

4

2017

INTERNATIONAL EDITION

VOJNO DELO

ISSN 0042-8426 ■ UDK 355/359

INTERNATIONAL EDITION

INTERDISCIPLINARY SCIENTIFIC THEORETICAL JOURNAL

VOJNO DELO

4

2017

MINISTRY OF DEFENCE OF THE REPUBLIC OF SERBIA

VOJNO DELO

INTERDISCIPLINARY SCIENTIFIC
THEORETICAL JOURNAL

Vol. 69, Issue 4/2017, (May-June 2017)

MINISTRY OF DEFENCE OF THE REPUBLIC OF SERBIA

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Manuscripts are not returned

The first printed issue of the *Vojno delo* appeared on 1st February 1949.

Printed by Vojna štamparija – Beograd, Resavska 40b

e-mail: vojna.stamparija@mod.gov.rs

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STRATEGIC ENVIRONMENT INFLUENCE ON DEVELOPMENT OF DEFENSE OF THE REPUBLIC OF SERBIA*

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Strategic environment of the Republic of Serbia is determined by the operation of a large number of factors, which affect the defense system and its development in various ways. In the area of development planning of the defense system, the overriding purpose of analysis and assessment of the strategic environment is review and cogitation of phenomena and trends, and their influence on the development of the defense system. This paper analyzes the basic phenomena and trends in the field of strategic environmental factors and their individual, as well as hybrid, impact on the development of the defense system.

For the sake of predictable and successful implementation of the defense system purpose, defense planning holders pay special attention to the analysis and assessment of the strategic environmental factors such as security, political, economic, social, technological, informational, ecological, and others. Strategic environmental factors are interdependent and connected, and they make an inseparable whole – the reality that affects functioning and development of the defense system.

Knowledge and experience of defense analysts and planners is important for the quality assessment of the strategic environment impact and in the end it is crucial for proposing management decisions in order to ensure the effective functioning and development of the defense system. In the process, the application of scientific and field-proven methods, tools and techniques is inevitable.

Study of the strategic environment impact creates the conditions for continuous and preventive action for timely adjustment of the defense system to new circumstances, thus enabling the successful execution of the defense tasks and protection of the defense interests.

Key Words: *analysis, assessment, strategic environment, strategic context, planning, development, defense system*

* The views expressed in this article are those solely of the author and do not reflect the policy or views of the Ministry of Defense of the Republic of Serbia.

Introduction

Regardless of the social system, the political structure or economic power, countries make great efforts to ensure the development of the defense system and its adaptation to current and estimated challenges, risks and threats (CRT) to security. The development of the defense system is necessary to ensure the protection of state interests, both in the state, whose security is threatened and those that aspire to maintain different forms and levels of power. The continuous improvement of capabilities and the overall condition of the defense system is an indication that the state takes care of the security and takes measures to create conditions to counter different forms of threats to the security of the society.

The development of the defense system represents *the totality of qualitative and quantitative changes which the system, adapting to changes in the environment and the available resources, translates from the existing state to the new, more effective and more efficient one*. In order to reach a qualitatively new state of the defense system, it is necessary to have opportune, system-oriented and resource-supported management decisions based on the argumentative, realistic and sustainable analyses and strategic environmental assessments, as well as the needs and possibilities.

The overall goal of any defense system, as well as the defense system of the Republic of Serbia, is to possess capabilities for a successful response to the challenges, risks and threats, and different forms of endangering the state and the society. As the range of threats to security in the modern world expanded, with a tendency for further expansion, defense systems are taking continuous measures to adapt to the changing environment. Therefore, the development of the defense system and its capability for a timely and adequate response to jeopardizing security covers different aspects of the capability development. It ranges from capabilities to defend against armed threats, terrorism, natural and technological disasters. It is desirable that reaching capabilities is a planned and controlled process of the transition of the defense system from the current conditions to the desired ones. In addition, the new defense system is characterized by adaptability to new circumstances, the strategic environment and the capability to perform successfully the tasks of the defense and protection of the defense interests.

This paper mainly deals with the analysis of the strategic environment and its impact on the development of the defense system of the Republic of Serbia, as an integral part of development planning of the defense system.

Strategic environment and strategic context of the Republic of Serbia

Among professionals and academics there is no single interpretation of the strategic environment concept, as well as its content. In the paper, the *strategic environment* means a *system of the (mutual) relations and connections of a large number of factors that have different influence on a certain subject*. Strategic environmental factors are: security, political, economic, social, technological, informational, ecological, and oth-

ers.¹ The subject in the paper means the state, the defense system of the state or other organized entity.

The strategic environment and the factors that shape it manifest individual, cumulative and hybrid impacts on a given subject. The *individual impacts* mean the isolated effects of certain factors. Although each impact in practice is relatively rare, there are circumstances when a particular factor exerts an operation that is separate from the operation of other factors. Their discussion requires specific knowledge of certain fields.

The cumulative impacts are the overall, combined effects of multiple factors. Such effects are common and distinctive due to synergy in the functioning of several strategic environmental factors. Therefore, consideration of the cumulative impact is extremely complex and requires the possession of fundamental and specific knowledge and information, and the use of special tools and techniques. It is necessary for the objective establishment of a large number of connections between the strategic environmental factors and recognition of their mutual influence.

The hybrid impacts are specific impacts generated by combining or mixing several individual and / or cumulative impacts.² In contrast to the cumulative impact, which is the joint action of several different impacts that retain their importance, the hybrid impacts are new entities formed by 'merging' several different impacts. The new ones have specific nature and characteristics, different from the nature and characteristics of the various impacts they arise from. Identifying and reviewing the hybrid impact requires a high level of interdisciplinary knowledge and experience, as well as the use of specific tools and techniques.

By their functioning, strategic environmental factors establish the so-called *strategic context*, which can be defined as a *set of manifest forms of individual, cumulative and / or hybrid operation of strategic environmental factors on the given subject, its functioning and development*.

Each entity whose condition, projection and development are considered from the perspective of the strategic environment has a specific and typical strategic context. There are not two entities with the same strategic context. The strategic context is the dynamic manifestation of the relationship between the observed entity, i.e. state or defense system and its strategic environment i.e. factors. Thus, a specific strategic context has been detected for the Republic of Serbia and its defense system that makes a series of phenomena resulting from the interaction of the Republic of Serbia and the strategic environmental factors (Figure 1).

¹ The factors are all fruitful conditions, i.e. all objects (things, processes, properties) whose operation is involved in production of the appearance date (regardless of whether they are necessary or sufficient), translation into English. Михајло Марковић, Филозофске основе науке, САНУ, Београд, 1981, 639.

² The word 'hybrid' originates from the Latin word 'hibrida' which has several meanings. In the On-line Merriam-Webster Dictionary, <https://www.merriam-webster.com/dictionary/hybrid>, visited on 28th March 2017, word 'hybrid' is defined in the following way: 1. Something that is formed by combining two or more things; 2. Something that is of mixed origin or composition; 3. Something heterogeneous in origin or composition; 4. Something that has two different types of components performing essentially the same function.

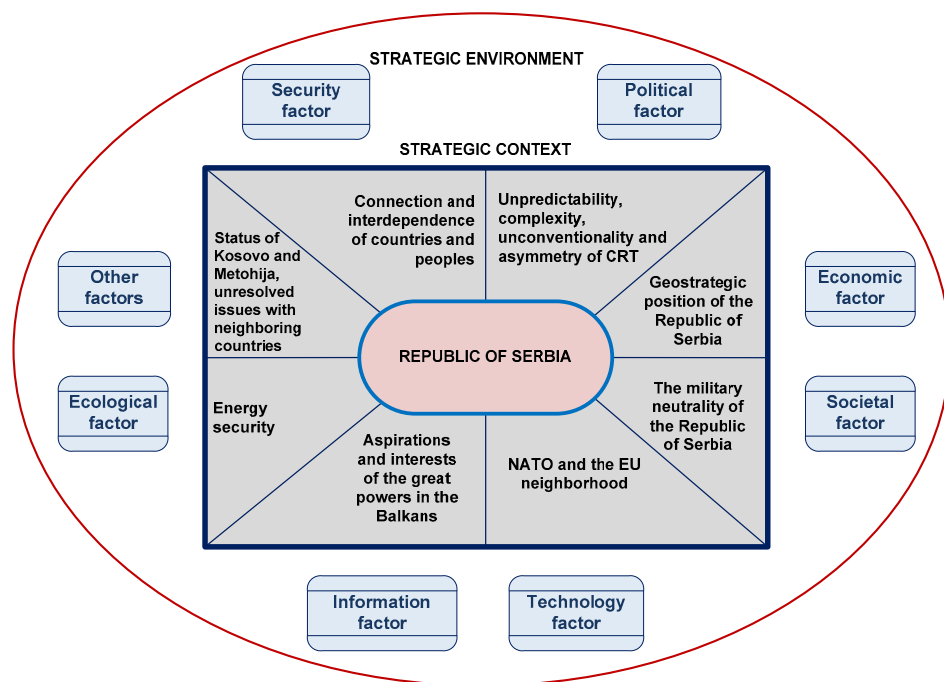


Figure 1 – Relationship between the defense system of the Republic of Serbia strategic environment and strategic context

The strategic context of the Republic of Serbia, which the defense system operates and develops in, is characterized by cohesion and interdependence of countries and peoples that arose as a result of the rapid penetration of the market-oriented economy and technological innovation. In addition, the existence of challenges, risks and threats that transcend national borders and whose main features are unpredictability, complexity, unconventionality and asymmetry are also the influential factors on the strategic context of the Republic of Serbia. An important manifestation of the strategic context is the geostrategic position of the Republic of Serbia in the middle-crossing of important routes, which causes its increased vulnerability to various forms of threats. Furthermore, the Republic of Serbia as a military neutral country in respect of military alliances is trying to build its own defense capabilities and capacities unlike the countries from the region that fulfill or strive to achieve their security within the framework of NATO.

The specificity of the strategic context of the Republic of Serbia provokes aspirations and interests of the great powers in the Western Balkans, which can make a significant impact. A special aspect of the strategic context makes energy security, and the fact that the availability of energy will impact on the development of the whole society. Finally, the Republic of Serbia can be affected by a number of unresolved issues that it has with neighboring countries, ranging from border and the international law issues to the humanitarian and social ones. However, it is possible to add a number of other phenomena to the abovementioned key events that shape the strategic context of the Republic of Serbia.

The practice shows that it is useful, for analytical purposes, to distinguish between the strategic environment and the strategic context having in mind that the strategic environment determines the strategic context. For the objective review of the strategic context in which the Republic of Serbia and its defense functions , as a prerequisite for development planning of the defense system, it is necessary to examine thoroughly and systematically the impact of strategic environmental factors.

The influence of strategic environmental factors on the development of defense system

The main purpose of an analysis of the strategic environmental factors is comprehension and deliberation of events and trends in a complex environment, and their impact on the functioning and development of the monitoring entity. When it comes to the Serbian defense system, its operation and development is determined by the nature and character of operation of the strategic environmental factors of the Republic of Serbia.

Knowledge and experience of analysts and planners is important for the quality assessment of the strategic environmental impact and in the end, it is crucial for proposing management decisions in order to ensure effective functioning and development of the defense system. Moreover, the application of scientific and field-proven methods, tools and techniques contributes greatly to the quality of the analysis and grounded argumentation that supports the decision-making process.

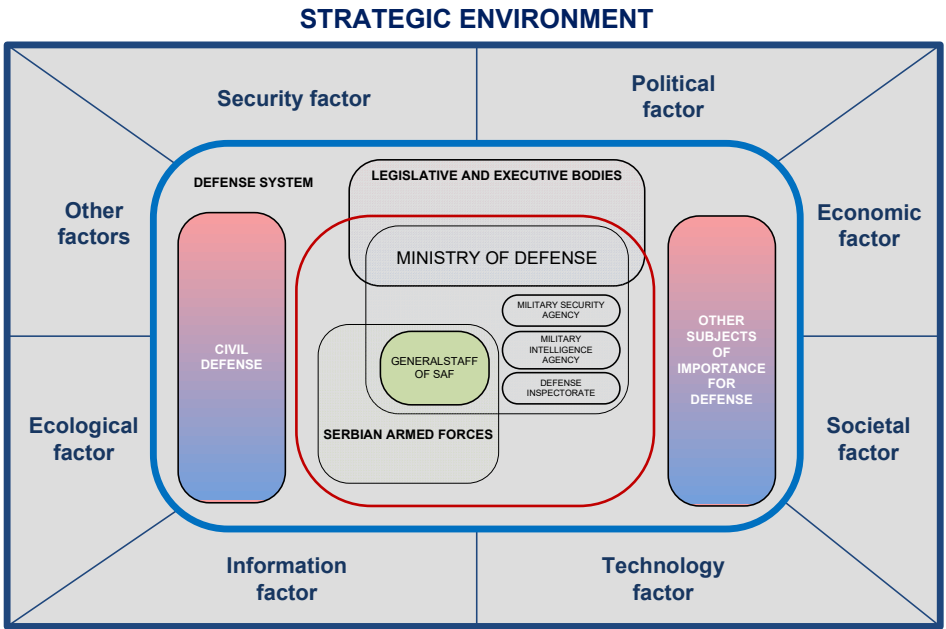


Figure 2 – The relationship of strategic environment (factors) and the defense system of the Republic of Serbia

Strategic environmental factors, i.e. security, political, economic, social, technological, informational, environmental, etc. make individual, cumulative and hybrid impacts on the development of the defense system of the Republic of Serbia. These impacts may manifest themselves in the defense system as a whole or to individual elements of the defense system (Figure 2).

A special aspect of the strategic environmental impact factors is their influence on the specific functions and/or processes of the defense system. The following will be considered as characteristic phenomena and trends within specific factors abilities with regard to the possible impact on the development of the defense system.

Security factor

Regardless of the reached development of the society, the emerging large number of conflicts and tensions of different shape and character are still in place. The outbreak of a global armed conflict and a conflict in the Balkans in the coming period is unlikely, but we can expect the continuation of tensions in the regions where the interests of major and regional powers are in conflict. The Republic of Serbia is, due to its geostrategic position, particularly exposed to this trend, which is necessary to build friendly relations with countries and peoples, but also the respectable armed forces that will be a powerful deterrent element.

The armed conflict in which the Republic of Serbia could participate would probably be dissymmetric or asymmetric in its character. To counter potentially more powerful opponent, the defense of the Republic of Serbia should be based on the strategic concept of the total defense. The defense system should have a wide range of capabilities that will enable it to perform different operations in peace, a state of emergency and war. For a successful response to the threat of a dissymmetric armed conflict, the Republic of Serbia needs fast, efficient, elastic and flexible forces capable of inflicting unacceptable losses on the enemy. Threats to the security of the Republic of Serbia in an asymmetric armed conflict are likely to be of a hybrid character, which requires the capabilities of the conflict prevention, as well as a comprehensive response. Early warning capability should be developed for both types of a potential conflict.

One of the characteristics of a contemporary armed conflict is that it is more conducted in urban areas, which requires further development of capacity of the defense system for urban warfare. This would include not only general doctrinal adjustment with a focus on the development of the doctrine of warfare in populated areas, but also the development of specific tactical actions and procedures, as well as combat platforms. Particular attention should be paid to developing a system of civil protection and training of the population for the defense. Proliferation of nuclear, chemical and biological weapons and their components could represent the particular threat to the Republic of Serbia. This requires the capabilities of the defense system for the nuclear, chemical and biological protection of the defense forces and the population.

The migration trend from countries affected by an armed conflict, instability, poverty and natural disasters through the so-called Balkan route and the Republic of Serbia is likely to continue in the future. This could increase the risk of the transmission of the infectious diseases, as well as the possibility of a pandemic. In line with this, the defense system has to develop specific defense capabilities to protect the defense forces and the population.

Political factor

Political factor has a key effect on the development of the defense system. The continuous political struggle of the great powers for supremacy in the Balkans and the emergence of new regional powers could create the potential to destabilize the region. In order to prevent any attempts to compromise its own security, the defense system of the Republic of Serbia should possess deterrent and preventive capabilities. The conflicting interests of great powers in the Balkans can have a positive impact on the defense system, so it would open the possibility of diversified development in accordance with the interests, needs and possibilities of the Republic of Serbia. However, it could also increase political pressure on the Republic of Serbia, especially in the part related to the choice of modern weapons and military equipment, which would require the conduct of fundamental defense analysis with the clear risks and benefits assessment for the Republic of Serbia and its security.

The integration of the Republic of Serbia into the European Union would have a positive impact on the development of the defense system in the form of acceptance of common standards, cheapening certain projects of importance for the defense, technology transfer, development of specific defense capabilities, etc. Furthermore, it is expected that the development of capabilities and interoperability of the defense forces for participation in peacekeeping operations under the auspices of the United Nations and the leadership of the European Union makes a positive impact on raising the total capacity of the defense system of the Republic of Serbia.

The enhancement of cooperation with neighboring countries can positively influence the development of the defense system in the form of carrying out joint projects in order to build defense capabilities. The obstacle to the cooperation is constant fluctuations in the neighborhood policy of the Western Balkan countries and the European Union and its member states policy conditionality for admission of the Republic of Serbia.

The instability in the Autonomous Province of Kosovo and Metohija and sensitive political and security situation in the municipalities of Presevo, Bujanovac and Medvedja require the increased engagement of the defense forces and spending limited resources, which in the long run, may adversely affect the development of the defense system. The conflicting views of the Republic of Serbia with the United States, a large number of the European Union countries and the Republic of Albania regarding the status of the Autonomous Province of Kosovo and Metohija weaken the European Union neighborhood policy and contribute to the instability of the political situation in the region. Political stability in the country and further development of democracy can exercise a positive influence on the development of the defense system in the sense of stable priorities and attitudes towards the defense as a function of the state.

Economic factor

Macroeconomic consequences of the global financial and economic crisis, and global financial instability will be expressed and difficult to predict, and will have a strong impact on the economy of the Republic of Serbia. The Republic of Serbia with its economic reforms seeks to increase the inflow of foreign capital, achieve economic growth and reduce high public debt, high unemployment and poverty of the population, and ensure the competitiveness of the national economy on the world market.

