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The specifics of security in territorial units of the Slovak Republic

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Abstract

The development of society is being affected by a range of potential risks and threats. The existence of these threats influences the level of safety as well as the sustainable development of society negatively. Given that security is one of the fundamental building blocks of civilization for citizens, social groups, states and the overall international community, it is vital to eliminate such threats. This paper focuses on the specifics of security in the territorial units of the Slovak Republic. Regional safety is affected by several factors and activities carried out within a region. A spatial plan is developed for the purpose of permanent harmonization of ongoing activities in a region. This plan, being the fundamental strategic document of an area, does not sufficiently incorporate the issue of security or its improvement; thus, it does not include preventive measures in it. Bearing the above-stated in mind, this paper firstly points out developing tendencies in the area of security within the Slovak Republic and further identifies the potential and real risks and threats directly affecting the citizens living in the regions. The principal focus of the paper is to describe and define the concept of the activities needed to design territorial planning documents, while at the same time maintaining an active role in minimizing the threats and risks in a selected territorial unit.

Keywords: security, territorial units, spatial plan, preventive measures.

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1. Introduction

Here With respect to the growing occurrence of crisis events in the world, and thus also in the Slovak Republic, both the professional and lay public are placing greater importance on the field of security. The development of society, changes in the natural world and technological development are all influencing the security of territorial units to a great measure. The crisis events that originate in an environment are an inseparable part of human existence; therefore, it is essential to learn to live with them. The consequences of crisis events can seriously endanger the life and health of persons and property, as well as the environment. A necessity for avoiding the occurrence of crisis events and minimizing their consequences is to take preventive measures before such a given crisis event actually occurs. The maintaining of a favourable measure of security, or increasing it in territorial units, is a task of state administration and local authorities (Dvorsky, Zeman & Betakova, 2016; Stofko, Soltes & Stofkova, 2016). The individual tasks and activities of state administration and local authorities are based on the legal standards in the field of security.

In the introduction of the contribution it necessary to clarify in detail the terminology used in this field. We consider defining the concepts of *security*, *territorial unit* and the *security of territorial units* as elementary. We define the subject concepts in line with available sources, specifically legal provisions of the Slovak Republic and the European Union, monographs as well as land-planning documentation, summary reports and other relevant materials. By using basic methods of scientific research, specifically analysis, synthesis, comparison, induction and deduction, we point out the determinants of security of territorial units. Under the influence of available data we narrowed the wider problem to selected dangers in the most affected regions of the Slovak Republic.

2. Crisis events influencing the security of territorial units

Many authors have dealt with the issue of security and its characteristics. When preparing the article we used both domestic literature, where it is necessary to mention (Simak, 2009; Kampova & 2010; Zagorecki, 2015), and world literature, where it is necessary to mention (Abdimanapov, 2014; Mingaleva, 2012; Pokorny, 2014; Wilches-Chaux, 2009). Security is also elaborated in legal provisions in the conditions of individual countries and thus their range and depth are not unified. Crucial in the Slovak Republic is Constitutional Act no. 227/2002 Coll. on State Security at a Time of War, State of War, State of Emergency and State of Crisis, where security is defined as a "state in which the peace and security of the state, its democratic order and sovereignty, territorial integrity and the inviolability of state borders, and the basic rights and freedoms in which the life and health of persons, property and the environment are protected, is maintained" (Constitutional, 2002).

Volner (2012) defined security as "a state into which people and societies of people got during their development and in consequence of changes in the internal system and in external surroundings, but also own behaviour". Volner states that this state occurs if humanity is not aware and does not feel a threat to its existence and development, or if people are aware of dangers but they have the capability, possibility and tools through which they can control them.

According to Simak(2006) security is defined as a "state of a social, natural, technical or technological system, which in specific internal and external conditions enables fulfilment of set functions and their development in the interest of humanity and society". Simak (2006) subsequently states that security would not exist without the existence of man and human society, since man from the position of a knowing and acting entity is a component of security. Security thus has the character of a subjective-objective relationship, in the scope of which we distinguish its subjective and objective side. The objective and subjective sides are characterized as follows:

- objective side of security – "the existence of phenomena which threaten characteristic signs of the security of the object or system was not demonstrated". "The object or system has sufficient resources for eliminating risks and the consequence of a crisis event occurring".

