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The Risk Analysis for the Czech Republic (adapted English translation)

Anotace

Analýza hrozeb pro Českou republiku (zkrácený anglický překlad závěrečné zprávy)

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Klíčová slova

Hrozba, nebezpečí, riziko, chráněné zájmy, analýza, Česká republika.

Summary

In the following article the author presents a shortened version of her English translation of the final report The Risk Analysis for the Czech Republic. The full version of the translation is available for viewing on the website of the Directorate General of the Fire Rescue Service. Translation has been created based on the European Union requirements. The author of the English translation has been for many years, among others, involved in the translation of the special texts and documents in the field of crisis management and management, public administration, security and law.

Keywords

Threat, danger, risk, protected interests, analysis, Czech Republic.

THE RISK ANALYSIS FOR THE CZECH REPUBLIC

Adapted and translated by PhDr. Rosinová Magdalena, Ph.D.

1. THE REASONS FOR THE RISK ANALYSIS PROCESSING

The growing complexity of threats and risks arising from them affects directly or indirectly ensuring protection of the population and requires constant adaptation of capabilities of the components of the security system of the Czech Republic. With regard to the growing number of natural and manmade emergency events and severity of their consequences, the targeted integrated approach to reducing the impact of these phenomena is becoming increasingly important. In the context of the systematic application of the policy of prevention of emergency events and crisis situations the analysis of threats and risks arising from them is crucial.

In the Concept of Population Protection till 2020 with the outlook up to 2030, adopted by the Resolution of the Government of the Czech Republic N° 805 dated October 23rd 2013 it was established *“to process the Risk Analysis for the Czech Republic and reflect its conclusions in the methodical and strategic materials in the field of national security”*. The Ministry of Interior in cooperation with relevant ministries and other central administrative authorities is responsible for its implementation.

The task itself can be divided into two substantive parts. The *first part* includes the analysis in a broader meaning, which comprises the risks' identification, risk analysis and subsequent evaluation. The risk impact level of these undesirable events is also determined. The subject of the *second part* is the implementation of obtained analytical outputs into the documents essential for ensuring the security of the Czech Republic.

In order to perform analytical activities, the working group within the authorized Ministry of Interior has been established comprising representatives of the Fire Rescue Service of the Czech Republic and representatives of other relevant ministries and other central administrative authorities.

The Report reflects the Decision of the European Parliament and the Council N° 1313/2013/EU from 17th December 2013 on the Union Civil Protection Mechanism and thus reacts to the requirements imposed on the Member States in the area of prevention. By making information on the outcomes of the risk assessments available to the Commission of the European Union, the Czech Republic contributes to promoting an effective and coherent approach of the European Union Member States in coping with large-scale emergency events and critical situations.

2. THE SELECTED SOLUTION PROCEDURE

The established task solution procedure respects relevant normative documents regulating the area of risk management and reflects the findings drawn from the experience with the threat analysis implementation.

The chosen solution procedure involves the implementation of the key and cross-cutting activities:

- **KEY ACTIVITIES**
 - project determination;
 - risk assessment (including identification of particular types of dangers; risk analysis; risk assessment);
 - risk treatment.

- **CROSS-CUTTING ACTIVITIES**
 - communication and consultation;
 - monitoring and review.

Description of key activities

INTENT DETERMINATION

The risks will be divided according to their importance and the types of danger for which the type plan will be processed.

The terminology discussion is not the subject of the report. Therefore the used terms are for the need of the task solution specified in the following way:

- **Danger** is any event which is able to damage protected interests. It is the substance property or physical situation (state, circumstance) which has the potential to cause loss of lives and damage human health, environment or property.
- **Protected interests** are lives and health of people, property, environment and economic and social stability.
- **Threat** is a synonymous expression of the term of danger. The term is particularly used in relation to serious dangers capable to harm the interests of the Czech Republic.
- **Risk** is the probability of formation of an undesirable specific effect occurring within a certain period of time or under certain circumstances and which is considered as undesirable from the security point of view. Risk is always associated with a particular type of danger.

RISK ASSESSMENT

Risk assessment is the key activity for the solution of the first part of the task. The process consists of the following partial activities:

- identification of dangers (threats);
- risk analysis;
- risk assessment.

Identification of dangers (threats)

The identified types of danger have been distinguished with the respect to the following categories:

- naturogenic (abiotic / biotic / cosmic);
- anthropogenic (technogenic / sociogenic / economic).

Risk analysis

The risk analysis has been processed for identified types of danger. The output is the risk level determination – quantities expressing that with a certain probability a particular type of danger will be realized and its destructive potential will be applied. The risk is given by the product of probability and consequences.

All types of danger registered in the registry were selected through the preliminary analysis and divided into two groups, namely into *dangers with a low risk* and *dangers with a high risk*.

As the second step the detailed multi-criteria analysis of all types of dangers belonging to the group with a high risk was carried out and particular risk levels were determined. Probability and consequences have been evaluated in the ten-point semi-quantitative scales and the consequences as an aggregated quantity took into account the partial effects on lives and health of people, environment, economy and society.

Risk evaluation

With respect to the necessity of differentiation of taken measures, the members of the Fire Rescue Service (FRS) working group determined the limited risk values (the lowest risk limit is 10, the highest risk limit is 30), under which three basic risk categories were distinguished:

- acceptable risks (risk level 0 – 10);
- conditionally acceptable risks (risk level 11 – 29);
- unacceptable risks (risk level 30 and more).