Strengthening the economy of the Republic of Serbia will make twofold impact on the development of the defence system. On the one hand, it is expected that the improvement of the economic situation will positively affect the financing of the defense system and facilitate its development in accordance with the priorities, needs and possibilities. On the other hand, better economic situation will complicate the recruiting process for the defense system with appropriate staff, particularly the specific specialties that are required on the labor market and which are better paid. In this environment, a special challenge will represent the recruitment of the professional soldiers for the Serbian Armed Forces, which would require the provision of appropriate conditions that will constitute the motive for employment and work in the Serbian Armed Forces .

The modern weaponry and military equipment are more expensive, which reduces their availability for the growing number of countries. Such trend suggests that countries should pool their resources and capacities to achieve the necessary capabilities, and even to provide the joint purchase and use of resources, e.g. protection of the airspace safety. In the case of the defense system of the Republic of Serbia, the subject of reflection could be areas of common interest with our neighbors, which would reduce the total cost of procurement, maintenance, development, production and the like.

The trend of establishing public-private partnerships in the field of development and production of weapons and military equipment at aglobal level can have a positive impact on the improvement of production capacities of the Serbian Defense Industry. This could be important especially in terms of taking market risks, the introduction of new technologies and the penetration of new markets. Indirectly, this would allow equipping the defense system of the Republic of Serbia with modern weapons and military equipment of national production and reducing dependence on imports.

However, if economic flows have a negative trend in the financing of the defense system of the Republic of Serbia, it can become even more restrictive and will require significant reductions in defense potentials. Such trend could limit or stop completely the development of the defense system, having a negative impact on equipping with the armament , the standard of living of the defense system members, as well as the overall preparation of the defense forces for the defense of the Republic of Serbia.

Societal factor

The demographics of the Republic of Serbia is characterized by the trend of negative population growth rate and the comparatively unfavorable age structure of the population. Also, there is more intense migration of population from rural to urban areas, and an increase in the uneven population density, especially in the border regions. These trends in the broadest sense could affect the quantity and quality of human resources for the defense of the Republic of Serbia, and could have the negative impact on the age structure of the defense forces in particular.

The Republic of Serbia is characterized by the diversity of national and religious structure of the population, and therefore its value orientation, which can complicate preparation of the society for the defense. In this sense, it would be necessary to develop mechanisms to motivate the population to participate in the defence system and the defense preparation of the country.

The departure of highly-educated population abroad or 'braindrain' has a negative impact on the recruitment quality of the defense system. Therefore, it is necessary to take appropriate measures for the retention of highly qualified personnel in the defense system. Another aspect is the development of the military education system, which should provide the defense system with appropriate personnel profile, which will be motivated to remain in the defense and develop professionally.

Urbanization, as a decades-long trend, along with the uneven population density can complicate defense planning, mobilization, and strategic and operational development of the defense forces. In addition, this could lead to the increased exposure of the defense forces during operations, reducing the capacity of the territory, as well as the difficulty of disposal and supply of the defense forces and the population in a state of war.

Besides the urbanization, changing lifestyle and habits also negatively affect the overall ability of the population, and therefore the overall ability of the defense system of the Republic of Serbia. This requires taking appropriate measures to halt the negative trend and create conditions for the improvement of psychophysical health of the population and the defense system. In this regard, the promotion of sport and physical culture is of special importance.

Changing the system of social values may adversely affect the defense of the country and the overall ability of the defense system. In the long term, the defense system can face not only with low interest for the employment and commitment in the defense system, but also for the defense of the country as a whole. In this regard, the defense system should promote civilization values that 'could survive the court of time', but the specific values based on the historical experience that the Serbian society inherited, where the relationship to their own state and defense has a special place.

Technology factor

The development, a significant breakthrough and achievements in technology are the trends that could affect the gap in the coming period and increase the technological backwardness of the defense system of the Republic of Serbia in correlation to the defense systems of the most developed countries of the world being the carriers of the technological development. This will require the Republic of Serbia to take special measures to ensure monitoring of the key trends in the development of the defense technologies, weapons and military equipment. A special aspect could represent the availability of new technologies conditioned by other factors, e.g. foreign political decisions. This could be the case even with the Republic of Serbia if it has financial possibilities for the purchase.

All current trends of rapid and innovative development of arms and military equipment, as well as its relatively rapid introduction into the armed forces and the implementation in the operations requires the defense system of the Republic of Serbia not only to monitor the development of arms and military equipment continuously, but also to timely develop the defense system readiness capabilities for an appropriate response.

The development of the defense industry is of special importance. Raising the technological level and capacities of the Serbian Defense Industry would have a positive impact on the defense potential of the country and reduce dependence on arms and military equipment imports. In this regard, cooperation with other countries and international institutions in the implementation of joint projects could reduce costs and achieve synergy of knowledge and experience.

Possibilities of misuse of scientific and technological achievements by extremist and terrorist organizations should be given special attention because they can pose a serious risk to the security of the Republic of Serbia. It is therefore necessary that the defense system develops specific skills for monitoring, preventing and combating terrorism and other forms of threats to security.

The defense technologies are increasingly geared towards the development of a product with so-called 'dual-use'. The increased use of such products may favorably affect the reduction of costs and the duplication of capacity within the defense system without compromising the ability to respond to challenges, risks and threats to security.

Bearing in mind the 'vulnerability' and 'sensitivity' of modern technologies, the particular aspect of the development of the defense system should include the preservation and development of alternatives to modern technologies. In this way, it will increase the toughness and resilience of the defense system.

Information factor

Sharp, fast and intensive development, but also the rapid obsolescence of equipment and resources, leads to the growth of the need for constant investment funds in order to monitor the needs and trends. Popularization and expansion of fields of use increase the availability and reduce the cost of equipment and resources. On the one hand, it allows wide application in the defense system of the Republic of Serbia, and on the other hand it requires an increased need for security protection.

The accelerated connection of computer networks, digitization and accessibility of data increases the ability of the defense system, but also increases its exposure to attacks from the cyber space, which requires the accelerated development of capabilities for the cyber defense. The widespread use of a variety of sensors makes engagement of the defense system more complex and requires the elaboration of specific techniques and operational procedures to reduce the potential detection by the enemy.

The widespread use of modern information and communication technology can increase the sensitivity and vulnerability of technologically superior opponents. In this sense, the development of the defense system should be directed to the development of capabilities for disabling information and communication systems of the enemy.

The increasing use of information technology in the entertainment industry, e.g. video games and telecommunications raises the possibility that it can be used in a simple and efficient way to improve the qualification of certain specialties in the defense system. Joint projects with national and foreign partners could help to share the costs of production, innovation and transfer of information technology for the defense purpose.

Due to the increasing dependence of the defense system on information factors, it is necessary to develop alternatives that involve the operation of the defense system of the Republic of Serbia in difficult conditions of restraint or deficiency of information and communication support.

Ecological factor

Climatic changes have produced a number of impacts on the defense system. On the one hand, the defense system is increasingly engaged in combating natural disasters and accidents that occur as a result of climatic change and environmental degradation,

which requires the development of specific skills, capabilities and capacities. On the other hand, the defense forces are engaged in climatic changes and other conditions, which require their adaptation to changes in the physical environment.

Environmental pollution will negatively affect the supply of the defense forces with food and water. In this sense, it is necessary to develop specific measures and mechanisms to ensure timely and regular supply.

The engagement of the defense forces of the Republic of Serbia in extreme weather conditions, fight against natural disasters and technological accidents, as well as provision of assistance to the affected population, could increase the need for adapting the doctrine of use of the defense forces, armaments and military equipment, as well as the procurement of specific equipment for the protection of people and equipment.

Contemporary armed conflicts, regardless of their intensity and duration, lead to the environmental degradation, which is further fuelled by technical and technological accidents due to the ravages of a war. Such a potential state requires the defense system of the Republic of Serbia to build capacity for the elimination of consequences.

A special aspect of environmental issues is disposal, storage and destruction of obsolete weapons, military equipment and explosives. This makes the defense system of the Republic of Serbia take appropriate measures for the release of obsolete weapons, military equipment and explosives, as well as planning costs for their storage and dismounting.

Conclusion

The strategic environment of the Republic of Serbia makes the system of mutual relations and connections of the security, political, economic, social, technological and other factors which affect the Republic of Serbia and development of its defense system in various ways. Strategic environment as a whole and its factors produce individual, cumulative and hybrid impacts on the development of the defense system.

The development of the defense system should ensure its continuous compliance with the state of the strategic environment. For adequate planning of the defense system it is necessary to perform analysis of the trends in the context of strategic environmental factors. The primary purpose of this analysis is structuring the complex environment in which the defense system works, and its reduction to clear and predictable indicators in order to create conditions for the fulfillment of the social role of the defense system.

Structuring the complex strategic environment is done primarily for analytical purposes. The continuous analysis of the situation and trends of individual factors of strategic environment can be identified by their specific effects on the development of the defense system. In reality, factors are mutually interdependent and connected, making an inseparable whole, the reality that affects functioning and development planning of the defense system.

In the analysis of strategic environment it is necessary to apply scientifically based and practically proven methods, tools and techniques. Objectivity and arguments are of crucial importance for the quality assessment of the impact of environmental factors on the strategic defense system and in the end, it is essential for the proposal, and then decision-making in order to ensure effective functioning and development of the defense system. Thus guided, the development of the defense system can trigger off social development and at the same time fulfill its purpose - the protection of the defense interests of the Republic of Serbia.

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MODEL OF SCENARIO DEVELOPMENT IN DEFENSE PLANNING – INTEGRATION OF SCENARIO AND DECISION – MAKING METHODS

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It is almost impossible to predict the future environment today, so instead of using prediction different methods of scenario development are used. Scenario as a hypothetical situation for future environment enables exploration of different possibilities of environment development in the future. Many methods based on a morphological analysis are used to develop scenarios. Numerous configurations of morphological fields prevent further use of scenarios and a practical description of the various scenarios. It is possible to reduce the number of configuration of morphological fields, classify configuration according to the different scenario classes and determine the representative configuration for the worst and best scenario case for each class of scenarios by integrating the method for scenario development with the decision-making methods. In this way further processing and description of scenarios is enabled, thus fulfilling a practical role of scenarios in the planning process.

Key Words: scenario development methods, morphological analysis, decision-making, classification, clustering, K-means, decision tree

Introduction

One of the preconditions for successful planning is to assess the environment, which ensures understanding of the environment in the future and the possibility of rapprochement of the organization with future environment requirements. When it comes to the defense system, the environment assessment is even more important since the main mission of the defense system is the protection of national interests from the challenges, risks and threats that jeopardize them. The complexity of the environment is characterized by mutual influence of many different factors, which the environment is composed of. Rapid technological advances and changes in the economic, social, political and other spheres of life cause the environment to constantly change.

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Due to the complexity of environment context it is impossible to predict future, so more frequently the term environment assessment is used. In contrast to the predictions, the basis of environment assessment is the development of different variants of the environment in the future. In order to describe the different variants of the environment in the future different methods of scenario development are used, so that each variant is represented with a single scenario. The most frequently used methods of scenario development are morphological analysis and methods based on morphological analysis such as Battelle and FAR analysis (Zwicky 1948, Kosow / Gaßner 2008, Nguyen / Dunn 2009, Kovač / Stojković 2009). The result of applying morphological analysis is represented by a large number of configurations. In real situations, when it comes to a large number of factors, where many of them may have numerous values, the number of consistent or compatible configuration can be several million. Too many configurations, which are the result of morphological analysis, do not allow efficient data processing, as well as identifying a limited number of configurations that will be used to describe the scenario.

The basic question to be answered is: *How to reduce the number of configuration of morphological fields?* In the literature, in the field of management and decision – making theory, different ways of reducing the number of configurations can be found. Some of the possible ways is the application of classification and clustering to reduce the number of configurations and identify scenarios (Kosow / Gaßner 2008, Nguyen / Dunn 2009, Fotr, et al. 2015, Calvo-Zaragoza, J.Valero-Mas/R.Rico-Juan 2015). Despite great literature dealing with the problems of reducing the number of configurations, there is no unique and systematic approach that integrates the methods of decision – making theory with the methods of scenario development.

This paper suggests a model that integrates the scenario development methods with the decision – making methods, principally classification and clustering supported by the methods of group decision-making and multi-criteria decision – making.

Model of scenario development

Scenario has double meaning (Kosow and Gaßner 2008): firstly, scenario is a description of a possible future situation; secondly, scenario includes a path of development that leads to some future situation. The term scenario planning prevails in the literature. This term is used to indicate the process of scenario development. The outcomes of scenario planning are: changed organization thinking, informative narrative or stories about possible or plausible future, improved decision - making about the future and enhanced human and organization learning and imagination (Chermack 2011). The scenario development identifies the set of possible situations in the future, where each can happen, but none is completely certain. The range of possible developments of values of environmental factors or positive and negative deviation from the value which is obtained on the basis of the trend function at a certain moment can be higher or lower.¹ If the time distance of estimation is closer to the present time, the range of deviation is smaller and as assessment goes to the longer term, the range is larger (Kosow / Gaßner 2008). This effect is usually called funnel model in literature (Figure 1).

¹ See more about environmental factors, values of the environmental factors and trend analysis in Mitić, Kovač / Kankaraš 2017.

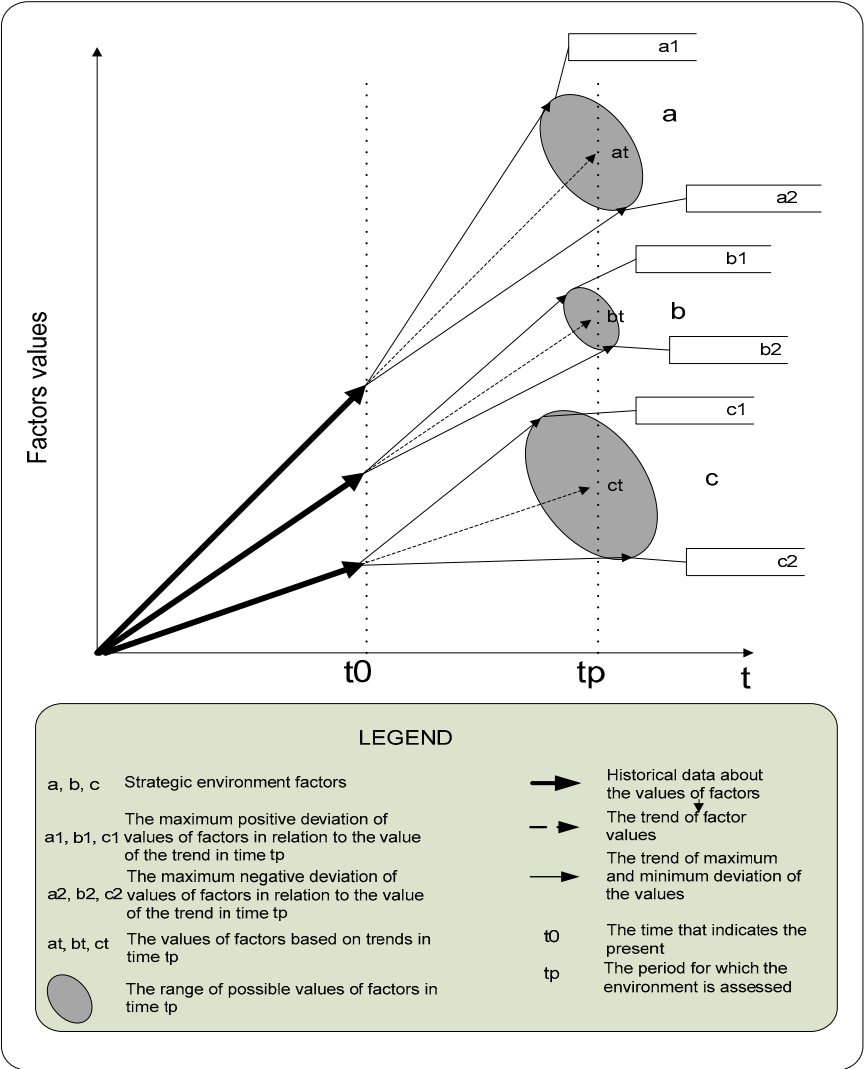


Figure1 – Funnel model of values of environmental factors (Mitić, Kovač/Kankaraš 2017)

In accordance with the description of the funnel model shown in the Mitić, Kovač / Kankaraš 2017 the combination of certain values of environmental factors results in different scenarios of environment. Generated number of scenarios depends on a number of factors in each scenario, as well as the possibility of combining specific values of environmental factors, so that the number of scenarios can be very large. It can be concluded that the generated scenarios also have their own funnel model, which will be determined by the different values of environmental factors that can be combined with each other.

A precondition for the application of the scenario development model are predetermined environmental factors, examined mutual influence of environmental factors and estimated or calculated trends of the value of environmental factors in the time the estimation is performed.² According to many authors, the best results in the development of scenarios are provided by integration of several methods which can reduce the disadvantages of certain methods and get better results. A possible model of scenario development is shown in Figure 2.

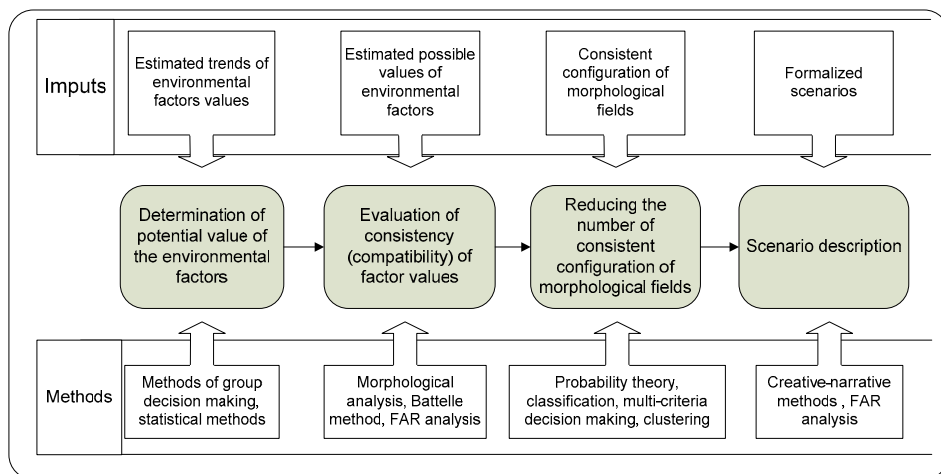


Figure 2 – Scenario development process

Scenario Development, as the phase of the Environment Assessment process, consists of the following steps: determination of a potential value of the factors, evaluation of consistency (compatibility) of factor values, reduction in the number of consistent configuration of morphological fields and description of the scenario.

