

# INDIVIDUAL SECURITY AND CRITICAL INFRASTRUCTURE SECURITY – RELATIONSHIPS AND INTERRELATIONS–

*Lieutenant General Professor Teodor FRUNZETI, PhD\**

**Abstract:** *The economic determinations on security have become increasingly clear in the current system of international relations, in the sense that the potential of defense and security is strongly related to economic resources. Even a brief analysis of the latest official documents of regional and international security organizations – The Security Strategy of the European Union<sup>1</sup>, NATO Strategic Concept<sup>2</sup>, United Nations Charter<sup>3</sup> – or of the strategies developed by the major state actors in the world – USA<sup>4</sup>, Russia<sup>5</sup>, China<sup>6</sup> – denotes an increasing importance paid to the more pronounced interrelating between economics and security, in the economic resources and security achievement.*

## **1. Individual and community security**

In present, the security must be understood as a result of the dynamic balance between different components of life environment, a state in which the dangers and conditions that might cause a human being's insecurity are controlled so that the individual was defended in all aspects, contributing, in this

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\* Lieutenant General Professor Teodor Frunzeti, PhD (tfrunzeti@unap.ro), member of the Academy of Romanian Scientists, Chairman of the Military Sciences Section, Commandant (Rector) of „Carol I” The National Defence University.

<sup>1</sup> European Union, *A Secure Europe in a Better World – The European Security Strategy*, Brussels, December 2003, p. 2, <http://www.consilium.europa.eu/uedocs/cmsUpload/78367.pdf>.

<sup>2</sup> NATO, *Strategic Concept – Active Engagement, Modern Defence*, November 2010, paragraphs 15, 19 si 37, [http://www.nato.int/strategic-concept/pdf/Strat\\_Concept\\_web-en.pdf](http://www.nato.int/strategic-concept/pdf/Strat_Concept_web-en.pdf).

<sup>3</sup> United Nations, *Charter of the United Nations*, 1945, article 26, <http://www.un.org/en/documents/charter/chapter5.shtml>.

<sup>4</sup> The White House, *National Security Strategy*, May 2010, p. 17, [http://www.whitehouse.gov/sites/default/files/rss\\_viewer/national\\_security\\_strategy.pdf](http://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf).

<sup>5</sup> The Security Council of Russian Federation, *The National Security Strategy of Russian Federation to 2020*, 12 May 2009, p. 5, <http://merln.ndu.gov/whitepapers/Russia2009.pdf>.

<sup>6</sup> Information Office of the State Council of the People's Republic of China, *China's National Defense in 2010*, Beijing, 31 March 2011, p. 3, [http://china.org.cn/government/whitepaper/node\\_7114675.htm](http://china.org.cn/government/whitepaper/node_7114675.htm).

way, to the security of the entire community/society. In fact, placing the human individual and the community in the center of the international preoccupations constitutes a direction for the policy of promoting the human development, a policy that is specific to the end of the 20<sup>th</sup> century and the beginning of the 21<sup>st</sup> century.

Individuals' security state must be the starting point of any study in this area, regardless of the level of analysis (national, zonal, regional or global), because the human being is the essential element of any form of social organization, and the degree in which his safety is achieved is reflected in the security of the community he belongs to<sup>7</sup>. In the first phase of the analysis, the concept of individual security can be linked to individual's perception on life and, therefore, there is a tendency to put the sign of equality between the state of security and the high standard of living. However, at a deeper analysis, it is necessary to study both the objective living conditions and the subjective ones, created in the interactions between people, brought together in the concept of social representation of security. Community security is similar to the previous one, because groups, similarly to the behavior of individuals, have certain expectations regarding its own security.

The threats to the security of the individual and the community to which he belongs as well as to the infrastructures which are vital for the normal economic and social life can be materialized by attitudes, gestures, acts, facts, events, phenomena, human activities creating (leading to) states of imbalance and instability and generating states of danger. They can be identified in relation to their nature (political, economic, military, social, and environmental), stage (latent, possible, probable, imminent) or type (overt, covert, mixed, violent, nonviolent). Perceived and identified threats to the individual security include a great variety of phenomena, especially of non-military nature, such as the one regarding economic security, food security, health, environment, personal safety, political security, etc. They can take different forms, from the demographic ones (illegal migration, aging, brain drain) to the criminality in all its forms (including the terrorism), violent conflicts and wars, genocides, etc.

Therefore, considering the existing theories, we can say that human being is the reference subject and object of security and human being's security is a state conditioned not only by objective factors, determined by the absence or the control of risks, dangers and threats to his existence, but also by subjective factors, resulted

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<sup>7</sup> Alexandra Sarcinschi, *Vulnerabilitate, risc, amenințare. Securitatea ca reprezentare psihosocială*, Editura Militară, București, 2008, p. 18.

from the perception of the way in which his existence, values and interests are or may be preserved the, both at individual level and at the level of the community he belongs to<sup>8</sup>.

