Gacic, J Def Stud Resour Manage 2012, 1:2
http://dx.doi.org/10.4172/2324-9315.1000e105

Journal of Defense Studies & Resource Management

Editorial

A SCITECHNOL JOURNAL

New Conception of Critical Infrastructure Vulnerability in Contemporary Terrorist Attacks

Jasmina Gacic[1*]

Introduction

The contemporary terrorism, as multi-dimensional political phenomenon – although present from the very beginning of class society in all the socio-political systems – has provided itself the reputation of a relevant factor in international relations and it has become a constant of the actual security ambient. The endurance and intensity of attention that terrorism calls, that is quantity and variety of publicity attributed to it, speak the best to its global significance and respectable importance, as it is the greatest security problem, in regard to which any social appearance could hardly be compared. The data collected through scientific investigation tell that 11.650 international attacks have been committed in the last thirty years – about 85.5% ended in a fatal way, with hard civil and material losses, approximately 8% had as its consequence individual murders, and only 6.5% of all the attacks finished without victims and with lesser material damages [1].

It is obvious that it is a rushing and persistent phenomenon, that will last long and that will be, according to the law of inertia, also present in the form of certain repetitions when its main incentives will have dissapeared. The progression of this occurence is testified, first of all, by the growing ruthlessness towards a kind of victims, especially collateral, as well as endangerment of the complete critical infrastructure [2].

Shortly after terrorist attacks of September 11th, critical infrastructure has become an important and basic part of national security, and its protection nowadays has become one of priority tasks of each country. According to the conclusion of Euroatlantic Partnership Council, Civil Protection Committee (EAPC, CPC) at the annual meeting in Brashova, Romania in 2002, which was later adopted by Senior Civil Emergency Planning Committee–SCEPC, the term "critical infrastructure" included relevant national capacities, services and informative systems which were of such a vital importance that their inoperability or damage could have direct impact on national security, national economy, public health, population safety and efficient government functioning. The other definition from the same meeting was: "Critical infrastructure includes particularly (but not exclusively): food, water, agriculture, health services and emergency services, energy, traffic, information and telecommunication, banking and finance, chemical plants, defense industry, postal and distribution of goods as well as national monuments and other cultural values." The definition proposed by the Canadian government which started to be of use in the UN documents shortly after the attack on the World Trade Center was: "Critical infrastructure consists of physical and informational technological structures, networks, services and tangible resources which if they are ruined or destroyed can have a severe impact on health, safety, security and welfare state or efficient government functioning."

Terrorist activities are directed precisely to the principal state and economic structures and are aimed to prevent normal economic existence in the particular area which in a circumstantial way makes an impression of nonfunctional and disorganized state as well as creates the atmosphere of fear, panic, frustration and defeatism.

The relation of international community towards protection of critical infrastructure

Mostly for above-mentioned reasons, terrorism has become a preoccupation of world-wide politics and national governments, but also a ground for concern and fear of common people in the growing number of countries. The emergence of global terrorism, personified primarily in the attacks and consequences of 9/11, 2001, has made that the role of numerous international organizations has been enhanced in opposing terrorism – UN, OESC and NATO. Common efforts are evident which EU countries and USA have made in view of fight against terrorism. The day after the New York and Washington attacks, the frontmen of EU met and qualified the attack on USA as an attack at the wholesale democratical values, as well as an attack at human dignity.[1] USA introduced a new strategic conceptual approach in the management of terrorist threats and it has obtained its first formal framework shortly after the terrorist attacks of September 11th, 2001 [3]. Some years later, the Department of Home Security (DHS) defined several essential and preferential goals which are conceived in order to protect the population and resources in the state against extant and potential terrorist threats. Shortly after that, these goals became a part of the strategic preventive plan in protection from terrorism, but also a part of a new integrated management in all the emergencies. As the fundamental objectives of the plan which is to contribute to better protection and more successful response to terrorism, there are enumerated: 1. **Warning** means the identification and comprehension of extant threats, a vulnerability appraisal, the determination of novel threats and supplying timely information for all the participants in national security. 2. **Prevention** pertains to the detection, identification and mitigation of threats that are a potential danger for national security. 3. **Protection** encompasses security and safety of people, their households, critical infrastructure, goods and economy against terrorist acts. 4. **Response** implies the management of all the measures and activities which are necessary

[1]The European Council held an extraordinary meeting on September 21th, 2001, in order to analyze situation in the international community. Of course, the EU was unable to adopt such drastic measures as NATO did when, for the first time in its history, it activated article 5 from the EU's perspective, 9-11 actually contributed to the unification of different opinions on international counter-terrorism co-operation within the organization. Out of the package of measures adopted 9-11 the following deserve particular attention: 1. the Council Common Position against Osama bin Laden, Al-Qaeda and the Taliban, 2. the EU Action Plan to Combat Terrorism, 3. the definition of terrorist offences, 4. the CFSP Concept in the Fight against Terrorism, and 5. the 2003 European Security Strategy.