Determination of a potential value of the environmental factors

The determination of a potential value of the environmental factors is the first step in the process of scenario development in which the funnel of possible values of environmental factors is expanded (Figure 1). The determination of potential values of the environmental factors begins by identifying a set of possible values that is limited by the maximum and minimum deviation of factor values in relation to the estimated or calculated trends. Potential values of the environmental factors are estimated or calculated on the basis of the method that is used for trend assessment. If the trends are calculated using statistical methods,³ the minimum and maximum deviation from the trend values is

² See more about processes of determination of environmental factors, collection of data on values of the factors and calculation and assessment of trends of the values of environmental factors in Mitić, Kovač / Kankaraš 2017.

³ If historical data on the values of environmental factors are available, if there is a connection between the data and if the data is numeric (quantitative), or if qualitative data can be transformed into quantitative by using fuzzy logic.

calculated using the standard deviation. If the trends are estimated using the method of group decision – making (e.g. Brainstorming and DELPHI),⁴ then methods of group decision – making (Čupić / Suknović 2008) will also be applied for the assessment of the maximum and minimum deviation from the estimated trend in the future.

After identifying a set of possible values of environmental factors, the overall field of possible values is divided into three to five subsets. On this basis a matrix of morphological fields or morphological boxes is formed (Zwicky 1948, Zwicky / Wilson 1967), which is shown in Table1.

Table 1 – Example of morphological field

Environmental factors	F1	F2	F3	F4	F5	F6
Values of environmental factors	f11	f21	f31	f41	f51	f61
	f12	f22	f32	f42	f52	f62
	f13	f23	f33	f43	f53	f63
		f24		f44		
				f45		

Only factors that have the greatest mutual influence will be in a single morphological field whereas factors that have no or small mutual influence are discarded or grouped into different morphological fields. DEMATEL method can be used to test the mutual influence of environmental factors (Bagheri Morghaddam, et al. 2010).

Evaluation of consistency (compatibility) of factor values

Evaluation of consistency (compatibility) of factor values is based on the application of Morphological analysis, Field Anomaly Relaxation analysis - FAR or Battelle methods. Morphological analysis is a method of structuring and researching a complex and multi-dimensional problem based on the expert assessment of the mutual consistency of individual parameter values (Zwicky 1948, Zwicky / Wilson 1967, Ritchey 2006, Kosow / Gaßner 2008, Nguyen / Dunn 2009, Fotr, et al. 2015). Each parameter of morphological analysis is a certain factor from the environment whereas parameter values are subsets of the possible values of environmental factors. The total number of combinations of morphological box (configuration) is equal to the product of the total number of possible values of all factors. Using an example in Figure 3 the total number of configuration is: $3 \times 4 \times 3 \times 5 \times 3 \times 3 = 1620$. The number of configurations can significantly increase to several million by increasing the number of factors, and also the value of factors. The next step is estimation of factor values consistency. Consistency is estimated by the association of the value of the factors with the values of all other factors. The experts as-

⁴ If historical data on the values of environmental factors are not available, if there is no correlation between the data and if nominal scale is applied to express the value of environmental factors, or factor values are qualitative.

sess whether it is possible that two factor values exist simultaneously in a future scenario, or if they can coexist together (Figure 4).

	f11	f12	f13	f21	f22	f23	f24	f31	f32	f33	f41	f42	f43	f44	f45	f51	f52	f53	f61	f62	f63
f11																					
f12																					
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Figure 3 – Example of the consistency (compatibility) matrix

In Figure 3, marks + and - indicate assessment of the consistency of the values of the environmental factors whereas the red numbers in brackets represent the example of the compatibility assessment. Compatibility is most often expressed in scale from one to five, where 1 is inconsistent, 2 is weak inconsistency, 3 is neutral or no mutual influence, 4 means poor compatibility and 5 is strong compatibility (Kosow / Gaßner 2008).

In practice, usually more than 90% of the configuration is not consistent (Ritchey 2006), thereby significantly reducing the total number of consistent combinations that are the subject of further analysis. Despite the significant reduction in the number of possible consistent combinations when it comes to large morphological box with ten or more factors, there is still the problem of a large number of consistent configurations that are difficult to be further processed. Application of Field Anomaly Relaxation analysis and Battelle methods allows further reduction in the total number of configurations. Battelle method is basically the same as the morphological analysis, and the difference is reflected in the assessment of consistency or compatibility (Nguyen / Dunn 2009). Morphological analysis is the basis of FAR analysis, as well as the application of Battelle method. However, in addition to consistency of value pairs, consistency of overall configurations is also estimated (Nguyen / Dunn 2009).

Reduction in the number of consistent configuration of morphological fields

Reduction in the number of consistent configuration of morphological fields is the third step in the process of scenario development that creates the optimum number of scenarios. Reduction in the number of configurations can be achieved in one of following ways:

- 1) Criteria of compatibility (Nguyen / Dunn 2009, Kosow / Gaßner 2008);
- 2) Criteria of probability (Kosow / Gaßner 2008, Nguyen / Dunn 2009, Fotr, et al. 2015, Turoff, et al. 2016, Medina, de Arce and Mahía 2016);
- 3) Classification (Calvo-Zaragoza, J.Valero-Mas and R.Rico-Juan 2015, Kwakkel / Jaxa-Rozen 2016, Damodaran 2008);
- 4) Clustering (Nguyen / Dunn 2009, Fotr, et al. 2015, Changyong, Joram and Sungjoo 2016).

The methods of classification and clustering are applied in this paper to reduce the number of configuration, which is shown in Figure 4.

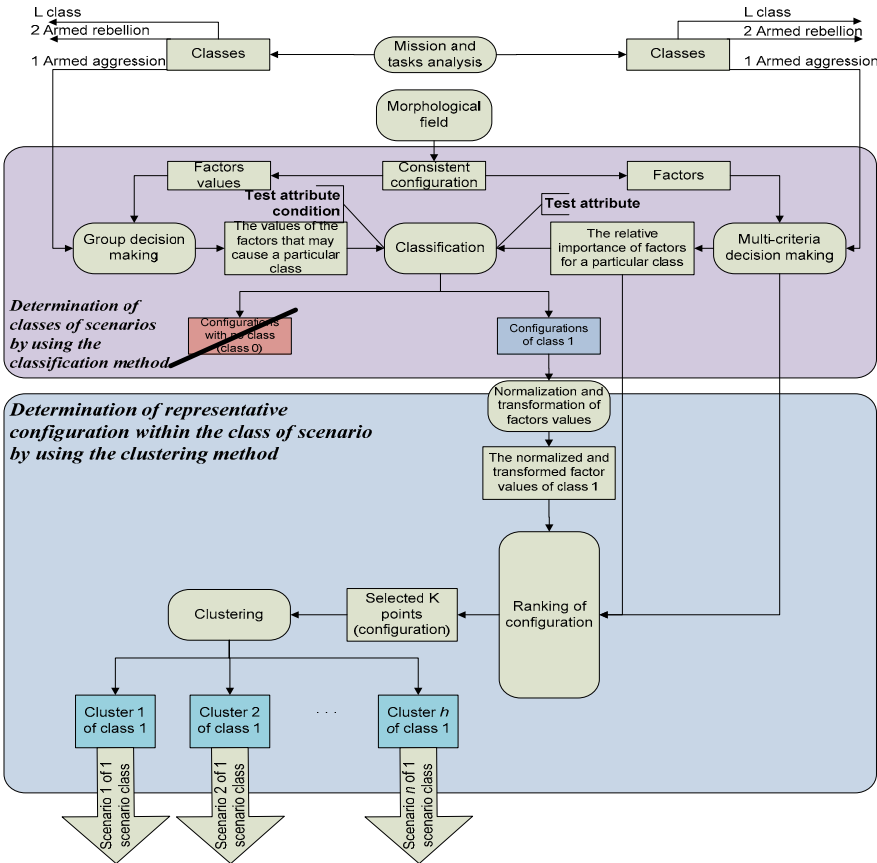


Figure 4 – Model of reduction in the number of configuration of morphological fields by using the classification and clustering method

Determination of scenario classes by using the classification method

Classification is the process of assigning objects to one or more specific categories, which are previously determined (Tan, Steinbach / Kumar 2006). Categories for the classification result from the analysis of the mission and tasks of the defense system and point to security challenges, risks and threats that the defense system has to confront in the future in order to protect national and defense interests. Modern military forces usually carry out three basic missions: defense of the country from armed threats, participation in the international peacebuilding and support to civil authorities in countering non-military forms of security threats (Kovač / Stojković 2009). In the context of protection of national interests, the most important mission of the defense system of the Republic of Serbia is to defend the state from armed threats, especially military ones. In this context, the primarily military threats are armed aggression and armed rebellion (Zakon o odbrani 2015).

In order to reduce the number of configuration using the classification method it is necessary to allocate the most important configurations that are included in tasks and missions of the defense system. In this regard, the classes for grouping configurations are armed aggression and armed rebellion. The basic concept of the classification method predicts the existence of training sets – data on the values of the environmental factors (Tan, Steinbach / Kumar 2006) and a specific test set – a sample of the historical data. The training set is a basis for the formation of the classification algorithm, which can be made by using decision tree techniques (Damodaran 2008). Unlike the basic concept for the classification method, to classify configuration in the class of armed aggression and armed rebellion, it is necessary to have the following facts in mind:

- armed aggression and armed rebellion in most cases are described by different factors from the environment;
- constant changes in the physiognomy of the armed conflict cause the appearance of armed aggression or armed rebellion to be influenced by various environmental factors depending on the historical period, international relations, state power, technological progress and other;
- different values of the environmental factors depending on the historical period, international relations, the role of force and power of the state and other conditions, affect differently the occurrence of armed aggression or armed rebellion.

On the basis of the abovementioned facts the following starting points in the application of the classification method can be derived:

- 1) the same decision trees cannot be used for the classification of the configuration into the class of armed rebellion and armed aggression. A separate decision tree must be formed for each class of classification, wherein the type of the attribute is binary conditional testing (e.g. either is or is not armed aggression);
- 2) for the determination of the test attributes from a set of the environmental factors it is not applicable to form a training set from the historical data as the historical factors variously affect the emergence of armed aggression or armed rebellion;
- 3) to determine values of the environmental factors as the condition test attributes, a training set from the historical data cannot also be used because the different values of the environmental factors have different historical contribution to the emergence of armed aggression or armed rebellion.

Taking into account the abovementioned limitations of the application of the classification method in reducing the number of configuration, it is suggested that a multi-criteria decision - making methods are used to determine test attributes (Fotr, et al. 2015). On the other hand, the methods of group decision - making may be used for determining the values of the environmental factors, which can be used for attribute test conditions (e.g. Brainstorming and DELPHI).

The first step in the application of multi-criteria decision method is to determine the weight of criteria, in this case the determination of the weight or importance of the environmental factors for armed aggression or armed rebellion. Weighting of factors can be performed through use of Saaty model. In accordance to Saaty model, the first thing is to form a matrix $n \times n$, where the header of a row and column of the matrix contains all the environmental factors. Then, the weight is estimated in pairs ($t_{n\#}$, where n is the ordinal number of the factors in rows and $\#$ is the ordinal number of the factors in columns), or the importance of each factor with respect to all the other factors separately in a scale of one to nine, in the context of a particular class, or challenges, risks and threats (for example, armed aggression). The weight in the pairs n and $\#$ is determined in such manner that the pairs are examined by how much the factor n (from row) is more important for certain scenario class than the factor $\#$ (from column). If the importance of the factor n (e.g. for armed aggression) is higher than the importance of the factor $\#$ then the weight per pairs is $t_{n\#}$, otherwise, if the importance of the factor n is less than $\#$ then the weight is $1/t_{n\#}$. During the next step the sum of each column of the matrix is calculated, and then each weight in pairs shall be divided by the resulting sum in the columns. Finally, the pre-corrected values are summed by rows and for each row arithmetic average is determined (Čupić / Suknović 2008). In this way, the total importance or weight of the environmental factor T_n is calculated for a particular class (in this case for armed aggression) and can be represented by equation 1.

$$T_n = \frac{\sum_{\# = 1}^i \left(\frac{t_{n\#}}{\sum_{n = 1}^i t_{n\#}} \right)}{n} \quad (1)$$

In the presented equation the following insignia are used:

T_n – Weight of the environmental factors (for a particular class of scenarios),

$T_{n\#}$ – Estimated weight in pairs of the matrix,

n – Ordinal number of factors in the rows of the matrix,

i – The maximum number of the environmental factors,

$\#$ – Ordinal number of factors in the column of the matrix.

A useful tool for estimating the weight of the environmental factors can be software Expert Choice. Figure 5 shows an example of determining the importance of certain environmental factors for armed aggression, which is set as an objective.

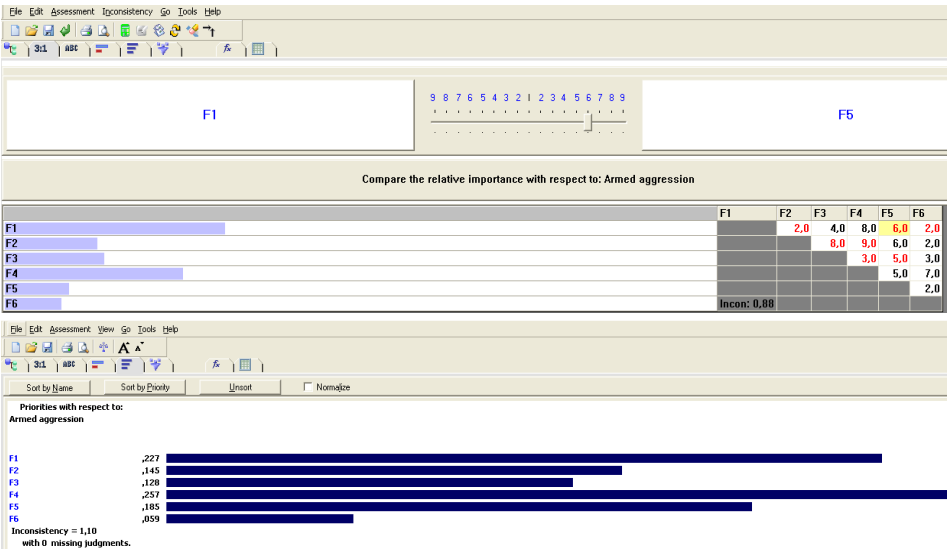


Figure 5– An example of using the software Expert Choice in determining the importance of the environmental factors on armed aggression

The estimated importance of the environmental factors for armed aggression will determine the order of test attributes in the construction of a decision tree. For example, looking at Table 2, the order of factors for classification of configurations per class of armed aggression would be: F4, F1, F5, F2, F3, F6. After determination of importance of the environmental factors, by using the method of group decision it is necessary to determine the value of the environmental factors (G_n), as well as condition (\leq or $\geq G_n$) for testing per each attribute that can lead to armed aggression. Value G_n is determined from the set of the value F_{nm} , where n is the ordinal number of factors and ranges from 1 to i , where i is the maximum number of the environmental factors, and m is the number of the factor values and ranges from 1 to j , where j is the maximum number of factor value of i -th factor and it is recommended that it ranges from three to five (Table 2).

Table 2– An example of the determination of the attribute test conditions for classification in the morphological field

F4	F1	F5	F2	F3	F6
f41	f11	G5	f21	G3	f61
f42	G1	f52	f22	f32	G6
f43	f13	f53	f23	f33	f63
G4			G2		
f45					

On the basis of the abovementioned assessment, using multi-criteria and group decision-making methods, classification decision trees can be constructed for the class of military aggression, as well as armed rebellion (Figure 6).

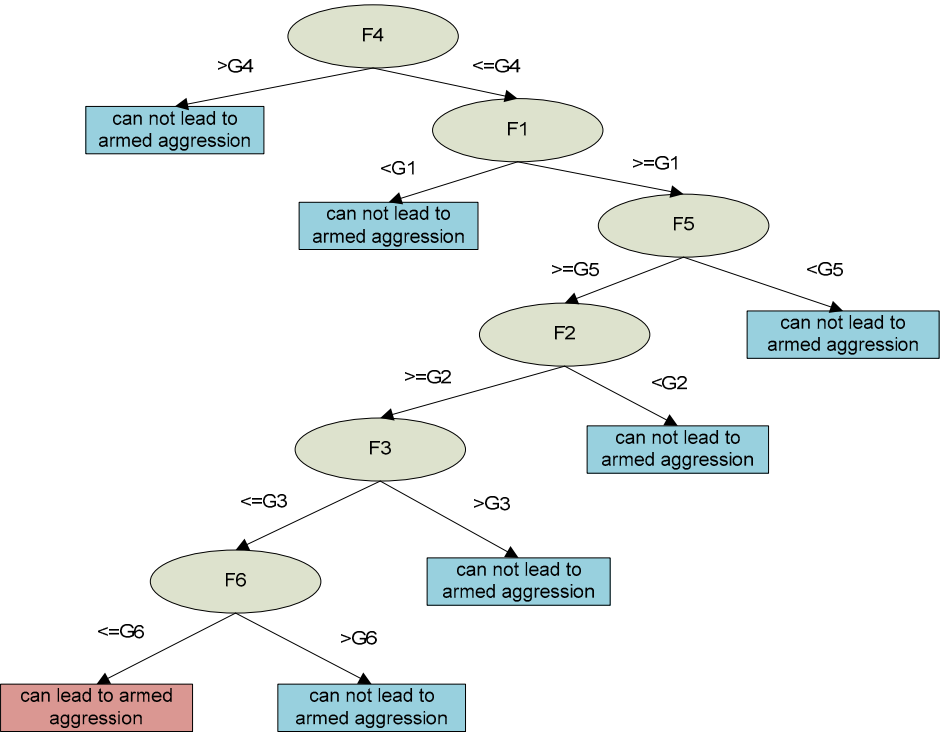


Figure 6 – Decision trees for classification of morphological configuration fields in the class of armed aggression

The application of the classification method, as well as multi-criteria and group decision-making methods to create a decision tree, enable configurations that can cause armed aggression or armed rebellion to be distinguished from the whole morphological field. In further analysis of scenarios only the configurations that can lead to armed aggression and armed rebellion are considered whereas other configurations are discarded. Taking into consideration the class of armed aggression and using the above-described example the total number of configurations is reduced from 1620 to $4 \times 2 \times 3 \times 1 \times 1 \times 2 = 48$.