We also have to mention within this analysis the much debated concept of human security because, in fact, it refers to the need for an individual-centered approach of security, as the sole manner to foster national, regional and even global stability. Moreover, human security is defined by its purpose, which is to safeguard the vital core of human lives in front of universal threats, in a manner that is consistent with the sustainable development of humanity.

Thus, achieving the individual and community security is affected by the contemporary challenges and problems regarding development and well-being. Often, individuals and communities are deeply threatened by events that are not under their control, such as: economic and financial crises, violent conflicts, terrorist attacks, epidemics, pollution from other areas, etc. In this context, together with the evolution of certain concepts such as individual security or human security, but also with their afferent practices, critical infrastructure protection gets new valances, in the sense of increasing society's dependency on these systems.

## **2. Individual – community – critical infrastructures**

State's ability to provide security depends, at a great extent, on the organization of the national economy, on its ability to produce and provide the necessary resources and means<sup>9</sup>. Only a high performance economy can provide the necessary conditions for generating an equally high performance defense capacity and security. And a modern, stable and strong economy cannot exist where the individual and community don't have the sense of security, stability and prosperity. A central role in this equation is played by critical infrastructures that constitute the "backbone" of countries, regions and continents, of any national economy. Critical infrastructures represent a network of large systems created by man (*hard* and *soft* structures) working synergistically to produce a continuous flow of goods and services which are essential for the economic development and social prosperity<sup>10</sup>. In this sense, we refer to the critical infrastructures in the following

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<sup>8</sup> Ibidem.

<sup>9</sup> Cristian Bărbăreanu, *Economic factor Influence in security*, Nationale Defence University "Carol I" Publishing House, Bucharest, 2009, p. 9.

<sup>10</sup> International Risk Governance Council, *Managing and Reducing Social Vulnerabilities from Coupled Critical Infrastructures*, White Paper no. 3, Geneva, October 2006, p. 15.

areas: finance, transport, trade, water supply, energy and public utilities, agriculture and food, health system, information and communication system, administration, etc. Also, the destruction of works of art, schools, universities, hospitals, churches, courts of law, sites and local and national monuments doesn't endanger vital systems, but could deeply damage population's morale. The dependency on critical infrastructure is so high that it would be difficult for human beings to live at its exterior.

Characteristic of critical infrastructures is the way in which they are interconnected in a "system of systems", so that the disruption or interruption of the operation of such an infrastructure could produce significant negative effects in other sectors, which ultimately affects the life and activity of a large number of individuals and communities to which they belong.

As the economic and social activities develop, critical infrastructures of state and society become increasingly vulnerable to the various dangers and threats. The more science and technology progress, the more accentuated are the vulnerabilities and the higher is the possibility for an attack or accident to be produced, triggering serious effects on people, property and the environment.

The panoply of dangers and threats to critical infrastructure, through which an internal or external actor (individual, organization or nation) is able to exploit the vulnerabilities of critical infrastructures in order to reduce the economic security, is increasingly diversified, given the fact that asymmetric threats incidence tend to increase. A classification of these dangers and threats could be the following:

- *natural* dangers/threats:
  - symmetrical, such as earthquakes, floods due to flash floods, landslides, drought, etc.
  - asymmetric, such as dangerous weather phenomena, falling meteorites and cosmic objects, global warming, etc.
- *anthropogenic* dangers/threats (caused by human intervention and human activities):
  - Symmetrical:
    - *Physical*, such as chemical accident, conventional war, transport accidents etc.
    - *Cybernetic*, such as programming errors.
  - Asymmetric:

- *Physical*, such as terrorism and organized crime, nuclear and biologic accident, errors of systems projecting, operation and maintenance, privatization of infrastructure elements, etc.
- *Cybernetic*, such as informational warfare, network-centered warfare, etc.<sup>11</sup>

Even more, critical infrastructures have become targets of modern economic war, as there are speculated the multistage effects which can be produced by their disablement or destruction. Due to the connections and interdependencies between different critical infrastructures, the attack of such an infrastructure disrupts the functioning of society and state and represents an effective method for achieving some strategic goals.

It is obvious that the protection cannot be provided at the same level for all the critical infrastructures against this multitude of dangers and threats. Local/national authorities must find answers to the question: What critical infrastructures take priority and what protection measures should be adopted? The recent economic and financial crisis has added new constraints in the sense of the significant diminution of financial resources, which makes even more difficult the task of responsible factors. Probably, the priority list of critical infrastructures which need to be protected at the local/national level will have to be reduced on the basis of an appropriate methodology. But, who will be able to decide with plausible arguments *which infrastructure is more critical than others*, that a certain company is more important than a hospital or a school.