- subjective side of security - "the relevant subject does not feel threats, which could cause a crisis initiated by an assessed risk". "He feels secure, because he does not have sufficient information about risks and potential threats occurring in consequence of them" (Simak, 2004).

When defining the term "territorial unit" it is necessary to start from §1 par. 1 and par. 2 of Slovak National Council Act no. 302/2001 Coll. on Self-governing Higher Territorial Units, according to which a Higher Territorial Unit is a self-governing region. The self-governing region is the independent territorial self-governing and administrative unit of the Slovak Republic. According to §1 par. 4 and par. 5 of Act no. 302/2001 Coll. the territorial division of a self-governing region is identical with a territorial district of the region. A self-governing region is a legal entity, which under the conditions stipulated by the law independently handles its own property and with its own revenues and secures and protects the rights and interests of its residents. According to § 4 of this Act a self-governing region supports, discusses and approves the land-planning documents of a self-governing region and territorial plans of regions (Act, 2001).

On the basis of the presented definitions it can be stated that under the concept of territorial units we understand such status of a system which enables the functioning, stability and development of a territorial unit and at the same time the functionality of public administration authorities, permanently sustained development and guaranteed observing and protection of basic human rights and freedoms, protection of the lives and health of persons, property and the environment are preserved.

The security of territorial units and resolution of crisis events of a non-military character is arranged by Slovak National Council Act no. 387/2002 Coll. on the Management of State in Crisis Situations Other than a Time of War and State of War. This act provisions the working of authorities of public power when managing the state in crisis situations other than a time of war and a state of war. The act states in § 8 the obligations when ensuring the security of territorial units for District Offices in regional capitals, § 9 for District Offices and § 10 for Municipalities (Act, 2002).

The measure of security of territorial units is influenced by a wide spectrum of risks and dangers of a non-military character, among which in particular are (The analysis, 2010):

- an attack against authorities of public power,
- attack against sites of special importance and other important sites,
- large scale illegal migration,
- large scale ethnic, religious and ideological conflict,
- large scale race intolerance,
- large scale social unrest (looting of shops, mass attack on warehouses, property, etc.),
- damaging and threatening of operation of generally beneficial facilities,
- a large scale threat of or actually conducting of a terrorist attack,
- violent illegal acts which significantly endanger or disrupt public order and state security,
- **natural disasters,**
- large aviation, rail, ship and road accidents linked with fires or the leaking of hazardous materials,
- fires and explosions,
- leaks of hazardous materials,
- damaging of distribution networks, their facilities and their remote controls,
- accidents at nuclear facilities,

- breaching of water-management constructions,
- an accident caused by selected hazardous materials,
- large scale mass infection of people and animals.

From the above-mentioned 18 groups of risk and threats of a non-military character influencing the security of territorial units we will focus, with respect to the size of the risk according to available information (The analysis, 2010), on the danger of the type exceptional event, namely natural disasters. Polednak (2011) defines an exceptional event as a serious unforeseeable and spatially bound incident caused by the influence of a natural disaster, a technical or technological accident, an operational malfunction or the intentional acting of a person, which causes a disruption of the stability of a system or running of events and activities and endangers the life and health of persons, material and cultural property, or the environment.

Conditions for effective protection of life, health and property from the consequences of exceptional events as well as the competence of individual authorities of the Slovak Republic are arranged by Slovak National Council Act no. 42/1994 Coll. on Civil Protection of the Population, which is supplemented by the Decision of the European Parliament and of the Council no. 1313/2013/EC from 17 December 2013 on Union Civil Defence Mechanism (Decision, 2015). Exceptional events are defined by the Act on Civil Defence as crisis events of a non-military character, which are divided into (Act, 1994):

- **natural disasters**,
- accidents,
- catastrophes,
- public health danger, II degree,
- terrorist attack.

For the limited range of this contribution we will in the next section devote attention to only a selected group of exceptional events, natural disasters. These are exceptional events caused by the effects of natural forces, which lead to the releasing of accumulated matter and energy. Floods, snow calamities, ice storms, landslides and earthquakes all belong among them. The following graph shows the measure of danger of regions of the Slovak Republic by selected types of natural disasters, namely by earthquakes, landslides, snow calamities and floods. Risk as the measure of a danger is assessed in a range of 1 – 5, where 1 means low risk and 5 means high risk.