However, despite a significant reduction in the number of configurations, depending on the number of factors to be analysed, there is a large number of configurations for each class. Such a large number of configurations disables further use of scenarios in the planning process.

Determination of representative configuration within the class of scenario by using the clustering method

To reduce the number of configurations for each class, using the principle of similarities configuration (Nguyen / Dunn 2009), grouping is carried out and determination of the reference configuration as a representative of the group (Fotr, et al. 2015). Clustering methods or cluster analysis is used for the purpose of grouping configuration. Clusters are potential classes, and cluster analysis techniques are based on learning with the aim of finding an automated class, as well as the most representative prototype of a class (Tan, Steinbach, / Kumar 2006). In the context of scenario development, prototypes represent configuration from morphological fields whereas clustering is applied for the purpose of compression of a large number of configurations. Cluster analysis is exclusively based on the information in the database, which describes objects and their relationships. Since the configurations obtained by morphological analysis are structured as database, clustering can be successfully used for data processing.

When it comes to types of clustering, taking into account the characteristics of the configuration of morphological field, as well as the objective that should be achieved by clustering, it is best to apply partitional clustering. Moreover, any configuration from a set of available configurations should be assigned to a single cluster. When it comes to types of clusters, taking into account that the configurations are structured by a large number of factors (attributes), and there is often the small and undefined difference between configurations, the most suitable cluster to apply is the one based on the prototype. Accordingly, for clustering configuration of morphological field *K-means* technique can be efficiently used.

K-means clustering is based on the presentation of the cluster through prototype (Tan, Steinbach / Kumar 2006). As a prototype configuration in the application of K-means method the most appropriate one to use is medoid, where the representative or prototype of the cluster is one of the existing configurations. The first step in the application of K-means clustering technique is the selection of a certain number of K points, which simultaneously determines the total number of clusters. K points represent the configurations of morphological fields, which are the basis for the calculation of the final medoids by repeating the operations of assigning a configuration to the K-point, calculation and determination of new K points until the calculated and the new set of K points do not differ from the previous one. In case of any change of K point, the clusters which are assigned to the configurations are also changed, so the condition for termination of clustering can be interpreted as the absence of changes in the allocation of configurations among clusters. In practice, the final condition for clustering is difficult to achieve, so the condition for the completion of clustering is such that less than 1% of the configurations change clusters that are assigned.

The characteristics of configuration obtained by morphological analysis are such that it is difficult to spot potential K points, mostly due to a lot of attributes used for their description. In order to determine the optimum K points, the configuration has to be processed and ranked. Multi-criteria decision-making methods can be successfully applied for the ranking of the configuration.

Prior to the application of the multi-criteria decision-making methods it is necessary to transform quantitative and qualitative values of the environmental factors into the quantitative values in the range from zero to ten, as well as normalize the values of the environmental factors.

The normalized values of the environmental factors (N_{np}) are calculated according to the equation 2 (Čupić / Suknović 2008):

$$N_{np} = \frac{F_{np}}{\left(\sum_{p=1}^s F_{np}^2 \right)^{\frac{1}{2}}} \quad (2)$$

In the presented equation the following insignia are used:

N_{np} – the normalized values of factors values F_{nm} , which fulfill a condition of classification (\leq or $\geq G_n$),

p – the ordinal number of values of the environmental factors, which fulfills a condition of classification (\leq or $\geq G_n$) and ranges from one to s ,

s – the maximum number of values of n -th factors, which fulfills a condition of classification (\leq or $\geq G_n$) and $s \leq j$.

An example of the normalized values of the environmental factors is shown in Table 3.

Table 3 – An example of the normalized values of the environmental factors

F4	normalized values (N_{4p})	F1	normalized values (N_{1p})	F5	normalized values (N_{5p})	F2	normalized values (N_{2p})	F3	normalized values (N_{3p})	F6	normalized values (N_{6p})
f41	1	f11		G5	0	f21		G3	0	f61	1
f42	0,66	G1	0	f52	0,5	f22		f32		G6	0
f43	0,33	f13	1	f53	1	f23		f33		f63	
G4	0					G2	0				
f45											

Using the previously calculated weight or the importance of the environmental factors for a particular class of scenario, as well as the normalized values of the environmental factors, the relative importance of each of the configuration can be determined by using equation 3.

$$R_q = \sum_{n=1}^i T_n \times N_{np} \quad (3)$$

In the presented equation the following insignia are used:

R_q – the relative importance of q -th configuration,

q – the ordinal number of configurations or index of configuration, and it ranges from one to w , and w is the maximum number of configuration of morphological fields of a certain scenario class,

T_n – the importance of n -th environmental factor, where n is the ordinal number of factors and ranges from one to i , where i is the maximum number of the environmental factors.

On the basis of the relative importance, the configurations can be ranked from the best - optimistic through basic to the most dangerous – pessimistic (Changyong, Juram and Sungjoo 2016). In this way, the relative importance of configurations represents danger or the estimated consequences that may arise if such a scenario occurs. A calculation example of the relative importance of configuration in a scenario class of armed aggression is shown in Table 4.

Table 4 – A calculation example of the relative importance of configuration in a scenario class of armed aggression

Index	Configuration						N_{4m}	T_4	N_{1m}	T_1	N_{5m}	T_5	N_{2m}	T_2	N_{3m}	T_3	N_{6m}	T_6	R_0	Rank
11	f41	f13	f53	f24	f31	f61	1	0.254	1	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.753	1
12	f41	f13	f53	f24	f31	f62	1	0.254	1	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.690	2
23	f42	f13	f53	f24	f31	f61	0.66	0.254	1	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.667	3
9	f41	f13	f52	f24	f31	f61	1	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.656	4
24	f42	f13	f53	f24	f31	f62	0.66	0.254	1	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.604	5
10	f41	f13	f52	f24	f31	f62	1	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.593	6
35	f43	f13	f53	f24	f31	f61	0.33	0.254	1	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.583	7
21	f42	f13	f52	f24	f31	f61	0.66	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.569	8
7	f41	f13	f51	f24	f31	f61	1	0.254	1	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.558	9
36	f43	f13	f53	f24	f31	f62	0.33	0.254	1	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.520	10
5	f41	f12	f53	f24	f31	f61	1	0.254	0	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.512	11
22	f42	f13	f52	f24	f31	f62	0.66	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.506	12
47	f44	f13	f53	f24	f31	f61	0	0.254	1	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.499	13
8	f41	f13	f51	f24	f31	f62	1	0.254	1	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.495	14
33	f43	f13	f52	f24	f31	f61	0.33	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.485	15
19	f42	f13	f51	f24	f31	f61	0.66	0.254	1	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.472	16
6	f41	f12	f53	f24	f31	f62	1	0.254	0	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.449	17
48	f44	f13	f53	f24	f31	f62	0	0.254	1	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.436	18
17	f42	f12	f53	f24	f31	f61	0.66	0.254	0	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.426	19
34	f43	f13	f52	f24	f31	f62	0.33	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.422	20
3	f41	f12	f52	f24	f31	f61	1	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.415	21
20	f42	f13	f51	f24	f31	f62	0.66	0.254	1	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.409	22
45	f44	f13	f52	f24	f31	f61	0	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.402	23
31	f43	f13	f51	f24	f31	f61	0.33	0.254	1	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.388	24
18	f42	f12	f53	f24	f31	f62	0.66	0.254	0	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.363	25
4	f41	f12	f52	f24	f31	f62	1	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.352	26
29	f43	f12	f53	f24	f31	f61	0.33	0.254	0	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.342	27
46	f44	f13	f52	f24	f31	f62	0	0.254	1	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.339	28
15	f42	f12	f52	f24	f31	f61	0.66	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.328	29
32	f43	f13	f51	f24	f31	f62	0.33	0.254	1	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.325	30
1	f41	f12	f51	f24	f31	f61	1	0.254	0	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.317	31
43	f44	f13	f51	f24	f31	f61	0	0.254	1	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.304	32
30	f43	f12	f53	f24	f31	f62	0.33	0.254	0	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.279	33
16	f42	f12	f52	f24	f31	f62	0.66	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.265	34
41	f44	f12	f53	f24	f31	f61	0	0.254	0	0.241	1	0.195	0	0.126	0	0.119	1	0.063	0.258	35
2	f41	f12	f51	f24	f31	f62	1	0.254	0	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.254	36
27	f43	f12	f52	f24	f31	f61	0.33	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.244	37
44	f44	f13	f51	f24	f31	f62	0	0.254	1	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.241	38
13	f42	f12	f51	f24	f31	f61	0.66	0.254	0	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.231	39
42	f44	f12	f53	f24	f31	f62	0	0.254	0	0.241	1	0.195	0	0.126	0	0.119	0	0.063	0.195	40
28	f43	f12	f52	f24	f31	f62	0.33	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.181	41
14	f42	f12	f51	f24	f31	f62	0.66	0.254	0	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.168	42
39	f44	f12	f52	f24	f31	f61	0	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	1	0.063	0.161	43
25	f43	f12	f51	f24	f31	f61	0.33	0.254	0	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.147	44
40	f44	f12	f52	f24	f31	f62	0	0.254	0	0.241	0.5	0.195	0	0.126	0	0.119	0	0.063	0.098	45
26	f43	f12	f51	f24	f31	f62	0.33	0.254	0	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.084	46
37	f44	f12	f51	f24	f31	f61	0	0.254	0	0.241	0	0.195	0	0.126	0	0.119	1	0.063	0.063	47
38	f44	f12	f51	f24	f31	f62	0	0.254	0	0.241	0	0.195	0	0.126	0	0.119	0	0.063	0.000	48

Ranking of configuration provides better orientation in a large number of configurations and helps determine the K points. After determining the initial K points, the clustering algorithm determines the clusters and allocates certain configurations to clusters. The overall number of scenarios or cluster of one class is k and ranges from 1 to h (where h is the total number of the initial K points and it usually ranges from 3 to 5. At the end, medoid is determined in each cluster or the configuration, which represents a prototype of the cluster. The prototype of the cluster is the basis for further development of scenarios or description of scenarios.

Scenario description

Scenario description is the last step in the process of scenario development, which aims to compile a textual description of scenario or Storytelling by converting scenarios that are presented into text using different configurations. The basis of scenario description is Roadmap or scenario tree which is obtained by FAR analysis (Nguyen / Dunn 2009, Changyong, Juram and Sungjoo 2016). Within each class the specific Roadmap is made for each cluster. The starting point for the Roadmap construction is the mutual influence between the values of the environmental factors in a single cluster. To assess the mutual influence between the values of the environmental factors DEMATEL method can be used (Bagheri Morghaddam, et al. 2010).

The results of the evaluation of the mutual influence between the values of the environmental factors within a cluster (scenario) are processed by calculating the total active and passive impact and the obtained values are normalized (Table 5).

Table 5 – An example of evaluation of the mutual influence between the values of the environmental factors within a cluster

Configuration No.5	f41	f12	f53	f24	f31	f61	Active influence	Normalized value
f41	0	3	1	5	6	5	20	0,31
f12	3	0	6	1	3	3	16	0,00
f53	2	5	0	1	7	6	21	0,38
f24	1	2	4	0	5	9	21	0,38
f31	4	7	1	3	0	8	23	0,54
f61	3	6	9	6	5	0	29	1,00
Passive influence	13	23	21	16	26	31		
Normalized value	0,00	0,74	0,68	0,52	0,84	1,00		

On the basis of the results of DEMATEL method the values of the factors that have the most passive⁵ and active⁶ mutual influence, the value of factors that have a small influence, as well as the value of factors with a large both active and passive influence are determined (Figure 7).

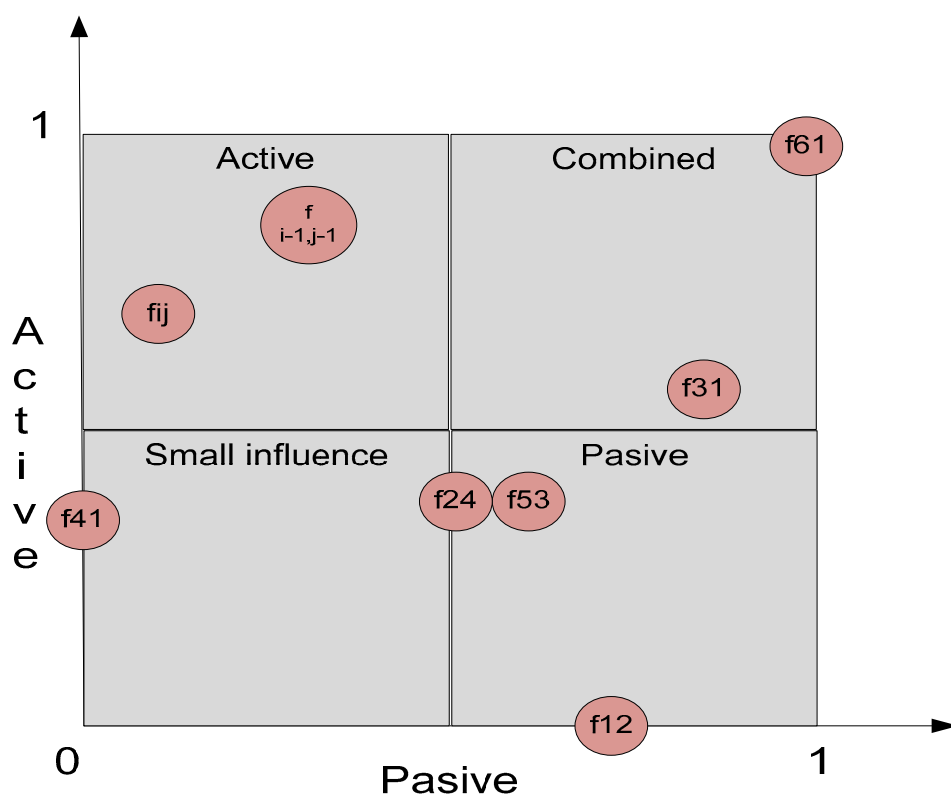


Figure 7 – An example of impact assessment matrix of the values of the environmental factors

Taking into consideration the result of DEMATEL analysis, it is possible to draw the Roadmap by application of FAR analysis (Nguyen / Dunn 2009). Only values of the factors with active, passive and combined influence are used to create the Roadmap whereas the values of the factors with low influence are not entered into the map. However, they are used in the description of a scenario (Figure 8).

⁵ The value of the observed factor is greatly influenced by the values of other factors.

⁶ The value of the observed factor has a great influence on the values of other factors.

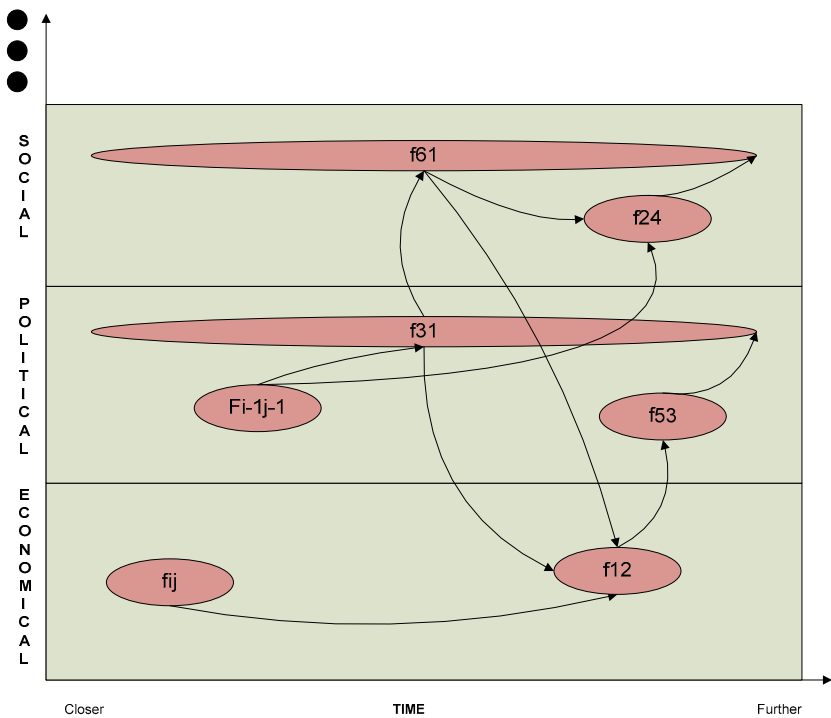


Figure 8 – An example of a roadmap

On the X-axis of the coordinate system of the Roadmap the entries are a timescale of assessments closer to the far future. The Y-axis entries are the environmental sectors (economic, political, military, social, technological, energy and others). The values of the environmental factors are entered in the coordinate system of the Roadmap according to the sector they belong to, as well as the result of DEMATEL analysis. Regarding the timescale, the values of factors with the active influence are entered on a closer future scale whereas the values of factors with passive influence are entered on the further future scale. In contrast to this, the values of factors with combined influence are presented in the entire timeline.

