Nela Urbanova. 2011. Dynamics of Human Resources in the Military Organisation. In *Book Series: Knowledge Based Organization*. Sibiu: Nicolae Balcescu Land Forces Academy, pp. 894–97.
- Urban, Rudolf, and Nela Urbanova. 2012. A New Requests Implementation into the Military Professionals Preparation. *Proceedings Social Science & Humanities*, 173–77.

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