RISK TREATMENT

The implementation of the risk treatment process belongs to the second part of the task. The purpose is to implement the outcomes of analytical findings into the key materials ensuring the national security and to support their practical realisation.

Description of cross-cutting activities

COMMUNICATION AND CONSULTATION

The process requires close cooperation of involved actors, namely in this case the members of the Fire Rescue Service (FRS) working group and the representatives of concerned ministries and other central administrative authorities.

MONITORING AND REVIEW

The whole process will be periodically renewed and the identified types of danger will be revised according to the current security situation. The used method will also be revised and possibly modified.

3. THE RISK ANALYSIS RESULTS

In accordance with the established task solution procedure 72 types of danger were identified.

Subsequently the risks were analysed. 21 types of danger were identified as a low risk and they were not subjected to further investigation. 49 types were comprehensively analysed. The remaining two types of danger (intrusion of information security of the critical information infrastructure, large-scale intrusion of financial and foreign exchange state economy) were without previous analysis indicated as a danger of a high risk level and assessed as unacceptable risks.

The risks arising from particular dangers were analysed in detail and subsequently assessed in the terms of their significance. Of the total number of evaluated figures, the proportion of individual categories was as follows:

- acceptable risks – 4 %;
- conditionally acceptable risks – 53 %;
- unacceptable risks – 43 %.

Acceptable risks, is the category for which the adoption of emergency measures is not expected. Usually the situations are manageable under the regime of current activities of the Integrated Rescue System Services and relevant administrative authorities.

Conditionally acceptable risks already require adoption of measures leading to their elimination. This category belongs to the field of preparation for dealing with emergency events and mainly includes emergency planning and preparation of the type activities of the Integrated Rescue System Services.

Unacceptable risks constitute the category which requires the highest priority of all levels of public administration. The measures leading to their elimination fall into the field of preparation for dealing with crisis situations and mainly include crisis planning.

In total, 22 types of danger have been identified for the Czech Republic, for which the crisis state can reasonably be announced. For these cases, it is necessary to take measures to eliminate their risks and **develop a new generation of the type plans** within the system of crisis planning.

In the terms of adopting measures leading to elimination, dangers will be divided according to the levels of management in the following categories:

- central;
- regional;
- central and regional.

The table below provides the overview of 22 identified types of danger with unacceptable risk.

CATEGORIES OF DANGER		TYPES OF DANGER WITH UNACCEPTABLE RISK	RESPONSIBILITY
<i>Naturogenic</i>	<i>abiotic</i>	Long term drought	MoE, MoA, MoI
		Extremely high temperatures	MoE
		Flash flood	MoE, MoI, MoA
		Heavy rainfall	MoE, MoI
		Extreme wind	MoE, MoI
		Flood	MoE, MoI, MoA
	<i>biotic</i>	Epidemics – mass infection of people	MoH
		Epiphytic – mass infection of field plants	MoA
		Epizootic – mass infection of animals	MoA
<i>Anthropogenic</i>	<i>technogenic</i>	Huge food supply disturbance	MoA, MoLaT
		Functioning disturbance of significant electronical communication systems	CTO, MoLaT
		Information security disturbance of critical information infrastructure**	NSO, MoI
		Special flood	MoA, MoI, MoE
		Dangerous chemical substance leakage from the stationary premise	MoE, MoI, SOfNS
		Huge drinkable water supply disturbance	MoA
		Huge gas supply disturbance	MoLaT, MoI
		Huge oil and oil products supply disturbance	AoSMMR, MoLaT
		Radiation accident	SOfNS, MoI
		Huge electric energy supply disturbance	MoLaT, MoI
	<i>sociogenic</i>	Huge migration wave	MoI, MoFA
		Huge legitimacy disturbance (including terrorism)	MoI
	<i>economic</i>	Huge national financial and exchange state economy disturbance**	MoF, CNB

Abbreviation Glossary:

MoE	Ministry of Environment
MoA	Ministry of Agriculture
MoI	Ministry of Interior
MoLaT	Ministry of Labour and Trade
MoH	Ministry of Health
CTO	Czech Telecommunication Office
NSO	National Security Office
SOfNS	State Office for Nuclear Safety
AoSMMR	Administration of State Material Reserves
MoF	Ministry of Finance
CNB	Czech National Bank

4. CONCLUSION

Ensuring protection of lives and health of people, environment and property values is one of the fundamental obligations of the state. The ability to develop preventive measures, such as the threat analysis and risks arising from them in the respect of emergency events and crisis situations threatening the protected interests of the society, is the fundamental prerequisite for fulfilling this obligation.

In accordance with the task assignment resulting from the Concept of Population Protection till 2020 with the outlook up to 2030 and taking into account the decision of the European Parliament and of the Council N° 1313/2013/EU from 17th December 2013 on the Union Civil Protection Mechanism the submitted report summarizes the findings of the analysis of threats and risks arising from them for the Czech Republic.

72 types of dangers were identified at the national level, 22 of them were identified as the dangers of unacceptable risk, which need the priority attention at individual levels of public administration. Due to the risk level it is still necessary to take measures to eliminate them.

Within the activities associated with the risk treatment the new methodology and the structure of the type plans of dangers with unacceptable risk will be developed.

Besides the above mentioned categories the dangers requiring taking measures to eliminate risks will be differentiated at all levels of public administration.

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