Roadmap is a basis for the application of creative-narrative methods (Kosow / Gaßner 2008) for the transformation of the configurations, which are expressed by the factors and the values of factors into the text scenario, which "tells the story". In accordance with the description of the scenario for a single cluster, by using the Roadmap and DEMATEL method, different scenarios may also be connected. In this case, the Y-axis of the Roadmap refers to the different classes of scenarios whereas different scenarios (clusters) for each class of a scenario are entered in the coordinate system. This approach allows the connection of different scenarios and the detection of parallel and independent scenarios, as well as the possibility of transition of one scenario to another.

Conclusion

The application of morphological analysis and the method of scenario development based on morphological analysis (Battelle and FAR analysis) enables the structuring of the problem of environment, as well as flexibility in the assessment of possible development of options of the environment phenomena in the future. This formalized approach to assessing the environment instead of a single variety, gives a number of possible answers to the question „How would the environment of the defense system look like in the future?“. The output of the morphological analysis is the configuration, whose total number is equal to the product of the values of the environmental factors that have been entered in the morphological field. Since each configuration is a potential scenario for the future environment, a large number of configurations is difficult for further analysis. Therefore, the selection of the representative configuration has been made.

By its structure, consistent or compatible configurations of morphological fields are database with specific attributes and attribute values. In terminology, the environmental factors are equal to the parameters of morphological fields, as well as the attributes in decision - making theory. In order to reduce the number of configuration of morphological fields and determine the representative configuration for a required number of scenarios, decision - making methods can be used. The basic decision - making methods which are used to reduce the number of configuration of morphological fields are classification and clustering (grouping), as well as the methods of group or multi-criteria decision-making to support the methods of classification and clustering.

The classification method, mostly using decision tree techniques, provides guidance to the environmental assessment of configurations that are the most important for the defense system. The most important configurations are those which are associated with the tasks and missions of the defense system, and they represent security challenges, risks and threats which the defense system should confront in order to protect the national interest. It can be concluded that the basis for the determination of a class of scenarios is security challenges, risks and threats that jeopardize the defense system. Taking into consideration the characteristics of challenges, risks and threats, as well as the continuous changes in the environment, it is not possible to apply the decision tree technique originally or to construct decision tree based on historical data. These limitations impose the need for application of the method of multiple-criteria decision – making for the determination of the importance of the environmental factors. Also, setting the value of the environmental factors that may lead to certain challenges, risks and threats, using the method of group decision – making can be the basis for the determination of attribute test conditions for each decision tree. In this way, the number of configuration of morphological fields can be reduced and configuration can be separated by the different classes.

Besides the significant reduction in the number of configurations, and their classification according to security challenges, risks and threats, there is still a large number of configurations which prevent the determination of the optimal representative scenarios. The use of the clustering method with the configurations previously ranked by danger in order to determine the initial configuration (K point), clustering algorithm enables the grouping of configurations of a particular scenario class to pre-determined number of clusters. Configurations that are representatives of clusters (medoids) are the basis for further description of the scenarios for each cluster, using the FAR analysis and creative-narrative methods.

The presented model enables more objective process of scenario development, as well as the rationalization of time and human resources necessary for the scenario development and

data processing. Furthermore, the application of the model requires IT support for the implementation of methods and techniques, as well as a high level of expertise in the assessment of the importance, influence and consistency (compatibility) of factors and values of the factors.

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MODEL OF MILITARY PILOT EDUCATION AND TRAINING FROM THE ASPECT OF NEW AIRCRAFT ACQUISITION

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Military pilot education, including flight training is a long, expensive and complex process. The main goal is to produce as many skilled professionals ready to perform flight tasks on the front-line aircraft and push them to the limits with complete control. To achieve this goal it is necessary to select and educate young people with aptitude and abilities to perform the most demanding military flight tasks. The creation of the model of military pilot education and training hardly depends on aircraft types, which are used in operational service in the front-line units. The acquisition of new aircraft imposes the change of the model of military pilot education. This paper describes the possible model of military pilot education from the aspect of the acquisition of the new aircraft in the Serbian Air Force.

Key Words: military pilot education, flight training, aircraft acquisition

Introduction

The education and training of military pilots is a very long, complex and expensive process. The entrance into this process is very unique regarding medical requirements, aptitude testing and flight screening. This is intended to determine whether a candidate has the necessary aptitude to become a military pilot in a reasonably short time. Young people with aptitude and abilities become the Military Academy cadets and they finish their master studies for five years, which include a theoretical part and the basic flight training on a piston and jet trainer or a helicopter. After that, graduate pilots are assigned to the front-line units. The small Air Force front-line units are usually conversion units, as well.

The main goal of pilot education and training process is to produce a combat-ready pilot during the optimal time and at an affordable cost. There are many factors that affect this process, but some of the most important ones are curriculum and training equipment

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(i.e. training aircraft or helicopter), which strongly corresponds to the front-line equipment characteristics. Acquisition of new aircraft in combat units also means remodeling the education and flight training system. It is not an easy process and it has to be carefully designed and tailored to the needs. The capabilities of new aircraft and their specific characteristics have to be recognized. The role and purpose of new equipment also have to be considered, as well as their operational environment. This paper discusses the current model of military pilot education and flight training, the acquisition of new aircraft and their impact on the future model of military pilot education and training.

Current Model of Military Pilot Education and Flight Training

The only high education institution in the Republic of Serbia, which has the study program in aviation with its graduate and master studies is the Military Academy. This study program called Military Aviation is specific in many ways. First of all, it correlates with the Bologna Process standards and it also meets the Air Force requirements. Due to this, the program is unique. The purpose of the program is the education of the Military Academy cadets (the military term for students) for the occupation of Aviation officers – aircraft pilots or helicopter pilots, as well as traffic engineers. Master studies in Military Aviation are performed during five academic years (with total number of 300 ECTS). A cadet gains a degree of Master of Military Aviation and in addition to a Diploma, a Diploma Supplement is also issued to cadets, which certifies the cadet's competences for professional Air Force pilot. The whole process is very demanding for cadets and their professors and instructors. The study is divided into two main parts. The first one, which lasts six semesters, is conducted in the Military Academy headquarters that is situated in Belgrade. The main goal of this phase is a theoretical preparation for the upcoming flight training in training squadrons. This phase is also considered as a preparation phase in terms of core activities (flying) during studying.

During this phase cadets do 37 courses. The first group of these courses is theoretical, methodological and scientific ones. The second group is professional and practical courses. The study of the second group of courses is performed during 3rd academic year (5th and 6th semester). It includes the courses such as General and Radio Navigation, Communications (Phraseology), Mechanics of Flying, Aerodynamics, Aircraft Construction, Meteorology, Aircraft Engines, Flight Instruments and Systems and Air Law. Due to the international standardization most of the listed courses are compatible with similar courses, which are a part of studies in other aviation universities around the world. Professional and practical courses comply with the standards recognized by the Civil Aviation Directorate (CAD) of the Republic of Serbia. It means revision of the national protocols and harmonization with the demands of the JAA Europe as a full-fledged member of the abovementioned aviation family encompassing 44 European countries. The CAD has agreed to bring the national aviation in compliance with European standards, thus making the Serbian aviation an integral part of the European and world aviation area.¹ The CAD has standardized many fields and the most important from the Military Academy standpoint is standardization of

¹ The Joint Aviation Requirements (JAR) are a series of accepted and comprehensive aviation rules created by the JAA, more specifically the Joint Aviation Authorities of the European countries. The new system of the European aviation rules (EASA – European Aviation Safety Agency).

requirements for airplane pilots - JAR FCL 1. It means that learning objectives of all professional and practical courses (except the flight training syllabus) have to be standardized, including course description.² The English language standards are also taken into account. The cadets have to speak English fluently. This does not only mean being able to speak and understand the standard phraseology. If an individual has to function in a team, the English proficiency needs to be high enough.³

The second phase is flight training at airplanes and helicopters and it is crucial for the cadet-pilots. It consists of basic and advanced flight training either at an airplane or a helicopter.

Basic flight training: A cadet, who passes aptitude testing and a theoretical part, begins the basic flight training. Students learn the basics of flying, aerobatics, VFR/IFR⁴ navigation, night and formation flying. This is done at a light piston aircraft. Successful cadets progress to other courses based on flying ability and military need.

The existing pilot training model in Serbian Air Force and Air Defense (SAF&AD) still includes the piston-engine Utva-75. This plane belongs to the older generation of piston-engine trainers and the new trainer Lasta will replace it by 2018. This airplane has a lot of limitations regarding aerobatic, night and IFR flying. It is the airplane equipped with an analog cockpit and its operational scope is flight screening with up to 15 flight hours.⁵

The basic jet training prepares cadets for the advanced jet training by teaching more advanced maneuvering and tactics on more powerful aircraft. The advanced jet training includes night flying, low - level navigation, as well as weapons and tactics training on a jet-driven aircraft. The training prepares them to move to the front-line combat jets, such as Oraj or MiG-29. Cadets complete both phases on Super Galeb G-4, the advanced jet trainer, which has been used in the national Air Force since 1978. Since the first flight, not even a minor modification has been done on this plane.

The helicopter pilot training includes basic maneuvering, such as hovering to more advanced training such as night flying and high terrain flying. The helicopter pilot training is conducted on the Sa-341/342 Gazelle utility helicopter. The Gazelle helicopter, which was licensed and built in the former Yugoslavia, has not been exposed to any modifications during the life time, as well.

The existing flight training system is not up to date. It is expensive and not effective enough.⁶

New Aircraft Acquisition

The acquisition of new aircraft involves much more than buying the latest equipment or the most capable one. In an ongoing series of capability acquisition projects, the SAF&AD has been upgrading its fleet of ageing aircraft. The particular case described

² Vlačić S. Rađenkov, S. Knežević, A. Vlačić I. Use of the commercial software tools in the preparation phase of the military pilot education and training, ITRO 2014, Zrenjanin, 2014.

³ Pilot Training Compass: Back to the Future, European Cockpit Association, 2013.

⁴ VFR-Visual Flight Rules, IFR-Instrument Flight Rules.

⁵ In the absence of a suitable training plane, Utva-75 was used for up to 60 flight hours.

⁶ The very first IFR and night flights are performed on a jet plane, not on a cheaper piston - engine trainer.

here involves the upgrading to a new type of fighter, utility helicopter, transport helicopter and trainer. Such acquisition produces a lot of consequences in terms of the necessary personnel with specific skillsets. The individual and collective training and provision of facilities, logistics management, and ultimately the level of effectiveness achieved in the conduct of operations is also under influence. SAF&AD is committed to acquiring the new variant of MiG-29 fighter called 9-13, the utility helicopter H145M and the transport helicopter Mi-17V-5.

MiG-29 9-13 is a fighter aircraft capable of operating by day and night in most weather conditions. These fighters will supplement the existing MiG-29 9-12 fleet acquired during the 1980s. The country is expecting a shipment of six Russian MiG-29 fighter jets in the short term, as well as the arrival of Russian aviation experts to help upgrade and modernize the arriving jets along with those already in use.⁷

The 9-13 variant (NATO reporting name Fulcrum-C) features extra fuel and a new active jammer whereas the 9-13S provides compatibility with the active homing Vympel R-77 medium range missile with beyond - visual - range capability. The aircraft is fitted with a bulged and extended spine, which reportedly houses both fuel and avionics including multi-function displays. Internal fuel is increased by provision of a larger fuel tank.⁸

It is expected that the 9-13 variant has a modified flight control system and upgraded radar with enhanced ground attack capability and provision for an active jammer. Certainly, the 9-13 has redesigned wingtips, which appear to accommodate new RWR antennas. A staged program of modifications will allow the aircraft to carry up to 4000 kg of external stores. An in-flight-refueling probe and laser, TV and radar-guided air - to - surface missile will be added. None of the SAF&AD airplanes have the capability to use precision guided munition yet.⁹

The utility helicopter H145M is equipped with a modern digital glass cockpit, night vision goggle (NVG) compatibility and Airbus Helicopters' advanced Helionix® avionics suite with a 4-axis digital autopilot. The enhancements include an upgraded transmission system and incorporation of Airbus Helicopters' signature Fenestron® shrouded tail rotor for the improved anti-torque control. For armed operations, the rotorcraft carries a mission computer, two rigid multi-purpose armament pylons that are easily removable, an infrared/TV electro-optical system and a laser range-finder/designator/pointer. With its open system architecture, this innovative weapons system contributes to full situational awareness for the crew.¹⁰ Equipped with an incremental modular weapon system, the H145M can handle all types of operational light attack scenarios, from conventional to asymmetric conflicts. Ballistic and guided weapons compatible with the H145M include 7-tube and 12-tube rocket launchers, a 20mm cannon pod, 12.7mm machine - gun pod and air-to-ground missiles. The growth potential exists for laser-guided rockets.

Serbia has ordered nine Airbus Helicopters H145M (six for the SAF&AD), becoming the third nation to commit to the latest variant of the German-built medium-twin rotorcraft.¹¹

⁷ <https://www.rt.com/news/377184-serbia-russian-jets-delivery/> accessed May 22, 2017.

⁸ <http://sirviper.com/index.php?page=fighters/mig-29/mig-29s> accessed June 6, 2017.

⁹ The exception was J-22 Orao armed with TV guided missile AGM-65B Maverick.

¹⁰ http://www.airbushelicopters.com/website/en/ref/H145M_47.html accessed May 22, 2017.

¹¹ <https://www.flightglobal.com/news/articles/serbia-orders-nine-h145m-helicopters-432874/> accessed May 23, 2017.

Mi-17V-5 helicopters are intended to be used as military transport/utility aircraft with auxiliary roles in conducting search and rescue, medical evacuation and disaster relief missions. The helicopters have a night-vision goggle compatible analog cockpit, meteorological radar GPS/GLONASS navigation system, TDS-84 color display unit and cargo hook capable of carrying a 2000 liter Bambi Bucket fire-fighting system, which is already in Serbia's inventory. Due to the budgetary restrictions, however, only one SLG-300 300 kg cabin-mounted rescue hoist, one FPP-7M searchlight and one 12-stretcher medical kit was procured for both helicopters.

Currently, Serbian helicopters are logistically problematic, under-equipped and due for the imminent retirement - the Mi-8Ts in 2018 and the Mi-17 in 2019. Serbia strives to build a fleet of 12 Mi-17s by 2020, including two aircraft already delivered to Serbia and follow-on procurement of additional two aircraft that was officially confirmed in April.¹²

The important place in the acquisition process is the introduction of indigenously built **training aircraft Lasta**.

Contemporary airplane piston engines are, generally speaking, simple, air-cooled, horizontally opposed, four-stroke internal-combustion devices with low operating speed and low specific output. Trainers driven by the piston engine, such as Lasta, belong to the sort of the most economical trainers. Lasta is the trainer intended for flight training including basic flying, aerobatic flying, navigation flying, instrument flying, formation flying and night flying. It can also be deployed in homeland security, light close air support, patrol and light attack missions. Lasta has retracting landing gear and tandem seats. With its performance, Lasta can cover up to the 100 flight hours of syllabus. Lasta aircraft are fitted with Garmin G500 avionics suites, which include primary flight display (PFD) and a multi-function display (MFD). SAF&AD will introduce up to 14 aircraft into the service besides prototypes.

SAF&AD also bought one **Piper Seneca V** equipped with similar avionics suite as in Lasta. The aircraft underwent conversion to allow the installation of the Leica Geosystems ADS80 digital camera. The sensor will be used during aerial photography missions executed for the national Military Geography Institute. The other application of the Seneca V will include provision of civilian-standard multi-engine training capability for Serbian Air Force pilots plus the use for light transport and passenger transport duties.¹³

It is worth mentioning that every new aircraft has a semi or a full glass cockpit.

Acquisition Challenges

As it can be seen, SAF&AD has started the acquisition process of almost 30 new aircraft, either brand new types or new variants. It is a great challenge for the small Air Force such as SAF&AD.

The introduction of new aircraft into service will demand that pilots, load masters, aircraft handlers and maintenance personnel, who currently operate and maintain the existing aircraft, be trained to operate the new types. The new organizational structure has to be created simultaneously with the transition to the new type.

¹² <http://www.janes.com/article/61834/serbia-receives-first-two-mi-17v-5-helicopters-from-russia> accessed May 23, 2017.

¹³ <https://www.flightglobal.com/news/articles/picture-serbian-air-force-receives-multirole-seneca-367496/> accessed May 23, 2017.

There is a number of challenges in planning and managing the successful introduction of the new aircraft¹⁴ into service:

- acquisition of new aircraft;
- training of flying instructors;
- training of pilots;
- training of aircrew, which includes aircraft handlers and weapons technicians;
- preparation for new operational flying roles including both day and night, all weather and other specialist tasks;
- the need to conduct routine maintenance on the aircraft efficiently;
- the transition to the new organizational structure consistent with the new roles and
- the achievement of the defined levels of operational capability.

This military acquisition and introduction into service project involves the correlation between sets of complex problems. Each of the sub-systems such as aircraft hardware acquisition, pilot training, maintainer training and facilities upgrading and management, is complex. The sub-systems are related to each other in the context of both maintaining the current capability whilst upgrading to the higher levels of capability over a period of transition. The introduction of the major enhancement to the Air Force capability involves considerably more than acquiring new equipment. For example, the British Ministry of Defense has therefore adopted an approach known as the "Six Lines of Development" to ensure that all the elements required to deliver a given capability are put in place. Delivering defense capability involves more than just buying new equipment. The Six Lines of Development are:¹⁵

- Delivery of the equipment;
- Development of appropriate structures and infrastructure;
- Development of concepts and doctrine for how the equipment will be used;
- Delivery of the required training;
- Recruitment and retention of manpower and
- Supporting and sustaining the new capability once the equipment has been introduced to service.

This paperwork emphasizes the required training inside the Military Academy curriculum and flight training.

New Model of Military Pilot Education and Flight Training

As it can be seen, almost all categories of military aviation inside SAF&AD will see the change in the short term. Besides the abovementioned, this process imposes creation of the new model of military pilot education and flight training intended to optimize time in education and training, closing the gap between the skills of aircrew final training output and the skills

¹⁴ Mclucas A;Lyell D;Rose B, 2006, 'Defence Capability Management: Introduction Into Service of Multi-Role Helicopters', in *24th International Conference of the Systems Dynamic Society*, 24th International Conference of the Systems Dynamic Society, Nijmegen, The Netherlands, presented at 24th International Conference of the Systems Dynamic Society, Nijmegen, The Netherlands, 23 - 27 July 2006.

