NEED FOR PROTECTION OF THE CRITICAL INFRASTRUCTURE IN THE REPUBLIC OF NORTH MACEDONIA

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Abstract

Within this paper, the author intends to contribute to the creation of appropriate solutions for shaping future development strategies in the protection of the critical infrastructure as a top priority and interest of a nation state. The author will analyze the need for protection of the critical infrastructure within the private sector of security in the Republic of North Macedonia. In the introductory part of the paper, the author analyzes the definitional approach to critical infrastructure. The author will make a comparative analysis of the situation regarding critical infrastructure and the realization of its protection in the Republic of North Macedonia and the Republic of Croatia. By clearly defining and concretizing the problem and the subject during the research, the author will give concrete proposals and solutions, which from a scientific and practical aspect will contribute to socio-scientific goals. The content will be prepared on the basis of analysis of foreign literature and using electronic content. In the preparation of the content of the paper, the author will apply the general scientific methods: the descriptive method, the normative method, the comparative method and the method of content analysis as a separate scientific method.

Keywords: critical infrastructure, need for protection, private sector for security

1. INTRODUCTION

The understanding of the term "critical infrastructure" moves within the description of critical infrastructure as an important component of the national security of each country because the threat to such facilities/infrastructure jeopardizes the normal course of life and safety of citizens but also the general functioning of the state (Mikac, Cesarec & Larkin, 2018: 23) or as a set of all facilities, systems, networks and functions, vital for the survival of the state, the destruction of which will negatively affect security, national security, public health, etc. (Mitreska, Mikac, 2017:19). Critical infrastructure could be defined as a value or set of values and goods that are essential to the economy, the state and society often identified as complex tangible and intangible systems, the disruption of which could have long-term detrimental consequences on the basic values of the economy of the state and the society as a whole (Bakreski, Gerasimoski, Mileska-Stefanovska, Spasov, Kermetchieva, 2016:10).
In the European Union, the process of identifying critical infrastructures is based on three factors, namely: (Bakreski, Gerasimoski, Mileska-Stefanovska, Spasov, Kermetchieva, 2016:28)

- human losses, in which the potential number of human losses or injuries is estimated;
- the economic effect by which the significance and magnitude of economic losses and/or degradation of products or services, including adverse effects on the human environment, are assessed;
- the social effect, which assesses the effects of public self-esteem, physical anxiety, and disturbances in daily life, including basic services.

The European Union defines critical infrastructure through Directive 2008/114 / EC, which calls on member states to identify and design European critical infrastructure, as well as to assess the need to improve their protection. All Member States have implemented the Directive by establishing a process for identifying and designating critical European infrastructure in the energy and transport sectors. According to the Directive, critical infrastructure is defined as: "an asset, system or part thereof located in the Member States which is essential for the maintenance of vital social functions, health, safety, economic or social well-being of the people and whose disruption or destruction would significantly impact in the Member State as a result of failure to maintain those functions" (According to DIRECTIVE 2008/114/EC – identification and designation of European critical infrastructures and assessment of the need to improve their protection).

The Directive specifically recognizes the European Critical Infrastructure (ECI) as a critical infrastructure whose disruption or destruction would have cross-border effects in the Member States and which as such should be set aside through a common procedure. In the Tallinn Manual, critical infrastructure means physical or virtual assets, as well as assets that are under the jurisdiction of the state and are so vital that disabling or destroying them could weaken national security, the economy, public health and safety, or the environment (Poposka, 2019:26).

In NATO, facilities, services, and information systems that are vital to a nation are considered critical and their destruction can endanger the security, economy, health or general security of the nation or hinder the effective functioning of states (Mitreska, Mileski, Mikac, 2019:22).

Analyzing the national definitions of critical infrastructure, it can be determined that they contain two elements: first, they emphasize the subject of the infrastructure (the object, i.e., the processes) and second, they state the threats and/or consequences. Critical feature indicates that the infrastructure provides essential support for economic and social well-being, public safety and the functioning of key Government competencies (http://www.merriam-webster.com/dictionary/critical available at 07.02.2021).

However, not every national infrastructure is defined as critical. The infrastructure characteristics mainly refer to the physical infrastructure (e.g., facilities, installations, equipment, etc.), but often the infrastructure includes intangible assets and / or production and communication networks, and in addition the critical national infrastructure of the United Kingdom stands out as a "logical" means of infrastructure, including information networks or systems.