***Corresponding author:** Jasmina Gacic, PhD, Assistant Professor, University of Belgrade, Faculty of Security Studies, Belgrade, Serbia, E-mail: jgacic@sezampro.rs

Received: August 22, 2012 **Accepted:** September 03, 2012 **Published:** September 07, 2012

doi:http://dx.doi.org/10.4172/2324-9315.1000e105

in the case of natural disasters, technological accidents or terrorist acts. 5. **Recovery and rehabilitation** relate to the administration of national (state) and local capacities and private sector in order to re-establish public service functioning and renew the community after executed terrorist attacks and other accidents. For the sake of this, it is necessary to enable the use of the national plan for the rehabilitation of community, to secure the employment of a wide scope of resources and to provide a comprehensive aid in all the sorts of emergencies in order to revitalize the area struck.

The importance of critical resources was defined in the National Strategy for Physical protection of Critical Infrastructures and Key Assets in USA. The basic elements of infrastructure, which should be indispensably protected in the conditions of different kinds of attacks, were identified: the sector of agriculture and food included 1.912.000 farms and 87.000 plantations, the water supply sector included 1.800 federal water towers and 1.600 local capacities for water supply, the public health sector referred to 5.800 registered hospitals while emergency services could be found in 87.000 locations. The basic industry, which had the role of a defence system, included 250.000 companies in 215 industry branches, while telecommunication included 2 billion miles of cables. The power distribution sector was divided in the electric power section possessing 2.800 electrical engineering plants and in crude oil and gas section possessing 300.000 active structures. The transport resources were very versatile and included: 5.000 public airports, 120.000 miles of main roads, 590.000 bridges, 2.000.000 miles of gaspipeline, 300 ports, 500 main, urban and public crossings. The finance sector included 26.600 insurance institutions. The chemical industry in use were represented with 66.000 plants. The key resources also included national monuments and icons, 5.800 of them, and they were treated as historical sights; nuclear power plants were 104, as well as 80.000 earthworks [4].

Furthermore, the main departments which should undertake the authority in the protection of national property were identified. The Department of National Security, the Department of Defence and Interior affairs certainly took over the main responsibility but the Department of Energetics, of Justice, of State administration were also engaged. Also, the Department of Health and Public services, the Environmental protection Agency, the Department of Agriculture and the Department of Finance were the participants in governmental activities referring to protection of vital national infrastructure.

The European Council, on June 24th, asked the Commission to prepare an overall strategy to protect critical infrastructure. In response, the Commission adopted, on October 20th, 2004, a Communication "Critical Infrastructure Protection in the Fight against Terrorism"; putting forward clear suggestions on what would enhance European prevention, preparedness and response to terrorist attack involving critical infrastructure. The aim of the European policy in this domain is to ensure a suitable and equal degree of protection for selected critical infrastructure facilities, which is only feasible on the basis of a common European framework for the protection of critical infrastructure. The EU's concern for the member states' critical infrastructure stems from the danger that the destruction or disruption of certain critical infrastructure in one member state could immediately affect other member states. In such events the protective measures are only as strong as their weakest link [5]. In this sense the EU defines the so-called European Critical Infrastructure as consisting of those physical resources, services, information technology facilities, networks and infrastructure safety, security, economic or social well-being of: either a) two or more member states, or b) three or more member states. The European Commission identified the following sectors of critical infrastructure: energy, information and communication technologies, water, food, health, finance, civil administration, public & legal order and safety, transport, chemical and nuclear industry, space, and scientific research.

Identification of critical infrastructure in the southeastern region of Europe

Modern, developed infrastructure is a postulation for integration of southeastern Europe region in European and global area. The infrastructure sections like traffic, energetics and telecommunication with their dynamics positively influence the overall economic growth and the level of employment in the economies of the West Balkan region. On the other side, although good infrastructure is an important factor for investment attraction in the actual dynamic and competitive business conditions, it is, at the same time, a potential target of terrorist attacks. Economic as well as safety reasons show that the efforts of particular countries in southeastern Europe have been more and more obvious in the process of identification of critical infrastructure.