¹⁵ Building an Air Maneuver Capability: the Introduction of the Apache Helicopter, UK Commons Committee of Public Accounts; issued Nov. 18, 2003.

needed to use the front-line aircraft, and reducing the overall cost of flight training. The implementation of the new model can be complicated by the budget restrictions, even though many benefits of the improved model could be conducted in operational training.

Currently, there are no great discussions about the theoretical phase during first six semesters,¹⁶ but there is a risk that flight training takes too long due to the shortage of suitable training aircraft. There have been significant delays between the courses. The obsolete training equipment did not reduce the amount of training undertaken on the expensive front-line aircraft. Time spent on training significantly affects costs, in manpower and equipment. The time to train aircrew also affects the time available to fly during their career. Ageing analog training aircraft means that aircrews leave the training system less prepared to operate more complex, modern aircraft equipped with digital cockpits and aircraft management systems. This means they have to train on the front-line aircraft, which is costly.¹⁷

Flight training is expensive. Costs increase as aircrew progresses through the system and the cost per flying hour of the training aircraft also increases. Ageing training aircraft are unreliable and expensive to maintain.¹⁸ Reduction of failure later in the training system (where sunk costs are higher) could reduce unnecessary expenditure. Some other factors affect the time, cost and success of flight training. These include aircraft and instructor availability, runway conditions and available airspace.

The main aims for the new model are to:

- develop aptitude tests to help identify specific skills necessary for the future aircrew;
- optimize time in training;
- close the skills gap between aircrew finishing training and skills needed to use the front-line aircraft and
- reduce the overall cost of flight training.

The Air Medical Institute/SAF&AD made a great step forward with the implementation of the Vienna Test System. This is a computer-assisted application of a large number of highly diverse psychometric tests, which measure reaction times in a task that requires the choice among complex stimuli. This will improve aptitude tests ability to identify the skills necessary for fast-jet, helicopter and multi-engine pilots to make early and accurate decisions on streaming trainees.

The reduction of unproductive periods between the courses, increasing the number of available training aircraft and proficient instructors in a dedicated training airfield can optimize time in training.¹⁹

Closing the skills gap between aircrew finishing training and skills needed to use the front-line aircraft is a very demanding task. As it was mentioned before, analog cockpit training aircraft means less preparation to operate more complex modern aircraft with digital cockpits and aircraft management systems. In order to overcome this gap, there is a plan to use the glass cockpit trainer airplane (Lasta) from the very beginning. This is

¹⁶ The theoretical phase is regulated under the framework of the National Law on High Education and by EASA standards.

¹⁷ Military flying training, National Audit Office, June 2015.

¹⁸ All training aircraft in SAF&AD are older than 30 years on average.

¹⁹ Conducting the basic flight training in the airbase, which operates fighter jets, transport airplanes, utility helicopters and flight test unit is a great obstacle to safe and effective flight training.

one of the most obvious problems that must be solved in a new education and training model. A glass cockpit is an aircraft cockpit that features electronic (digital) instrument displays, typically large LCD screens rather than the traditional style of analog dials and gauges. Whereas a traditional cockpit is based on numerous mechanical gauges to display information, a glass cockpit uses several displays driven by flight management systems that can be adjusted to display flight information as needed. This simplifies an aircraft operation and allows pilots to focus only on the most pertinent information.²⁰

The change from conventional instruments to glass cockpit displays has created new challenges for interface and display design with implications for the way pilots monitor information in the cockpit. However, the differences between conventional and glass cockpit displays extend beyond appearance. Glass cockpit displays rely on computerized systems that integrate multiple data inputs and control. Glass cockpit displays can present more information in the space required for conventional instrument panels, but the increase in information places greater demands on pilot attention and creates a risk of overloading pilots with more information than they can effectively monitor and process. The complexity of the integrated computerized systems that drive glass cockpit displays may also limit pilots' understanding of the functionality of the underlying systems.²¹

Flying a glass cockpit aircraft requires a different cognitive style of thinking. As a result, conversion from a traditional aircraft with dozens of individual instruments to a glass cockpit with a few displays requires more than just learning where to look. The older pilots, who have flown thousands of hours in traditional cockpits, usually experience some difficulty transferring to a glass cockpit aircraft.²² Without familiarization training, a basic change of a radio or navigation frequency can cause confusion, distract the pilot and take longer than using a stand-alone radio in a traditional cockpit. While glass cockpits offer an abundance of useful features in fully integrated cockpit nowadays, learning how to use effectively these new tools while still maintaining control of the aircraft is something that will keep training squadron busy for years to come. There are numerous training options for pilots who are going to be converted to a glass cockpit and want to gain the numerous advantages of modern avionics. Many suppliers provide Internet-downloaded trainers free of charge, and there are free online interactive courses. Commercial DVDs and simulator training are extremely useful, as well. Therefore, it can be concluded that the increased use of simulated training combined with the use of more advanced, reliable and efficient training aircraft could reduce live flying and maintenance costs.

The use of the modern training aircraft Lasta could enable more training to be done on less expensive aircraft and free up the front-line aircraft and crews for use in operations. There is the potential to make more use of simulators in training. However, it must be clear that Lasta can cover up to 100 flight hours of syllabus including basic, aerobatics, navigation, IFR, night and formation flying. This syllabus can download the flight hours on a more expensive advanced jet aircraft.²³

²⁰ Decker, T.: "Improving Safety in Glass Cockpits", *Plane & Pilot*, July 6, 2010.

²¹ <http://blog.covingtonaircraft.com/2012/11/14/theglass-cockpit-advantage/> accessed June 2017.

²² Roscoe, A.H., *Workload in the glass cockpit*, *Flight Safety Digest*, 1-8. 1992.

²³ Estimated ratio in flight hour price between Lasta and G-4 is 1:10. Downloading only a few hours from G-4 syllabus means significant cost saving.

The developer of Lasta had not provided training devices and simulators, yet. The Military Academy staff has developed its own trainer only by use of COTS components including both software and hardware. The Military Academy staff has acquired Flight Simulator X. In order to simulate national airplanes (UTVA-75, Super Galeb G-4, Gazelle), which are not involved in FSX package, the specific add-ones have been created as a long-term process. This software package was installed on the high-end hardware configuration that was commercially available at the moment.²⁴

The introduction of Lasta trainer in a new flight training model supported by synthetic training devices could enable downloading of expensive flight hours on a more sophisticated jet trainer.

The next steps in the flight training of fixed-wing pilots are basic and advanced jet training on Super Galeb G-4. This type of airplane has not been the subject of any modernization during its service life. It has old - fashioned analog cockpit that is not compatible with MiG-29 9-13 cockpit. Forming the effective flight training model without modernization of G-4, which is the cornerstone of any modern model of flight training, will not be possible.²⁵ Only the use of modern or modernized training aircraft could free the front-line aircraft and crews for engagement in operations. Some part of the front-line training has to be moved to cheaper training aircraft for the advanced fast-jet training. The increased proportion of simulated training in this flight training phase will further reduces cost.

The fixed - wing flight training model presented in Figure 1 gives the quantitative, not qualitative picture.

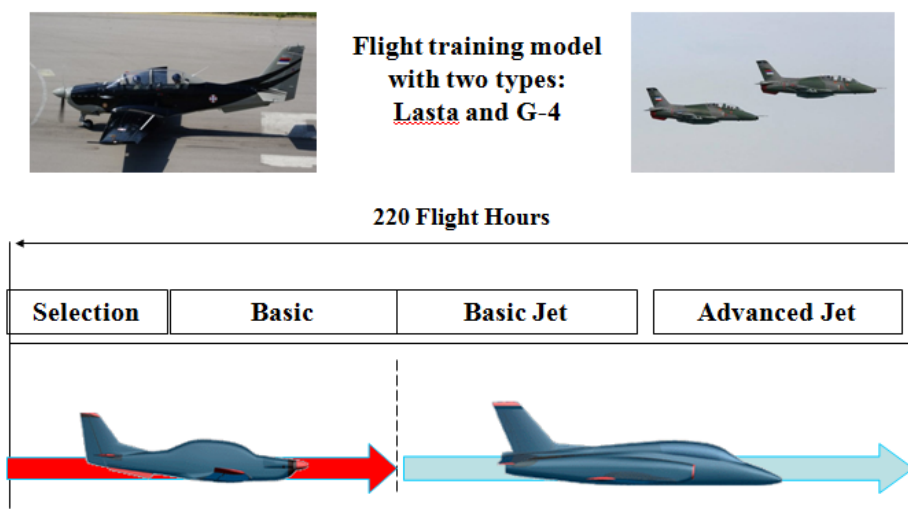


Figure 1 – Fixed - wing pilots training model

²⁴ Vlačić S. Knežević A. Milutinović M. Application of commercial available hardware in the making of flight trainer, ITRO 2015, Zrenjanin 2015.

²⁵ Idea of G-4 modernization has existed since 2004. Due to the budget restrictions the fate of G-4 modernization is uncertain.

There is a big difference in flight training model, which includes 220 flight hours on analog or a digital cockpit and with or without synthetic training devices (STD), which includes:

- Flight and Navigation Procedures Trainer (FNTP);
- Flight Training Device (FTD) and
- Full Flight Simulator (FFS).²⁶

Today, STD are usually supported by interactive computer based training (ICBT), which represents a cheap and affordable way of teaching.

An example of using trainers and simulators for flight simulation is presented in Figure 2, which shows the use of trainers and simulators in the case of MiG-29. This STD configuration can be applied on any aircraft in operational use. Cost savings by avoiding the STD in different phases of flight training is very dangerous, ineffective and counter-productive. Instead of closing the gaps between skills, it will deepen the gap between existing analog jet trainer and first - line fighter aircraft in the new variant.

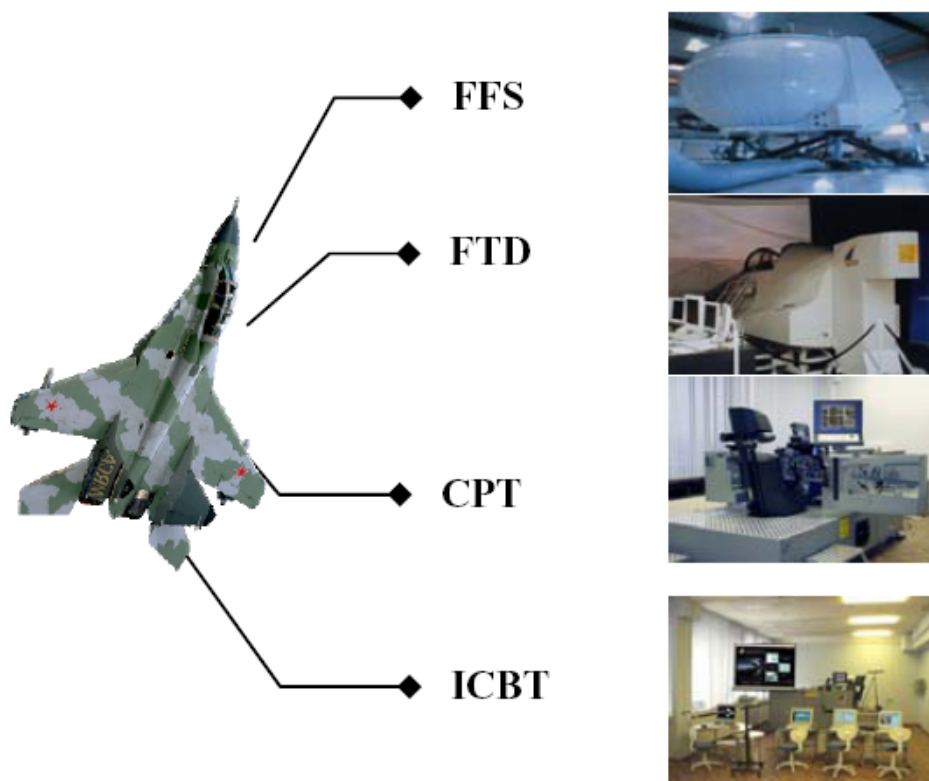


Figure 2 – Use of trainers and simulators in the case of MiG-29

²⁶ More on FTD in Vlačić S., Training devices and flight simulators variants of application in pilots training on the aircraft Lasta, OTEH 2011 Proceedings, pp 144.

Helicopter flight training will be more sophisticated by introduction of H145M. There is no STD that supports the helicopter training. Training on a basic variant jet helicopter Sa-341/342 Gazelle before Gama²⁷ is possible and sustainable because there are no significant differences between two helicopters. The gap between Sa-341/342 and Mi-8/17 is far more serious. For many decades, young pilots were transferred in this way, but this conversion will be more effective by introducing FTD or FFS in the syllabus.²⁸ Flight training model of helicopter pilots is shown in Figure 3.

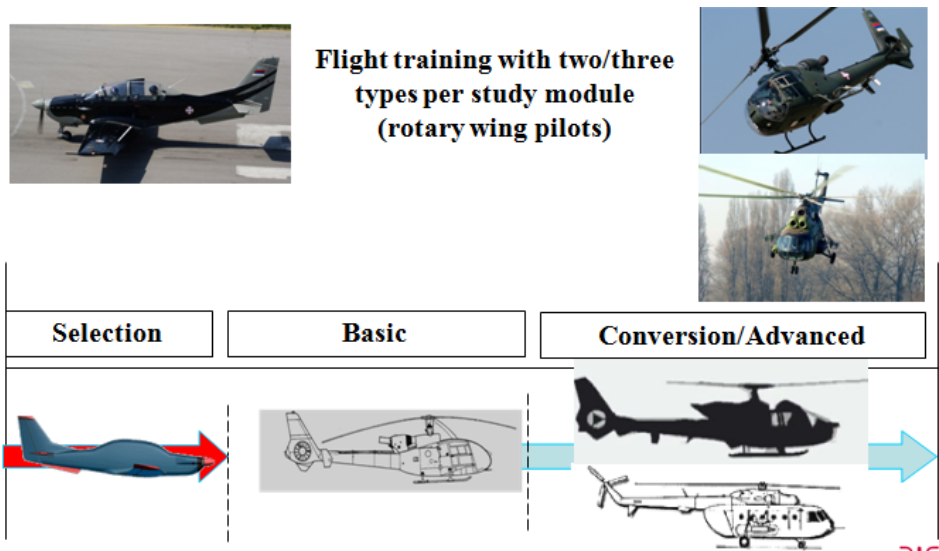


Figure 3 – Flight training model of helicopter pilots

Any conversion from Gazelle to H145M will be cost ineffective without providing the STD. The lack of experience in high-tech helicopter such as H145M limits consideration of its use in the Military Academy flight training model in the midterm period.

Conclusion

Serbian Air Force & Air Defense has recently started the acquisition process of almost 30 new aircraft, either brand new types or new variants. SAF&AD is committed to acquiring the new variant of MiG-29 fighter called 9-13, utility helicopter H145M and transport helicopter Mi-17V-5. It is a great challenge for the small Air Force such as SAF&AD. It means

²⁷ Gama is an anti-armour variant of basic Sa-341/342 Gazelle helicopter.

²⁸ First Mi-17 V-5 conversion course of Serbian helicopter pilots was supported by the use of leased FFS. The course has accomplished great success.

that almost all categories of military aviation inside SAF&AD will see the change in the short term. There is a number of challenges in planning and managing the successful introduction of the new aircraft into service. The introduction of new aircraft into service will demand that pilots, aircraft handlers and maintenance personnel, who currently operate and maintain the existing aircraft, be trained to operate the new types. The new organizational structure has to be created simultaneously with the transition to the new type. The introduction of aircraft of a new generation in the front - line units imposes a completely new approach to the education and flight training. The basic step forward has been done with the establishment of master academic studies in military aviation at Serbian Military Academy. This study program called Military Aviation is specific in many ways. First of all, it correlates with the Bologna Process standards and it also meets the Air Force requirements. Professional and practical courses comply with the standards recognized by the Civil Aviation Directorate (CAD) of the Republic of Serbia. The CAD has standardized many fields and the most important from the Military Academy standpoint is standardization of requirements for airplane pilots - JAR FCL 1. It means that learning objectives of all professional and practical courses (except the flight training syllabus) have to be standardized. The English language standards are also taken into account. Currently, there are no remarks about the theoretical phase during first six semesters.

The second phase of master studies in Military Aviation is flight training on airplanes and helicopters. It is crucial for the cadet-pilots. It consists of basic and advanced flight training either on an airplane or a helicopter. In order to support the whole process, the Air Medical Institute has implemented the Vienna Test System. This system has improved aptitude tests, which can identify the skills needed for fast-jet, helicopter and multi-engine pilots in order to make early and accurate decisions on streaming trainees. Having in mind that every new aircraft in the SAF&AD inventory has a semi or a full - glass cockpit, the training philosophy has to be changed. Preparation of the pilot to fly the glass cockpit front - line aircraft means the very first flights have to be done on a similar glass cockpit. This will be achieved by the introduction of the Lasta trainer. The developer of Lasta had not provided training devices and simulators, yet. The Military Academy staff has developed its own trainer only by use of COTS components including both software and hardware. The new model of education and training of military pilots must be supported by synthetic training devices to enable downloading of expensive flight hours on a more sophisticated jet trainer. To overcome the bridge between Lasta and MiG-29 9-13, the advanced jet trainer G-4 must be modernized to a glass cockpit standard with suitable training devices and simulators. Only the use of modern or modernized training aircraft could free up the front-line aircraft and crews for use in operations. This is the critical point in the new model of military pilot education and training. The increased proportion of simulated training in this flight training phase will reduce cost. The same approach has to be implemented in the helicopter pilot training model, especially having in mind capabilities of the new generation of the utility helicopter H145M.

The implementation of aptitude tests to identify the skills of the future pilots using suitable training aircraft (new or modernized) with the increased use of simulated training will optimize time in training and reduce the overall cost of flight training. The skills needed to use the front-line aircraft will emerge in a proper way in order to meet SAF&AD requirements.