For this area See more: Methodology for selection of critical information infrastructure, Ministry of Information Society - Telecommunications of Montenegro - October, 2014, p. 8
2. PROTECTION OF THE CRITICAL INFRASTRUCTURE

The protection of the critical infrastructure generally implies a set of measures and activities of different nature aimed at maintaining, enhancing and preserving the character and functionality of the critical infrastructure as such. In this context, different sectors or different countries have different understandings of critical infrastructure protection. In modern conditions, the understanding and application of the protection of critical infrastructure is strongly influenced by several factors, namely, the complexity of the critical infrastructure, regulation of competencies, lack of responsibility in sectors where several state and private institutions are engaged, insufficient exchange of information, primarily between institutions, which, in turn, increases vulnerability and directly affects the effective approach to the protection of the critical infrastructure, the amount of knowledge and skills regarding the protection of critical infrastructure and the interdependence of the critical infrastructure sectors.

Therefore, the authors conclude that the protection of critical infrastructure is a very broad and dynamic activity and is achieved in two different ways. The first is carried out by public bodies, such as various legislative institutions, law enforcement agencies, inspection and judicial bodies and private security organizations. The latter are activities carried out by international bodies such as the European Union and NATO. Other theorists, in a similar way, argue that each case is special, so it is necessary to pay special attention and realize the fact that many actors participate (Mitreska, Mileski, Mikac, 2019:30).

The main threat to the critical infrastructure is conditioned by two factors. The first is the natural factor and here the dangers are caused by earthquakes, fires, volcanoes, epidemics, floods and similar. These consequences are merciless in the damage they inflict and therefore the sense of danger itself can have a lasting impact on the infrastructure with catastrophic consequences and its collapse, while the second factor refers to the deliberate causing of damage (theft, vandalism, terrorism, and sabotage) here, too, the consequences are also great and cause general danger. The analysis of the need for protection of the critical infrastructure is a good example to indicate that there is a whole range of necessary and previously undertaken activities through which structural measures can avoid and reduce the vulnerability of critical infrastructure.

3. REPUBLIC OF CROATIA - NEED FOR PROTECTION OF THE CRITICAL INFRASTRUCTURE

When it comes to the legislation on the protection of critical infrastructure, the Republic of Croatia has regulated this area with the Law on Critical Infrastructure in 2013, according to Zakon o kritičnim infrastrukturama (Narodne novine 56/2013), which is based on Directive 114 of 2008 of the European Union. The Republic of Croatia has also adopted two more by-laws, as follows: Decision on determining the sectors from which the central bodies of the state administration identify the national critical infrastructures (according to Odluku o određivanju sektora iz kojih središnja tijela državne uprave identificiraju nacionalne kritične infrastrukture te liste redoslijeda sektora kritičnih infrastrukturna, Narodne novine 108/2013, 282 ), as well as the List of the order of the critical infrastructure sectors and the Rulebook on the methodology of preparation of risk analysis in the critical infrastructure management (according to Pravilnik o metodologiji za izradu analize rizika poslovanja kritičnih infrastrukturna, Narodne novine 128/2013).
The Law on Critical Infrastructure of the Republic of Croatia regulates the national and European critical infrastructures, sectors of national critical infrastructures, critical infrastructure management, preparation of risk analysis, owner safety plan / managers, security coordinator for critical infrastructure, handling of sensitive and classified data and overseeing the implementation of this law (according to Zakon o kritičnim infrastrukturama - Narodne novine 56/2013). This Law in the legislation of the Republic of Croatia assumes the legal property of the European Union contained in Council Directive 2008/114 / EC of 8th December 2008 on the identification and designation of the European critical infrastructure and the assessment of the need to enhance their protection.