According to the Resolution adopted by the Government of the Republic of Slovenia from 2010, the critical infrastructure of national importance in the Republic of Slovenia included all facilities and services indispensable for the state, thus perturbation or destruction of them could have a great effect on national safety, economy, vital social functioning, health, security as well as on the overall social welfare.[2]

The Republic of Macedonia does not have the clear strategy which would define the ways of threat reduction on their resources. They also failed to have the law which defines the critical infrastructure. However, some laws show that the issue of critical infrastructure protection represents the main determinant of several departments. Thus, the main institutions responsible for the protection of the critical resources of the state appears to be the Ministry of Interior Affairs (The Law on Internal Affairs, Official Gazette RM, No 92/09), the Ministry of Defense (The Law on Defense, Official Gazette RM, No 8/92), the Ministry of Transport and communication (The Law on Railway traffic safety, Official Gazette RM, No 40/07), the Law on Hazardous materials transportation (Official Gazette RM, No 92/07), the Law on Road traffic transport (Official Gazette RM, No 114/09, 83/10, 140/10), the Law on Electronic communication (Official Gazette RM, No 14/07, 55/07, 98/08, 83/10, 103/08, 67/10) [6].

The Republic of Croatia has specified, in the draft version of the National Security Strategy, in the part referring to threats to tangible goods, the following threats: endangerment of critical national infrastructure, endangerment of infrastructure security, climate changes and damaging of environment. Endangerment of critical national infrastructure makes a potential threat for overall functioning of a society and a state, as well as national security. The critical national infrastructure takes in structures, services, constitutions (transaction, energetic, communicative and informative assembles, financing and banking assembles, public administration, health service, food, water) which support economic, political and social life in a state. It is also specified that the critical infrastructure can be endangered by huge accidents, separate sabotages, unfriendly activities done by other states

[2]Resolution of the Government of the Republic of Slovenia, No. 80000-2/2010/3 of 19 April 2010.

as well as by terrorism. This document, however, says that the critical infrastructure is also threatened by bad management, management opposite to public concern representing personal and group interests.[3] In November 2008, the Republic of Croatia ratified the Strategy for prevention and repression of terrorism. That document defined the critical national infrastructure as a collection made by properties, services, assembles which support economic, political, social life in a state, otherwise a partial or complete endangerment of it could cause loss of human lives, could endanger national security and functioning of economy, accordingly it could seriously endanger a part of a society or the whole state community. In the today's arrangement of civil protection and planning of defense exists a term of structures and legal entities especially important for the defense, thus taking specific measures for their protection. The term of legal entities and structures (including their products and services) does not differ from the term of critical infrastructure, but it is defined and protected in a more modern way, with more compatible, more modern conceptual and technological achievements.

The Republic of Serbia, albeit faced with grave economic, social and political problems, started the reexamination of its own goals and priorities, and at the same time it is aware that it undergoes the unavoidable process of defining a novel conceptual security framework. Having in mind significant efforts made at the international level in respect of terrorism and critical infrastructure protection, the Republic of Serbia, in approximating European integrations, opted for a series of new steps in this domain. In addition to the harmonization of legislative opposition to terrorism, the improvement of intelligence-security system and the reorganization of integrated protection system, several strategic legal and sub-legal acts are enacted which deal with the problem of terrorism and critical infrastructure protection. Certainly, the problem of terrorism constitutes a chief determinant in the National Security Strategy of the Republic of Serbia, as the legal document onto which the whole system of national security is founded. In defining security challenges, risks and threats the National Security Strategy decided for a co-operative approach to security, for it is possible to respond to security challenges, risks and threats only through co-operation between states which share the same security challenges, risks and threats.[4] Terrorism is counted, more than justifiably, as a security challenge, risk and threat. The Strategy treats terrorism in the following way: "Terrorism is one among the greatest risks and threats for global, regional and national security. The contemporary terrorism is global by its scope, and it is tied with the violent religious extremism. In the circumstances of global terrorism, Serbia may be a target of terrorist action, as directly, so well as by abusing its territory for preparation and execution of terrorist acts in other countries. From the standpoint of security risks and threats that face the Republic of Serbia, the link of terrorism with all the forms of organized, trans-national and trans-boundary crime is especially important." With the Law on Emergencies, adopted in 2009, the Republic of Serbia made new steps in the domain that defines emergencies. Namely, after numerous consultations at all the levels, the state decided that the Ministry of Interior should be authorized for the organization of elaborating the Assessment of Endangerment from elemental disasters and other accidents, and delivering it to the government for its enactment. The same law, in article 46, prescribes that the Assessment of Endangerment identifies the sources of potential threat, envisions possible consequences, needs and capabilities of undertaking the measures and tasks of the protection and rescue from elemental disasters and other accidents. The Assessment of Endangerment comprises especially: 1) features of the territory, critical plants, critical sites and areas from the standpoint of endangerment from elemental disasters and other accidents, with possible cross-border effects of an accident; 2) vulnerability of the territory caused by elemental disasters and other accidents; 3) analysis of possible effects of elemental and similar disasters; 4) needs and capabilities for the protection of people, material goods and environment from the consequences of elemental and other disasters. The government of the Republic of Serbia, on the basis of article 45, paragraph 4, of the Law on Emergencies (Official Gazette RS, No 111/09), enacted the Decree on the Content and the Way of Elaborating the Plan for Protection and Rescue in Emergencies. This document, above already cited elements of the Assessment of Endangerment, which are defined in the Law on Emergencies, determines that a part of the Assessment will be the assessment of critical infrastructure from the viewpoint of elemental disasters and other greater accidents, too. By this decree, for the first time, the concept of critical infrastructure is introduced in Serbia, but still without clear definition of what elements or segments of infrastructure are at stake [7].