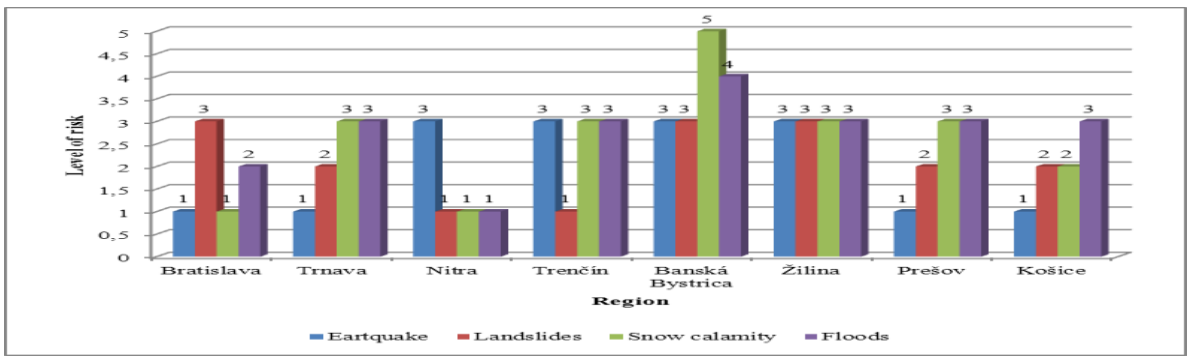


Figure 1. Graph showing the measure of danger of regions of the Slovak Republic by selected natural disasters (based on the analysis, 2016)

On the basis of data presented in Figure 1 it can be stated that the highest measure of danger represents the occurrence of a snow calamity in the Banska Bystrica region. In contrast, the smallest measure of danger represents earthquakes in the Bratislava, Trnava, Presov and Kosice regions, landslides in the Nitra and Trencin regions, a snow calamity in the Bratislava and Nitra regions and floods in the Nitra region. The data presented in Figure 1 points out that for the Slovak Republic as a whole, floods represent the greatest threat. For this reason we will further deal exclusively with the risk of flooding in the individual regions of the Slovak Republic. Of the eight regions of the Slovak Republic the highest measure of floods occurring is in the Banska Bystrica region, followed by the Kosice, Presov, Zilina, Trencin and Trnava regions.

Table 1. Percentage of the total flood damage in Slovak regions (based on the Ministry of Environment of the Slovak Republic, 2016a)

Region	2001 [%]	2002 [%]	2003 [%]	2004 [%]	2005 [%]	2006 [%]	2007 [%]	2008 [%]	2009 [%]	2010 [%]	2011 [%]	2012 [%]	2013 [%]	Percentage of the total flood damage in region [%]
Bratislava	0.00	37.44	0.00	0.00	0.00	16.17	0.00	0.00	19.87	0.00	21.63	0.00	0.00	7.32
Trnava	0.19	4.17	5.06	0.04	0.00	20.23	0.00	0.00	1.51	0.00	0.03	0.00	0.00	2.40
Trencin	0.13	1.67	23.13	9.27	7.70	15.71	0.49	0.00	29.41	34.22	0.00	0.09	0.00	9.37
Nitra	0.00	2.64	0.00	0.80	0.00	30.05	0.80	0.00	1.04	8.40	0.21	0.00	0.00	3.38
Zilina	42.89	13.22	25.31	0.25	89.39	1.99	78.68	0.46	17.88	26.68	11.70	72.64	0.00	29.32
Banska Bystrica	1.60	16.17	0.91	0.00	0.00	0.02	7.26	0.00	4.10	3.15	22.75	0.00	90.44	11.26
Presov	51.52	20.42	36.49	69.99	0.00	9.19	12.17	60.96	26.18	1.13	41.35	27.28	9.56	28.17
Kosice	3.67	4.27	9.09	19.65	2.91	6.63	0.60	38.58	0.00	26.42	2.33	0.00	0.00	8.78

Because we demonstrated above that it is essential in the conditions of the Slovak Republic to devote attention especially to flooding and flood protection, in Tab. 1 we present additional data. Specifically, this is data regarding the percentage share of damage after floods in the individual regions in total volume of damage in the Slovak Republic. During the monitored period (2001 – 2013) floods occurring in the Zilina region had the largest share of damage in the total damage, namely up to 29.32% of total damage.