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BASIS OF THEORETICAL DETERMINATION OF ARMED CONFLICT

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This paper presents the theoretical basis of the origin and development of thoughts of armed conflict. The historical-comparative method, content analysis and the methods of definition and classification have been primarily applied in the paper. In addition to the introduction and conclusion, the paper consists of two more parts. The emergence of civilization thought about the notion of war and armed conflict is described in the first part. Furthermore, the first part relates to the perception of armed conflict in accordance with classic and military theories including modern theories of warfare. Classification of armed conflicts is described in the second part.

Key Words: *armed conflict, the Geneva Conventions, war*

Introduction

Armed conflicts have evolved along with the development of the society, science and technology. The purpose of the study of this phenomenon is to try to define and construct defence mechanisms and reactions of the society to the potential emergence of armed conflicts. How to regulate the society in the sense of the defence, how to know and predict the course of events and to timely respond to such phenomena are the questions and issues faced by a lot of societies nowadays. The study of armed conflict in the 21st century is particularly complicated by the increased frequency of conflicts at the global level, and also simplified with the development of thoughts of the collective security as the only possible response to threats. However, it is always necessary to look at the roots of armed conflict and sometimes look for theories that several centuries ago established the basis of something that is now called the modern war.

Notional Determination of Armed Conflict

The term armed conflict finds its place in the international dictionary for the first time in 1946 during the Conference of the National Red Cross, when it was proposed that solutions to all armed conflicts, whether interstate or within one country, are subjected to

a single corpus of international treaty law (Elder, 1979). Although this initiative has not been accepted until nowadays, the concept of armed conflict survived and kept its value in the domain of international war and humanitarian law. The reason for this is its acceptance in all most important treaties in this field.

The notional determination of Armed Conflict according to the Geneva Convention

According to the documents of international humanitarian law, there are legally defined standards governing all aspects of warfare. These standards are established in the four Geneva Conventions of 1949, which are the primary sources of international humanitarian law. These conventions have been ratified by almost all countries all over the world and they contain a set of binding restrictions that determine behavior in war.

In the field of contract law, the notion of armed conflict was established for the first time in the Geneva Conventions, which stipulate that they are applied in the case of "published or of any other armed conflict which may arise between two or more parties, even if one of them did not recognize state of war". The term armed conflict is also mentioned in Common Article 3 of the four Geneva Conventions, which applies to "the case of armed conflict which has not an international character and arises in the territory of one of the high contracting parties" (Elder, 1979).

In comments to the Geneva Conventions (hereinafter: comments) there is a concept that has been compared to the traditional concept of war, which is more comprehensive and corresponds better to reality. In the case of international armed conflicts comments stand out: "Any disagreement arising between two countries and which leads to the intervention of armed forces is an armed conflict in accordance with meaning of Article 2 of the Convention" (Geneva, 1960).

However, when it comes to the concept of armed conflict, which does not have an international character, according to the Commentaries: "In general, it must be recognized that the conflicts referred to in Article 3 are armed conflicts, in which both parties participate in hostilities – in short, conflicts that are very similar to the international war, but take place within a state" (Geneva, 1960). Taking into consideration the aforementioned, it can be concluded that the use of armed forces was an essential element for defining both international and non-international armed conflicts. Another important element of this concept is the requirement that the armed forces really, actually take part in hostilities.

Despite the aforementioned, it is necessary to recall that the Doctrine of international humanitarian law recognizes more demanding definitions of armed conflict. One of them is as follows "the use of weapons as an instrument to harm persons and/or property in order to overcome the opposing party" (Geneva, 1960).

Bearing in mind the aforementioned, it is obvious that the lowest common factor of armed conflict is the engagement of the armed forces. If there is intervention of the armed forces, regardless of the vision in which this intervention is manifested, it is the international armed conflict. The conflict that does not have the international character is a situation where there has been enmity between the armed forces (at least one of them is non-state entity), which takes place within the territory of one state.

There are other ways of determination of armed conflict. For example, the armed conflict between two countries includes the involvement of military forces on both sides and at least 1,000 dead as a result of military activities (Radivojević, 2013), or armed conflict is a result of the incompatibility that concerns government or territory, where two sides are engaged (one of them is mandatory state) and where the ultimate outcome is of at least 25 dead as a result of military activities (Wallenstein 2012).

The notional determination of Armed Conflict in Military Sciences

According to the Doctrine of operations, armed conflicts represent a process of mutual destruction of conflicting parties (Doktrina operacija Vojske Srbije, 2012). Armed conflicts are characterized by the application of the armed forces to achieve limited objectives. Conflicts can be carried out between states or within national borders, in the form of armed rebellion or the fight against terrorism in an urban or uninhabited area (Doktrina Vojske Srbije, 2010).

Armed conflict exists if foreign armed forces, armed groups, conflicting fractions or terrorist forces use force or threat of force to promote their own interests or objectives. Moreover, conflicting parties apply the best possible combination of political instruments including diplomatic, economic and psychological resources and means.

The most extreme or ultimate form of armed conflict can take the form of war. The characteristic difference between armed conflict and war lies in the fact that the significant part of population of the conflicting parties is mobilized. Another difference lies in the fact that in case of war the conflicting parties are considered to be so serious threats to their own objectives and interests that they believe there is no other way, but to use substantial military force, usually over a long period of time. The state of war would certainly exist if a country's own military forces attacked the integrity of other countries.

The notion of armed conflict can be defined in the narrow and broad sense. Armed conflicts in the narrow sense mean the use of the armed forces by one or more states against another state or group of states with a view to imposing their own will to them – attacked countries (Sakan, 2003).

In a broader sense, armed conflict means any use of the armed forces, whether it comes to the engagement of one state or group of states against another state or group of states with a view to imposing their own will, or that it is an internal conflict (rebellion or revolution) or border incidents in which a firearm is used and the armed forces deployed (Sakan, 2003).

Armed conflict is the basic form of objective reality, which manifests the engagement of all capacity of military forces. The traditional armed conflicts, which have historically been mostly symmetrical, have received a completely new dimension in recent decades. The symmetry, in terms of military power, economic, political and diplomatic influence of conflicting parties, has disappeared in recent decades and armed conflicts have become bisymmetrical. The emergence of bisymmetrical armed conflicts constitutes an appropriate impulse for finding new strategy of performing armed conflict with an inferior side in the conflict. As a result of the aforementioned, in the last two decades, armed conflicts have become asymmetric, in which it is possible to achieve important effects, sometimes of strategic proportions, with the help of the surprise factor and the initial planning and with a relatively small

forces. At the end of last and the beginning of this century armed conflicts, in which air forces have the main role in achieving strategic objectives, respectively, air defence forces (depending on goals and strategic possibilities of conflicting parties), are bisymmetrical according to their characteristics (Petrović, Kankaraš and Cvetković, 2016). After completion of main operations, these armed conflicts often take the form of asymmetric conflicts.

The acceptable definition of armed conflict is that it represents the military - technological social phenomenon (genus proximum - senior notion in relation to the term that is defined), in which the mutual destruction of two or more adversaries in the conflict fulfill political, economic, military, diplomatic or confessional objectives of the conflicting adversaries, which could not be achieved by other activities (diferencia specifica – the notion of specific differences, which is defined in relation to all other terms included in the senior notion) (Petrović, Cvetković and Stojiljković, 2015).

Classification of Armed Conflicts

The classic law of war knew only the concept of war between sovereign states.

However, the warfare within the country, such as rebellion or revolution was not considered to be the war in terms of international law, but civil war according to the applicable national law (Abi-Saab, 1991).

The traditional concept of inter-state war was based on formal and subjective criteria of a unilateral declaration by the sovereign in the form of a declaration of war or ultimatum. This criterion for determining the beginning of implementation of the law of war proved to be, like many others, insufficiently precise.

State practice between the world wars has confirmed that armed conflicts begin without a formal announcement, which can be an argument of one or more conflicting parties to eliminate the application of the law of war (Berman, 2004).

However, only the tragic experiences of the Second World War will have a serious impact on the formal concept of inter-state war to expand the concept of international armed conflict.

International Armed Conflicts

The introduction of the notion of international armed conflict, which includes the war, according to the Geneva Convention is based on factual, objective and functional criteria. The result of that is the common Article 2, which stipulates that the Geneva Convention should apply in every armed conflict, which may arise between contracting states, whether they publish war or not. Moreover, the Geneva Conventions apply to all cases of partial or total occupation of the territory of a contracting party, even if the mentioned occupation meets with no military resistance.

Moving from the formal and subjective to factual and objective criteria had a significant impact on the change of the concept of interstate war. At first, the declaration of war is no longer a necessary condition for the existence of a state of war and the application of the rules of international law. The Geneva Conventions certainly do not forbid the dec-

laration of war or any other statement of state, but they stop connecting declaration of war with legal consequences. The consequence is that the declaration of war becomes legally irrelevant because the international armed conflict represents the fact on the field (Dinh, 2002). The recognition of war has been made irrelevant by insisting on factual criteria. The Geneva Convention expressly regulates the situation when one of the participants in armed conflict does not recognize the existence of state of war.

Therefore, international armed conflict assumes disagreement, which arises between states and leads to the intervention of the armed forces, even if one party denies the existence of state of war (Geneva, 1960). Thus, it can be concluded that the existence of war or any other armed conflict represents *de facto* occurrence of hostilities.

How long the conflict lasted, how many people were killed and how many forces participated is not relevant for the existence of international armed conflict. . International humanitarian law does not determine the level and intensity of violence that armed operations must reach to the applicable rules related to international armed conflicts. It is enough to establish the authority over other conflicting side that is considered to be protected in terms of the Geneva Conventions by the armed forces of one state. Even if there was no warfare, the fact that the persons protected by the Convention were deprived of liberty should be sufficient for its implementation (Geneva, 1960).

The establishment of Protocol I had a significant influence on the development of the notion of international armed conflict. Therefore, this act revised the concept of international armed conflict by introducing a new category, which encompasses the national liberation and anti-colonial wars. Namely, according to this act, the international conflicts are performed in the territory of one state. The objective of one conflicting side is to achieve the right to self-determination. This kind of conflict was considered as an internal problem by the traditional laws of war. According to Paragraph 4 of Article 1 of the Protocol, the international armed conflicts are classified as "armed conflicts in which people are fighting against colonial domination, foreign occupation and racist regimes, using the right of nations to self-determination, confirmed in the United Nations Charter and the Declaration on Principles of International Law concerning friendly relations and cooperation between states in accordance with the Charter" (Izvori medjunarodnog humanitarnog prava, 2007).

The analysis of this provision indicates the existence of several basic criteria required for the conflict that takes place in the territory of a state to be qualified as international armed conflict. First of them is the existence of armed conflict, respectively the existence of the usual conditions required for the qualification of a certain situation as armed conflict (Sakan, 2003). The second criteria is the claim that it is a conflict when government forces oppose forces that belong to the people who have still not exercised their right to self-determination by means of weapons, fighting against colonial domination, foreign occupation and racist regimes. The third condition to perform equalization of international conflict is a statement of government that represents the people engaged against contracting state to apply the Geneva Conventions and this Protocol in relation to that conflict. In this regard and it is also the fourth condition, it is necessary that the state itself in whose territory the conflict takes place is a contracting party to the Geneva Conventions and Protocol.

It can be concluded that the ability of engagement in armed conflict will remain the last instrument of state power in the future. However, three factors dictate that the emergence of inter-state conflict will be probably reduced. Firstly, it is not likely that bipolar competition created between the global superpowers, as it was the case during the Cold War, will be re-

peated. Secondly, the superiority of the most powerful states is likely to discourage strategic conventional attacks against them, their allies or those regions, where they have strategic interests. Thirdly, the risk that the protagonists will grow because of the cost and lethality of weapons spills over into regional and global stability and strengthens the international anti-war beliefs and punishments for the participants of the conflict. Despite the aforementioned, the wars will continue to occur and they will potentially be more dangerous due to the increased lethal effects, massive weapons systems and the growing impact of the conflict.

Non-International Armed Conflicts

Conflicts within the state, even when they are characterized by durability, organization and high level of violence, were regulated only by the internal law of the state in whose territory they took place,¹ not internationally until the end of the Second World War, but However, during the first decades of 20th century the first indications of the establishment of different views on the relationship of international law of war and wars within states appeared. Due to the civil war in Spain in 1938 the Assembly of Nations adopted a resolution on the protection of civilians from aerial bombardment, omitting the distinction between interstate wars and wars within the country (League of Nations, 1938).

Despite these and other efforts for civil wars to undergo some principles of international humanitarian law, none of the existing international agreements, including all of the Hague Convention, could not deal with this kind of war. States feared that their possible inclusion in the field of application of the rules of international law of war would mean unlawful interference in their sovereignty and exclusive jurisdiction. Namely, only the horrors and destruction left behind by the Second World War would strengthen the belief that internal conflicts should be subject to the international laws of war.

Acting in this direction, the Geneva Conventions have made at that time a revolutionary step forward in the sphere of the internal jurisdiction of extending the application of the rules of the international protection of victims of the non-international conflict. The protection provided by Article 3 is common to the four Geneva Conventions (Izvori međunarodnog humanitarnog prava, 2007). It is based on a request for humane procedures against persons taking no active part in hostilities, including members of the armed forces who have laid down their arms and persons unable to combat due to sickness, wounds, or any other cause, and without any discrimination.

Common Article 3 of the Geneva Convention has been declared a "Convention in miniature", "Convention of the Convention," which provides mandatory minimum standards of protection in all armed conflicts. In any case, it is difficult to argue that this article has several important virtues. In the first place, it is its clarity, simplicity and the possibility of applying the principles of humanity. This article has an additional advantage because it is automatically applied irrespective of the nature of the conflict in the territory of a state. Therefore, it can be said for its provisions that they represent the absolute minimum threshold for the entire application of international humanitarian law, and that deviation from them (in the negative sense) is not allowed in any armed conflict.

¹ Conflicts within the state can be called internal conflicts.

Additional Protocol II has brought significant changes when it comes to the concept of the non-international armed conflict, which has become the dominant form of conflict in the meantime. For the first time, this document has precisely formulated material elements, whose presence qualifies a particular situation as the non-international conflict in which the new, higher standards of protection of victims is applied. This led to the adoption of a new notion, and therefore to redundancy of protection regime in relation to Article 3 of the Geneva Conventions.

Taking into consideration the aforementioned, it can be concluded that there are four basic conditions for the categorization of non-international armed conflicts, which are the criteria for its application, namely:

- a) that conflict takes place in the territory of the contracting party between its armed forces and rebel forces or other organized armed groups;
- b) that rebel forces have responsive command;
- v) rebel forces exercise control over part of its territory, which allows them to carry out sustained and concerted operations; and
- g) rebel forces exercise such control that allows them to implement Protocol II (Commentary 1987).

If the abovementioned is achieved then the Protocol introduces a distinction between non-international armed conflicts to be regulated and whose existence requires stronger intensity and conflicts in common Article 3 of the Geneva Conventions, which assume lower or weaker intensity. It also leads to the duplication of the regime of protection of victims of non-international armed conflicts.

The next step towards the complexity of the concept of non-international armed conflict was the adoption of the Rome Statute, which, as it was mentioned, introduced the category of non-international armed conflicts, which are characterized by the continued violence.

It is actually about the armed conflicts in Article 8, Paragraph 2, Point d of the Statute "taking place in the territory of a state when there is continued armed conflict between the government authorities and the organized armed groups or between such groups." As a new category, these types of conflicts are somewhere between non-international armed conflict of Article 3 of the Geneva Conventions and conflicts covered by Protocol II. According to the criteria of intensity, conflicts characterized by continued violence appear on the scale as a middleweight, and in addition to Article 3 Protocol II could apply to them (Knežević 2007).

When it comes to internal conflict, it is very likely that in the future this kind of conflict will become more frequent. Internal conflicts would get international characteristics if some of the conflicting parties gained the support of influential global centers of power.

Conclusion

Definition and classification of armed conflict is a problem that is as old as the theoretical systematized knowledge of it. Taking into consideration that the sphere of objective reality called armed conflict exists as a social and technological phenomenon determined by the development of civilization, it is necessary to define armed conflict at an appropriate scientific level (Petrović, Cvetković and Stojiljković, 2015). Only this approach will provide better understanding of armed conflict and specific forms of its manifestation from the scientific point of view.

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INFLUENCE OF CHAPLAINCY ON PREPARATION AND EXECUTION OF OPERATIONS

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This paper deals with one of the segments which can contribute to development and enhancement of the military strength of the Serbian Armed Forces in operations by its positive influence mainly on moral component. The newly established chaplaincy in the Serbian Armed Forces is the aforementioned segment. The author states the concrete possibilities of the influence on planning, preparing and executing an operation in all its phases with an emphasis on *doctrinal provisions*. It means that the imperative is not development of the theological thought, but contribution to further doctrinal regulation of operations, improvement of moral component, enhancement of the total military strength of the Serbian Armed Forces and improvement of the operational art as one of the defence sciences. This paper serves as a short reminder of general issues of the Serbian Armed Forces operations with an emphasis on the role of chaplaincy in increasingly present multidimensional operational environment with focus on the link to social and time dimension. There are several short comparative analyses in order to explicate chaplaincy in planning, preparing and executing operations. The first one is the intensity analysis of three parallel activities, which are different according to its pith. These are the activities conducted during all three phases of the Army operations: *combat, CIMIC and chaplaincy*. The second one is the analysis of intensity of chaplaincy activities in operations phases whereas the third analysis is related to predominant types of their execution depending on operation phase. The paper expresses personal views with the aim to focus attention to the need and potential directions of further doctrinal and by-law development of this field. Concretely, it is necessary to upgrade the set of doctrinal documents in the field of operations, service, CIMIC and human resources management doctrines. Furthermore, it is necessary to elaborate procedures of work of military chaplains in commands and headquarters in operations planning process, and the level of their implementation should be enhanced through professional development and training of officers.