Conclusion

It is evident that most countries have developed a set of activities with the aim of: 1) realizing critical and vulnerable elements of different infrastructure of a state, 2) defining measures to decrease the vulnerability, 3) composing and developing plans for critical and extraordinary coincidences and recovery after a critical situation, 4) encouraging the development of awareness with public and private operators regarding the protection of the critical infrastructure, 5) supporting international cooperation.

Regarding the protection measures for the critical infrastructure, all countries as well as the Republic of Serbia must determine the steps of a procedure: a) critical structure identification, b) preparing maps of critical infrastructure, c) exchange of information, d) qualifying the personnel engaged in jobs and tasks connected with the systems of critical infrastructure, e) training the systems for critical infrastructure protection or recovery in the case of a critical or an extraordinary situations

[3]In the document it is said that the Republic of Serbia is especially vulnerable to endangerment of critical infrastructure because its size and resources do not enable to develop alternative compositions to its full extent, and this vulnerability increases with the connection of numerous departments with the departments in other countries.

[4]On collaboration among national security systems of different countries that share the same security challenges, risks and threats, see more In: Shaw M, The Development of "Common Risk Society": A Theoretical Overview, In: Military and Society in 21st Century, Hamburg, 2000.

References

1. Stohl M (2003) The Mystery of the New Global Terrorism: Old Myths, New Realities. In: The New Global Terrorism: Characteristics, Causes, Control (ed. Kegley CW), New Jersey: Prentice Hall.
2. McEntire D, Myers A (2004) Preparing communities for disasters: issues and processes for government readiness. Disaster Prevention and Management 13: 140-152.
3. Haddow GD, Bullock JA (2006) Introduction to Emergency Management (2ndedn), Elsevier Butterworth-Heinemann.
4. Purpura P (2007) Terrorism and Homeland Security. The Maple-Vail Book Manufacturing Group, British Library Cataloguing in Publication Data.
5. Boin A, Rhinard M, Carrel L, Duke S, Ekengren M, et al. (2005) Shocks without Frontiers – Transnational Breakdowns and Critical Incidents: What Role for the EU? EPC Issue Paper No. 42, 16 November 2005.

doi:http://dx.doi.org/10.4172/2324-9315.1000e105

6. Janev M (2011) Threats to the Critical Infrastructure of South-East Europe Posed by Al Qaeda and its Associated Movements. The Case of Macedonia. In: Counter terrorism challenges regarding the process of critical infrastructure protection (ed. Čaleta D), Institute for Corporative Security Studies, Ljubljana, Slovenia and Center for Civil-Military Relations, Monterey, USA.

7. Gačić J, Mandić G, Jakovljević V (2011) A possible model of the responses in the Republic of Serbia in the protection of critical infrastructure against a terrorist attack. In: Counter terrorism challenges regarding the process of critical infrastructure protection (ed. Čaleta D), Institute for Corporative Security Studies, Ljubljana, Slovenia and Center for Civil-Military Relations, Monterey, USA.

Author Affiliation

Top

[1]*University of Belgrade, Faculty of Security Studies, Belgrade, Serbia*