This Law determines certain terms that have the following meaning:

- Risk analysis (means considering possible manifestations of threats to assess vulnerability and possible assessment of disruptions in the functioning of critical infrastructure or to assess its destruction);
- European Critical Infrastructure - means critical infrastructure of interest to at least two Member States or one Member State, located on the territory of another Member State;
- Cross-sectoral metrics (benchmarks) - denote a set of general metrics according to which the risk is assessed for individual critical infrastructure systems and networks in all sectors.
- Sensitive data - critical infrastructure data that are marked as classified data in accordance with special regulations.
- Contact point - a central body of the state administration that communicates on behalf of the state with the competent authorities of the European Union and other countries in order to exchange information on critical infrastructures and implement identified activities to achieve their protection and ensure continuity of operation;
- Sector metrics (benchmarks) - a set of specific metrics according to which the risk for the composition and network of critical infrastructure in a given sector is assessed;
- Critical Infrastructure Security Coordinator - a person who acts on issues related to the protection of critical infrastructure between the owner / manager and the central bodies of the state administration responsible for a certain critical infrastructure sector;
- The owner / manager security plan - a plan that ensures confidentiality, integrity and availability with organizational, personnel, material, information-communication and other solutions, as well as permanent and step-by-step security measures necessary for the continuous functioning of the critical infrastructure;
- Critical infrastructure management - the provision of working conditions and continuous functioning of the critical infrastructure;
- Owners / managers - legal entities responsible for critical infrastructure management;
- Protection of critical infrastructure - activities that aim at achieving functionality, continuous operation and delivery of services / goods to critical infrastructure as well as prevention of endangerment of critical infrastructure.
Furthermore, this Law of Croatia defines the term "National Critical Infrastructures" as systems, networks and facilities of national importance, and the interruption of operation or interruption of the procurement of goods or services of these, may have serious consequences on national security, human health and life, property and the environment, security and economic stability, and the continued functioning of the Government.

This Law as Sectors of National Critical Infrastructures determines:

- energy (production, including accumulation and dams, transmission, storage, transport of energy and energy, distribution systems);
- communication and information technology (electronic communications, data transmission, information systems, provision of audio and audiovisual media services);
- traffic (road, rail, air, sea and inland water transport);
- health (health care, production, trade, and supervision of drugs);
- water management (regulatory and protective structures of water and communal structures of water);
- food (food production and supply and food safety system, stocks);
- finance (banking, stock exchanges, investments, insurance and payment systems);
- production, storage and transport of hazardous substances (chemical, biological, radiological and nuclear materials);
- public services (ensuring public order and peace, protection and rescue, emergency medical care),
- national monuments and values.

Also, the Government of the Republic of Croatia, by decision, may designate critical infrastructures from other sectors. The Government of the Republic of Croatia with a special decision will determine the sectors from which the bodies of the central state administration identify individual national critical infrastructures in order to provide comprehensive action for protection and reduction of negative effects in case of threats to critical infrastructures, at the proposal of the body, of the central state administration responsible for protection and rescue, and establishes a List of the order of the critical infrastructure sectors due to their importance for the general functioning of the country (ranking of the critical infrastructure sectors due to their criticality) and achieving protection of the critical infrastructure at the state level.

Most of the remarks about the Law come from the expert community which, first of all, points out that the Law itself does not mention protection in the title, which is a fundamental weakness - everything that is done in the area of establishing critical infrastructure and critical infrastructure management is ultimately better to protect (Bakreski, Gerasimoski, Mileska-Stefanovska, Spasov, Kermetchieva, 2016:33). Furthermore, the comments refer to the role of the Croatian State Protection and Rescue Directorate (DUZS). This body is the central coordinating body, and it is given most of the responsibilities in the field of national critical infrastructure management. Then, it is stated that this body reacts reactively, and the management and protection of critical infrastructure means above all proactive (preventive) action. This body, with its primary responsibilities to protect and rescue, cannot perform such a complex, managerial and coordinating function related to critical infrastructure. It is also stated that this body cannot perform risk assessment for protection of the critical infrastructure, that this body is not competent in the development
of quality risk assessments and risk management in the protection of the critical infrastructure, and how at sectoral as well as at cross-sectoral level.

However, it should be emphasized that the legal and practical experience of the Republic of Croatia in this area can be extremely useful if only the positive sides are accepted in the legal regulation of the matter related to the critical infrastructure in the Republic of North Macedonia.

4. THE REPUBLIC OF NORTH MACEDONIA - NEED FOR PROTECTION OF THE CRITICAL INFRASTRUCTURE

In the Republic of North Macedonia, the term critical infrastructure is a relatively new area and is legally unregulated. In fact, there is still no legal framework in terms of identification, definition or protection of the critical infrastructure, and thus, a formally established list of critical infrastructure does not exist. However, it should be emphasized that the identification of the critical infrastructure will not start from the beginning because it is realistic to expect it to be based on some existing acts recognizing this area.