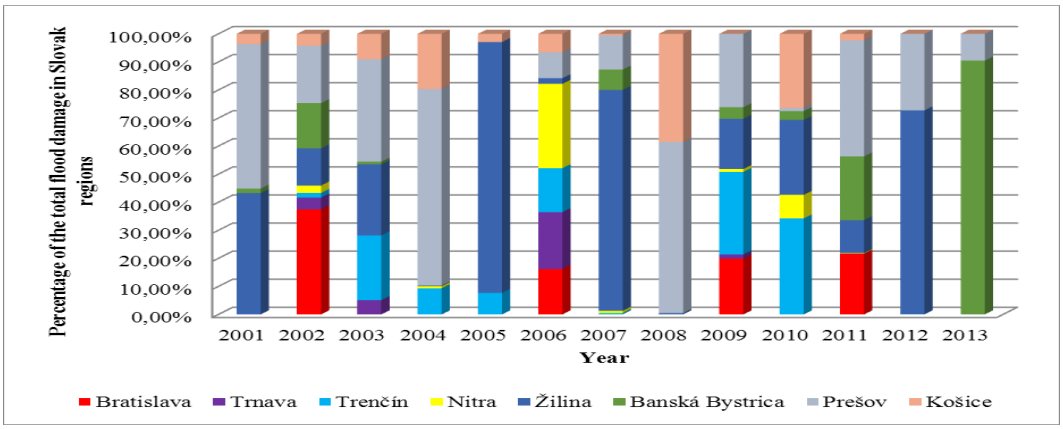
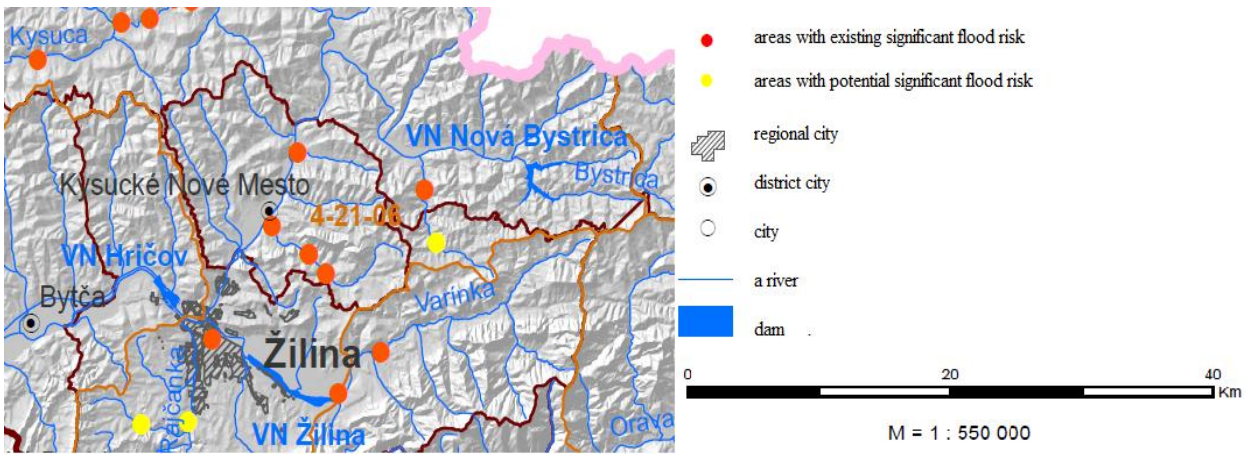


Figure 2. Graph of percentage of the total flood damage in Slovak regions (based on the Ministry of Environment of the Slovak Republic, 2016a)

The Zilina region is the second most threatened region in the Slovak Republic in terms of flooding (Fig. 3). In relation to the level of damage after floods it has the worst position, which means that it is necessary to continuously monitor risk elements, to take preventive measures and to actively share in minimizing the possibilities of the origin of such natural catastrophes or the size of their consequences.



With respect to the size of the Zilina region, the amount of risk elements and threatened areas, it is essential to narrow attention to a selected locality or a specific place. For this reason, as well as the subject of the resolved grant project, the next section of the contribution will be focused on the regional capital of the selected territorial unit that is the city of Zilina.