### **3. Critical Infrastructures Security**

The necessity of critical infrastructure's security and securing results from the need of the individual and community security, because people live on an infrastructure support which they continuously strive to strengthen, modernize and secure. The recent years' events have accelerated the efforts to identify and designate the critical infrastructures at national and European level and intensified the preoccupations for increasing the protection of the infrastructures of those areas which are significant for the individual and community security. In fact, the threats to individual and community security are largely the same as those to the critical infrastructures: natural or anthropogenic disasters, deliberate attacks or even the malfunctioning of certain systems.

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<sup>11</sup> Radu Andriuc, *Dangers and threats to the critical infrastructure*, Psihomedica Publishing House, Sibiu, 2008, p.59

The damage, destruction or disruptions of critical infrastructure activities affect directly or indirectly the security of society as a whole and thus the security of state, communities and individuals. In this context, an important trend can be identified: human vulnerability increases along with its dependence on vital support systems. Unfortunately, recent years give us many examples: from the events of September, 11<sup>th</sup> 2001 to Katrina Hurricane and the tsunami in Asia, which did not destroy only critical infrastructures, but also human lives.

The critical infrastructure protection must become a national priority, be it Romania, Italy or any other country, because it reinforces the bindings of society, not what splits it. And putting in practice such a protection is not possible without cooperation at all the levels of society. Protection is not just strengthening the security and resilience of a single critical infrastructure of a particular social or economic area, but also of the whole network to which it is connected.

The resilience at chronic and catastrophic risks is the key to ensure the security and prosperity in the 20<sup>th</sup> century. There should be given a great importance to the need that individuals, communities and critical infrastructures have the capacity to resist, respond and quickly recover and adapt to natural or man-made disturbances. At the community level, resilience requires the rebirth of civic spirit, more exactly, the involvement and integration of all parties' actions in a common effort to build a sustainable society. Users, manufacturers, operators, managers and regulators share the same common goal to ensure the resilience of critical infrastructure and each of them plays an important role in the normal functioning of essential systems and networks<sup>12</sup>. Individuals must develop means to rapidly recover and adapt to the risks they face at personal and familial levels. Companies and communities must be prepared to deal with the effects of some internal and external risks concretization.

There have been undertaken a series of measures and there were developed protection systems with the aim to reduce the vulnerabilities or to manage in an optimal manner the consequences of a hazard or an attack, so that the disablement or destruction of critical infrastructure would have a small probability, and in case they nevertheless occur, their effects on individual and community to be minimal and to be able to be rapidly removed; however, we reckon there are also necessary the following measures:

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<sup>12</sup> Stephen Flynn, Sean Burke, *Brittle Infrastructure, Community Resilience, and National Security*, TR News 275, July-August 2011, p.5

- to conduct a reliable assessment of the type and extent of the main risks and threats. Instead of focusing exclusively on terrorism, critical infrastructure protection should also aim the vaster panoply of threats and to broadly approach the vulnerability of extremely complex systems;
- to better understand the vulnerabilities, including through a review of the interdependencies between critical infrastructures. It turns out that due to the increasingly high complexity of systems, the current method is no longer sufficient to grasp the extent of the problem;
- to cooperate more closely in everything related to critical infrastructure protection. In this regard, an effective partnership between state and the economic environment is indispensable.

Of course, it is impossible to protect fully and at any time all critical infrastructures. But assessing the threats to their security, system and process vulnerabilities to dangers and threats, strengthening cooperation and the implementation of a system for identifying, monitoring, evaluating, securing and protecting critical infrastructures creates prerequisites for the critical infrastructures security to be managed in an efficient way.

### **Conclusions**

Economy and security reinforce each other: the more pronounced is the sense of security of individuals and communities, the more are created the conditions for a solid growth; the more developed the economy, the more strengthened is the individual and community security.

The security state of the individual and of the community which he belongs to is closely correlated and determined by the proper functioning of critical infrastructure networks, their need of being protected constituting an essential condition to avoid serious disruption of society. The connections between the functionality and viability of critical infrastructures, on the one hand, and, on the other, the fundamental elements of social and economic, political and military life of a state significantly strengthen the link between the security element and the role of infrastructure systems in the sustainable development of society.

Although there are searched and implemented the most effective protection solutions and measures, it is almost impossible to be able to completely protect a critical infrastructure. However, we must make every effort to enhance as much as possible the protection level and to find solutions that are adapted and covering all categories of critical infrastructure that must be protected.



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