As a result of the Euro-Atlantic commitments, the Republic of North Macedonia undertakes and implements a large number of reforms that cover the range of issues related to the protection of the critical infrastructure.

The protection of the critical infrastructure is one of the most important activities, on the basis of which the security policy is further built.

These activities include: (Mitreska, Mileski, Mikac, 2019:158)

- defining facilities as critical infrastructure;
- defining measures for their protection and security and
- defining duties and responsibilities.

From this aspect, it is especially important to note that the determination of the critical infrastructure in the Republic of North Macedonia is not in line with the guidelines of the European Union. In this regard, there is a lack of clear concretization of the term critical infrastructure. Therefore, it is generally accepted that in concretizing the facilities as critical infrastructure, one should start from the analysis of several decisions, as follows: The Decision to determine persons and objects for protection. This Decision was adopted on the basis of the Law on Internal Affairs. The Decision precisely lists the facilities of interest for the security of the Republic of North Macedonia, as follows: electricity, PTT traffic, railways, airports, water supply systems, etc.

The Government of the Republic of North Macedonia in 2013 adopted a Decision on determining legal entities that are obliged to have private security. The need for adoption arises from the Law on Private Security of 2012 and the Law on Amendments to the Law on Private Security adopted in 2013 (according to the Decision on determining legal entities that are obliged to have private security, the Government of the Republic of Macedonia, Official Gazette of the Republic of Macedonia No. 106 of 29.07.2013).

The Decision explicitly states the provision of legal entities, engaged in activity related to handling, as follows:

- with radioactive substances or other dangerous substances for people and the environment;
- legal entities registered for production and wholesale of medicines and medical devices;
• legal entities registered for production and trade of flammable liquids and gases;
• legal entities registered for transport of dangerous goods;
• legal entities registered for handling objects and objects of special cultural and historical significance (according to the Decision on determining the legal entities that are obliged to have private security, "Official Gazette of the Republic of Macedonia", No. 106/2013, Article 2).

According to this Government Decision, legal entities that are obliged to have private security are defined in three groups of legal entities. Both groups of legal entities are formulated according to the activity of legal entities, so in that sense the first group of legal entities performs "activity related to the handling of radioactive substances or other substances dangerous to humans and the environment", and the second group of legal entities performs "activity related to the handling of objects and objects of special cultural and historical significance". Additionally, the Decision prescribes a third group of legal entities that are obliged to have private security on the basis of a special criterion, i.e., they are of interest for the security and defense of the Republic of North Macedonia.

In order to be able to operationally, professionally and efficiently protect the critical infrastructure in the Republic of North Macedonia, part IV of this Decision defines mandatory private security of legal entities when it is in the interest of achieving the security of the Republic of North Macedonia. In particular, several activities are defined, as follows:
• energy (production, transmission and distribution of energy);
• water supply;
• environment;
• Macedonian Radio and Television, electronic and print media;
• The National Bank of the Republic of North Macedonia and other legal entities registered for performing banking activities (according to the Decision on determining the legal entities that are obliged to have private security, "Official Gazette of the Republic of Macedonia", No. 106/2013, Article 2).

If we analyze the current situation in the Republic of North Macedonia related to building an efficient system for protection of the critical infrastructure, it can be concluded that the protection and provision of the critical infrastructure in the Republic of North Macedonia should be focused on several key activities: the energy sector; information technologies; water systems; and air traffic.

In each of the indicated sectors, as a result of the reform efforts of the state, there are certain laws and by-laws that can enable effective regulation of the protection of the critical infrastructure. Based on the analysis of the situation, appropriate measures and recommendations that would be most expedient in the organization of the protection of critical infrastructure can be offered.

For example, it is proposed to create an effective strategy for the protection of the energy critical infrastructure (Mitreska, Mileski, Mikac, 2019:173). The strategy, after identifying the existing risks, should give the right direction to overcome the situation regarding the lack of positive legislation on the energy critical infrastructure. However, partial solutions have been identified in various sectors of the critical infrastructure, which are not wrong, but can most likely contribute to the "suffocation" of the whole process for the creation and efficient functioning of the optimal system for protection of the critical infrastructure.
5. CONCLUSION

There are many different solutions and practices, but every country needs to recognize the most appropriate model for achieving critical infrastructure protection. That is why it is necessary to protect the critical infrastructure to regulate it through an integrated approach, starting with identification and preventing. Furthermore, by reducing the vulnerability of critical infrastructures, mitigation of critical infrastructure may occur.