3. Flood-protection solutions in the city of Zilina

The city of Zilina is the centre of north-western Slovakia and also one of the largest cities in the Slovak Republic. It is the seat of the authorities of the Zilina Self-governing Region, which covers an area of 6,788 km2 and has a population of 693,041. The city of Zilina had as of 31 March 2016 a population of 83,484. The Zilina basin is located between the Mala Fatra, Strazovske vrchy and Sulovske vrchy mountain ranges and the Javorníky and Kysucká uplands. In terms of hydrological relations, the territory of the city of Zilina belongs to the basin of the River Vah. Its average flow volume is 123.9 m^3. The greatest influxes are the Varinka, Kysuca and Rajcianka rivers (Basic, 2016).

From the viewpoint of flood-protection the territory is protected partially by dams with hydroelectric power plants (Hricov, Zilina). The system of barriers on the River Váh provides flood protection for the city and its surrounding villages along the watercourse. Threatened areas, among which are also localities presented in Fig. 3, are those areas threatened by flooding. To avoid floods and for effective reaction in the case of a flood, it is necessary to approve sufficient measures of various types, specifically technical, technological, agricultural and forestry-related. The working of measures from the "Flood-risk management plan" into the land-planning documentation of the city can also be assigned among such measures (Betakova, Lorko & Dvorsky,2014). At present only the following measures from the mentioned plan have been worked into the land-planning documentation (Land, 2016):

- take heed to maintenance of channels, mainly in the spring
- to preserve and supplement accompanying vegetation of watercourses deriving from the original species composition and to maintain existing embankment greenery in a good, healthy condition,

- in the framework of constructions around streams but also in other non-urban parts of the territory to give preference to the drawing off of rain waters into the sub-base before drainage into sewerage in order to limit the rapid acceleration of water drainage, which assumes sufficient green areas in the territory,
- with the problematic watercourses the Trnovsy stream, Rosinsky stream, Banovsky stream and the Vsivak stream to carry out revitalization, including flood modifications and measures for watercourses (dry polders, infiltration zones, discharging, accumulation surfaces and the like).
- to limit widespread deforestation of forests and conversely, the moderate outflow from the land by preserving and supplementing the structures of shrubbery and tree growth and to devote sufficient attention to the mowing of meadows and pasturage,
- to process revitalization projects and flood-protection modifications for selected watercourses: the Trnovsky stream, Rosinsky stream, Banovsky stream, Zaparovsky stream, Vsivak stream and the streams in the urban district of Brodno with regard to prepared construction in their vicinity, outside of built-up areas to minimize their regulation,
- to respect flood plain water courses when designing constructions,
- to limit pollution of watercourses and the origin of unauthorised dumps.

The mentioned measures are thus the most essential, but for ensuring sufficient flood protection following from them influencing the sustainable development of the territory it is necessary and desirable to elaborate and truly implement additional measures stated in the Flood-risk Management Plan, and not only in the Zilina region but over the entire territory of the Slovak Republic.

4. Summary

The contribution, on the basis of an analysis of risks influencing the security of territorial units, identified the most significant of such risks. We subsequently focused attention on a selected group of risks, namely natural disasters, which upon occurring and with the size of their negative consequences threaten the security of territorial units of the Slovak Republic in a large measure. Upon comparing the regions of the Slovak Republic from the viewpoint of measure of danger by individual natural disasters, we came to the conclusion that the territory of Slovakia is most threatened by floods. Therefore, we analyzed the occurrence of flood damage in the regional and we determined that the largest percentage of damage after floods in the overall flood damage occurred in the Zdvoilina region. This fact conditioned the need for dealing with flood protection as a priority in the mentioned region. Due to the limited range of the contribution it was not possible to include flood-protection measures over the whole of the Zilina region; thus, we focused on the regional capital, the city of Zilina itself.

The resulting finding was that it is necessary to work the proposed measures of flood-risk management in a broader measure into the city's land-planning documentation, and not only in the case of the city of Zilina, but also in the case of all municipalities and cities in the Slovak Republic. The approving of this measure would with great probability contribute to minimizing the negative consequences or the probability of floods occurring.

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