Regarding the improvement of the situation with the protection of the critical infrastructure in the Republic of North Macedonia, it is necessary to undertake some important activities. The critical infrastructure is a platform for maintaining the development of every society and country. Hence, the Government should be included in the system of protection of the critical infrastructure as a proposer of laws and bylaws and has the task to authorize certain ministries to be coordinators of the whole system. The Government provides a strategic framework that is essential for the successful functioning of the system, cooperation, communication, and coordination of all actors involved. The Government also designates (by separate decision) the sectors of certain critical infrastructures in order to provide a holistic approach to protection and mitigation in the event of a threat to critical infrastructure.

After the Government, the next most important actor is the coordinator (a specific ministry) of the entire system for protection of the critical infrastructure. There are various examples and practices as to which body is appropriate for this role. In many European countries, the post is assigned to the Ministries of the Interior. Hence, there are different solutions and practices, but each country should recognize the most appropriate model. In Macedonia, many suggest that the Macedonian Ministry of Interior must be the coordinator of the entire critical infrastructure protection system.

Normatively, the drafting of a Law on Protection of Critical Infrastructure can be proposed. When drafting the critical infrastructure regulations, the recommendation is to regulate primarily the energy and transport areas - these two segments are required by the European Union from its member states and those who intend to join. If the other sectors of the critical infrastructure are involved, the experience of Croatia can be repeated immediately at the beginning to slow down and complicate the process. It is therefore recommended to start with the energy and transport sectors. The law or by-laws must mention the security coordinator who is a key figure and will be in charge of critical infrastructure matters in all bodies and organs. The law or by-laws need to emphasize the place and role of public-private partnership, and they should also emphasize schooling, education and training. The location and role of the newly established Critical Infrastructure Protection Center is extremely important.

In the Republic of Croatia, all challenges related to the development of the critical infrastructure protection system can be identified as follows:

- Insufficient and inadequate communication and cooperation of the liaison officers for critical infrastructure security with the decision makers in the state administration bodies at all levels on one hand, and insufficient cooperation of the state administration bodies at central level with the competent agencies and professional associations on the other hand;
- insufficient education of the stakeholders, lack of regulation; the responsible state bodies do not have the necessary tools (software) in the field of risk management for critical infrastructures and lack of scientific research activities in this field.
According to the analysis of the needs for establishing a high-quality system for protection of the critical infrastructure that has been made so far, certain recommendations can really be offered in that regard.

In the phase of marking the critical infrastructure that follows the identification, great attention should be paid to the criterion of criticality and the national importance of the specific infrastructure. In certain sectors of the infrastructure, the degree of importance is overemphasized. This slows down the process of determining the critical infrastructure implemented by the Government, and is achieved through the adoption of a Decision for granting the status of critical infrastructure.

Following the marking, prioritization is required, bearing in mind that the overall critical infrastructure does not require an equal level of protection, and also that not all critical infrastructures are of equal importance. Regarding the further activities and phases in the realization of the protection of the critical infrastructure, it is necessary to introduce in the system appropriate internationally recognized standards (such as the International Standard ISO 31000: 2009 Risk Management: Principles and guidelines) which are in function of risk assessment and maintaining continuity in the operation of the critical infrastructure.

In terms of cooperation between the stakeholders, a key element is the existence of public-private partnerships and the establishment of quality cooperation. The private sector has the responsibility to protect the infrastructure that is important to the functioning of society as a whole.

Such a ratio raises a number of open questions in this regard, such as the development of joint procedures, the exchange of the aforementioned sensitive data, which, in turn, requires building trust, as well as the exchange of knowledge and experience.

Therefore, in the Republic of Croatia, it is necessary to establish an acceptable common model of cooperation in this area with clearly defined mutual rights and obligations. The development of the model and in general of all components related to the system for protection of the critical infrastructure should be aimed at the establishment of a special body that in fulfilling its tasks will have institutional powers and influence on all stakeholders in the system.

In many countries there are good examples (such as the United States, Great Britain, Romania) of the successful establishment of such bodies as the Critical Infrastructure Protection Centers. By analyzing their activities, it is possible to adapt them and to properly establish such a center in the Republic of Croatia. In 2017, the National Security Strategy and the Law on Internal Security were adopted in Croatia - these acts recognize the importance of the concept of protection of critical infrastructure.
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