Key Words: *operations, chaplaincy, CIMIC, military chaplains*

Introduction

The military strength of the Serbian Armed Forces consists of three mutually connected components: physical, conceptual and moral. The term *mutually connected* stresses the fact that in case of absence of one of them we could not talk about the military strength, which highlights the importance not only of each component individually, but their cumulative qualitative and quantitative influence. The moral component is particularly interesting for analysis, not only due to its significance, sensitivity and tendency to sudden changes, but because it was and still is the greatest unknown for a potential enemy. Without the moral component, the physical and conceptual ones do not have strength and completely lose the point. It is possible to contribute to development and enhancement of the military strength of the Serbian Armed Forces in contemporary operations by chaplaincy activities and a positive influence on the moral component, taking into account the fact they are conducted in conditions of rather *multidimensional* operational environment. It is expected that type and intensity of such activities greatly depend on the *social and time* dimension of operational environment, kind and phase of operations, and the scope of CIMIC activities and actors.

Having in mind characteristics of contemporary conflicts, a high level of dynamics characterized by contemporary operations, a wide variety of possible actions and a rich diversity of spiritual capacities at traditional churches and religious communities disposal from dogmatic aspect, and rather high percentage of the Serbian Armed Forces members declared as believers, it is expected that chaplaincy can have a positive effect on planning, preparing and executing operations.¹

Chaplaincy in operations

Military chaplains participate in planning, preparing and executing operations. Moreover, restrictions connected to their engagement in some operations defined by the by-law regulation such as information and psychological operations are related exclusively to their engagement in performing main tasks of the aforementioned operations. In other words, the stated does not exclude spiritual care for the armed forces members engaged in those operations and includes only *protective component of its own forces*. Furthermore, from the aspect of participation of military chaplains in operations, it is important to stress their non-combatant status. Actually, these are members of the armed forces recognized by the Geneva Convention and treated as one of the protected categories in the rank of medical personnel, the wounded, civilians, etc.²

At an operational and tactical level military chaplains are directly subordinated to commanders and by *upgrading* the by-law regulation, which stipulates *operational planning* in the Serbian Armed Forces, as well as by *development of standard operating procedures*, it is possible to enhance modalities of their cooperation with officers responsible for moral and psychologists *within groups which are formed in headquarters of the forces that execute an operation*.³ Today

¹ Stevica S. Karapandzin, *Chaplaincy in SAF, influence on Army operations*, Media Centre „Odbrana“, Belgrade, 2015, p 11.

² Convention (III) related to the Treatment of Prisoners of War. Geneva, 12th August 1949, <http://www.icrc.org/ihl/INTRO/375?OpenDocument>, Internet, 08/03/2014.

³ *Guide for operational planning and work of commands in the SAF*, Serbian Armed Forces General Staff, document of Planning and Development Department (J-5) Internal No. 3498-36, 16th December 2013, Belgrade, p. 118.

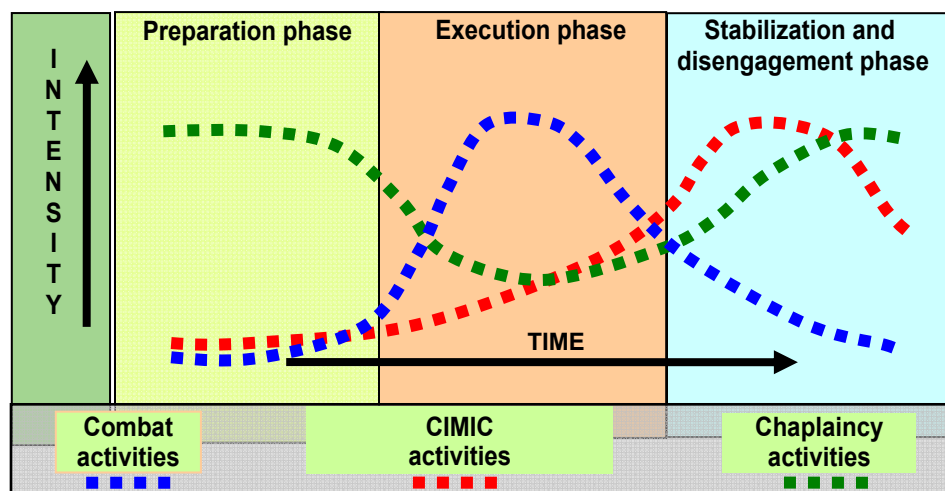
some defence sciences do not treat only military issues during operations because in their planning, preparation and execution both in peace and state of emergency and war there are numerous other non-armed and non-military factors, whose engagement affects the success of operations. Today we have *multidimensional operational environment* as one of the most significant characteristics of operations during which chaplaincy activities are conducted among others. From the point of view of this paper the social and time dimension are interesting out of the dimensions of operational environment defined by the Operations Doctrine of the Serbian Armed Forces (physical, time, political, social, economic, technological, information, military).

The social dimension represents the public opinion and its relation to an operation. The conditions which have to be met in order to have the favourable social component is *respect of the international humanitarian law, legitimacy of the selected targets, provision of support for fulfilling objectives of operations and CIMIC in the area of an operation.*

Undoubtedly, chaplaincy has its role in fulfilling certain number of the aforementioned conditions in operations. The relation of chaplaincy and *legitimacy of the selected targets and CIMIC*, as well as the effect of *the time dimension*, will be dealt with in greater detail later in the following text. As far as *provision of support for fulfilling objectives of operations* is concerned, chaplaincy does not exert an influence which would be interesting for analysis.

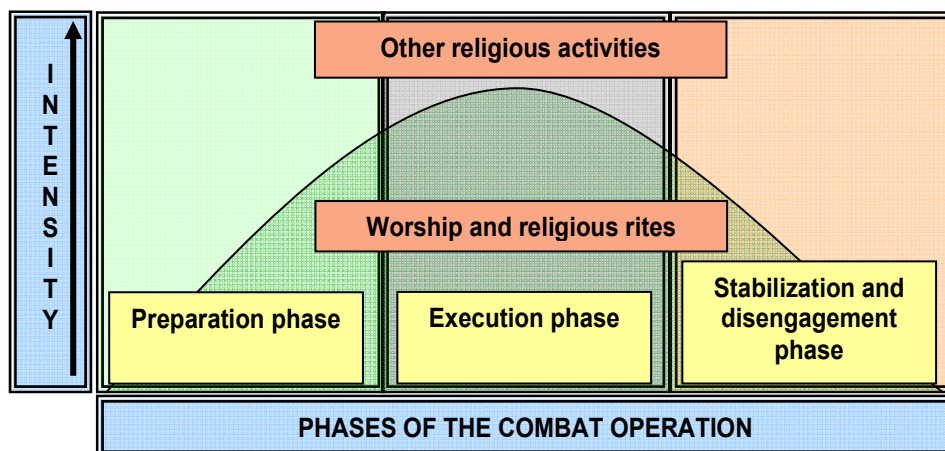
An operation is conducted in three phases: 1) preparation phase; 2) execution phase; 3) stabilization and disengagement phase. Chaplaincy activities are focused on constant coordination with activities carried out in all three phases of operations as their religious support in order to contribute to enhancement of its military strength. Therefore, focus should be on three short analyses.

The first one is the intensity analysis of *three parallel activities*, which are different and conducted during all three phases of combat operations: 1) combat activities; 2) CIMIC activities and 3) chaplaincy activities (Picture 1).



Picture 1 – Comparative review of intensity of combat activities, CIMIC activities and chaplaincy activities according to phases of combat operation

It is clear that the third phase unlike previous two phases is rather *non-combatant* whereas the second one is characterized by a strong relation to *the social dimension* of operational environment. It is also known that the level of intensity of *combat activities* during a combat operation varies and it is minimal in the first phase. At the end of the first phase it begins to increase, and during the second phase it reaches its maximum. After that, the level of intensity of *combat activities* starts to decrease, so during the third phase of an operation it becomes similar to the level of the first phase. In CIMIC Doctrine of the Serbian Armed Forces it is written, inter alia, that the intensity of *CIMIC activities* is inversely proportional to the intensity of *combat activities*, and it reaches its maximum in the third phase of operations.⁴ When considering *chaplaincy activities* during phases of combat operations it is noticed that their intensity during the first and third phase is very high whereas during the second phase it is at a lower level. Otherwise, *chaplaincy activities* are classified into two groups: 1) *worship and religious rites* and 2) *other religious activities*.⁵ The degree of inverse proportion of the intensity of *combat* and *chaplaincy activities* during *combat operations* is even more expressed. It can also be concluded that the intensity level of *CIMIC activities* and *chaplaincy activities* in the third phase of operations is almost the same. Thus, the possibility of the future unique regulation of overlapping fields of the aforementioned activities is offered as a special challenge. The second analysis is related to the *intensity of chaplaincy activities* according to phases of *combat operations*. Before considering certain issues from the field of their execution, it is necessary to emphasize that in the first and third phase of operations the intensity of execution of *worship and religious rites* and *other religious activities* is inversely proportional. Actually, the intensity of *worship and religious rites* is somewhat lower in the first and third phase whereas it reaches its maximum in the second phase. The situation is opposite with *other religious activities* and the intensity of its execution is higher in the first and third phase whereas in the second phase it is somewhat lower (Picture 2).



Picture 2 – Comparative review of intensity of worship and religious rites and other religious activities according to phases of combat operations

⁴ CIMIC Doctrine of the SAF, Media Centre „Odbrana“, Belgrade, 2012, p. 30.

⁵ Regulation on the chaplaincy in the SAF, *Official Gazette of the Republic of Serbia*, No. 22/11, Article 22.

The aforementioned is a consequence of the effect of several factors. These are: *the intensity level of combat operations*, *characteristics of an armed conflict* and *duration of an operation*, and the influence of *the time dimension* of operational environment can be noticed, as well. It has already been stressed that the level of intensity of *combat activities* is the highest in the second phase, which has a crucial effect on the fact that *worship and religious rites* in this phase is not only more intensive, but also more prevailing, so in relation to *other religious activities* during execution phase it has a higher level of priority. The reasons are in more expressed presence of *danger*, *stress* and *chaos*, and in sudden changes of situation and great increase in number of events in a unit of time as a result of conduct of *combat activities* such as wounding and death as being the most dramatic ones. However, this does not mean that, in accordance with the possibilities, necessity and available time, *other religious activities* would not be conducted in this phase.

The time dimension of operational environment during execution phase of combat operations exerts an influence on the increase of priority level of *worship and religious rites* in relation to *other religious activities*. During execution of operations *time* represents a complex value and encompasses several intervals, which have their beginning, flow and end. The total duration of operations is considered in relation to phases of an operation and consists of: the time for preparation, the time for execution of an operation and the time for stabilization of fulfilled objectives and disengagement of a unit.⁶ *The time for execution* of an operation includes the initial and execution time for conduct. *The initial time* represents an interval from receiving a task until starting its execution whereas the execution time is from beginning of execution until conduct of a specific combat task.⁷ The length of the aforementioned intervals depends on numerous factors. However, *the execution time* differs slightly, but sufficiently, from other intervals in lack of possibility, figuratively speaking, to "stop and go back". The issue of time, actually, from the theological point of view, is a category considered in a special way and a review from this point offers new and interesting remarks, which are not the topic of this paper. It means that, as a consequence of the expressed and already mentioned dramatic nature as a characteristic of *the execution phase of combat operations* in relation to it, according to an unwritten rule and again figuratively speaking, "there is more time" in the first and third phase. Although someone would think of it as being "psychological illusion", and someone else as "reality" due to characteristics of an armed conflict and more explicit needs of members of the armed forces, it affects the sudden increase in the intensity of *worship* in *the execution phase of combat operations*. The aforementioned statement is very important despite the fact that maximum attention is dedicated to preparation for execution of a combat operation. The intensity level of *combat activities* decreases in the third phase of a *combat operation*. In accordance with this, the number of requests to eliminate their consequences increases, which relates to chaplaincy activities to a considerable extent, as well. In other words, the consequences produced in the second phase are eliminated in the third phase, when the relationship to the killed, wounded and traumatized comes to the fore and the work with families of the armed forces members, which is greatly achieved by conduct of *other religious activities*. It means that during the third phase of an operation the connection of chaplaincy to the *social dimension* of operational environment comes more to the fore.

⁶ *Doctrine of the SAF Operations*, Media Centre „Odbrana“, Belgrade, 2012, p. 46.

⁷ *Ibid.*, p. 47.

The third analysis is related to the priority level of *certain types of worship and religious rites* during the *execution phase* of operations depending on whether we talk about *combat* or *non-combatant* operations. The aforementioned intensity is not always the same, that is, it is different in the greatest number of cases. During eliminating consequences of non-combatant threats in the execution phase of *non-combatant* operations, due to the nature of such threats, there are changes in requests of the Serbian Armed Forces members for chaplaincy activities. In other words, the intensity level of *worship and religious rites* decreases in relation to the intensity of *other religious activities*.

Chaplaincy in preparation phase for execution of operations

Preparation of operations lasts from the moment of receiving a task until the beginning of an operation, when processes of the work of headquarters at decision making and preparation of units, their development and bringing are conducted, an operational schedule formed and a sequence of other measures preceding execution of operations. They are conducted before and during execution of operations and they encompass planning operations, organization of forces, provision of necessary resources, training and operational development of forces.⁸ Chaplaincy activities are conducted in order to contribute to reaching the required level of operational capabilities of forces engaged in an operation. The focus of engagement of military chaplains is on *human resources*, primarily on their *qualitative* characteristic, that is, the most vulnerable, the most prone to sudden changes and for an enemy the least known *the moral component* of the military strength. The justification and need for the aforementioned engagement is noticed in the fact that the armed forces members during operations are in the situation that, in the conditions of great psychophysical stress, they perform complex tasks. Therefore, preparation for operations carried out by military chaplains lasts continuously. It means they continue conditionally with preparation after the end of the first phase of operations, in the second and even third phase of operations. Such approach has as the result classification into *preparation before, during and after performance of a task*. Preparation before performance of a task is conducted in accordance with specificity of an operation and it has already been stated that in this case *other religious activities* prevail. Preparation during performance of a task is conducted in order to maintain spiritual strength of the armed forces members, who are already engaged in operations, which includes participation of military chaplains in operations, where, as already mentioned, *worship and religious rites* prevails. Preparation after performance of a task is based on activities conducted in order to stabilize the spiritual state of the disengaged personnel, where *other religious activities* come again to the fore.

Participation in human resources preparation

Preparation of human resources includes: human resources planning, calling up military conscripts, admission of professional members, deployment, socialization, moral and psychological preparation, career planning, resolution of status issues, evaluation and assessment of

⁸ *Ibid.*, p. 55.

efficiency and capabilities of personnel.⁹ Chaplaincy has exceptional possibilities in eliminating negative effects of operations such as *danger*, *stress*, *chaos* and *friction*. Therefore, from the aspect of engagement of military chaplains in human resources preparation, moral and psychological preparation in which they participate are prioritized and done in cooperation with officers responsible for moral and psychologists.¹⁰ However, besides cooperation, it is the fact they exert a remarkable influence on shaping the overall moral profile of the armed forces members, mainly through enhancement of both *motivational* and *ethical* side of the moral component. The first one represents the will to fight and win, and the second one *internalization* of the ethical side of the moral component.¹¹ Military chaplains primarily achieve this by affirmation of the ethical principles of religion and their simultaneous *connection* to the most important values of the military profession, which results in adoption of those values by the faithful armed forces members. They teach them to live according to the principles of religion and at the same time they prepare them for all difficult moments, which they will encounter in operations that they take part in together. In this way, the faith in victory and *motivation* for fight strengthen, as well as the *ethical* conduct during operations, which, inter alia, creates the favourable conditions for respect of *the international humanitarian law* provisions.

One of *other religious activities* is the engagement in preparation for execution of complex tasks, as well as taking measures to prevent extraordinary events, bad behaviour and negative phenomena such as suicide, abuse of psychoactive substances, sects, theft, etc.¹² It means that preparation, which has begun in regular peacetime conditions, continues during operations in all phases and with adaptation to conditions in the area of an operation. Negative phenomena, especially those events which happen suddenly are noticed during this preparation and eliminated. Thus, military chaplains, during preparation phase of operations continue with previously started participation in primary, secondary and tertiary prevention of extraordinary events, bad behavior and negative phenomena. The *primary* preventive work includes the engagement in prevention of occurrence, the *secondary* in early detection, and the *tertiary* preventive work in rehabilitation, that is, elimination of consequences of extraordinary events, bad behavior and negative phenomena, which have already happened. This is especially significant during execution phase of operations because the main efforts of the engaged forces, primarily commanding personnel, are focused on performance of set tasks in operations. In such situation, occurrence of some of the aforementioned negative phenomena would have much harder consequences for operational capabilities of the forces executing an operation in relation to their occurrence in peacetime conditions. The mental hygiene teams in units not only continue, but intensify their work during all phases of operations.¹³ It is also significant to mention prevention of suicide,

⁹ *Army Doctrine*, Media Centre „Odbrana“, Belgrade, 2012, p. 41.

¹⁰ *Regulation on the chaplaincy in the SAF*, Official Gazette of the Republic of Serbia, No. 22/11, Article 22., Paragraph 1, Indent 2, Sub-Indent 7, Point 1.

¹¹ Internalization represents a transfer of certain external norms to an internal, mental plan, which is later experienced as their own.

¹² *Regulation on the chaplaincy in the SAF*, general quote, Article 22, Paragraph 1, Indent 2, Sub-Indent 6.

¹³ The primary mental hygiene teams have been established at all tactical level commands, the secondary teams in military medical centres, and the tertiary mental hygiene team at the Military Medical Academy. The primary teams are composed of a deputy commander, a doctor and a psychologist, and an operations officer, the Military Police officer and a command NCO. The teams follow and analyze the psychological and social status and psycho-physical strain of members of a unit. They are engaged in preparation for execution of complex tasks and they

which represents a very important activity of military chaplains. Furthermore, special attention is paid to the fight against sects and cults in the military environment in preparation phase of operations due to the danger of their destructive and devastating actions, which can have a negative effect on preparation and execution of operations. Moreover, it is known to what extent drinking alcohol, abuse of psychoactive substances, as well as inclination to abuse, sexual harassment, gambling, theft and fight can affect execution of operations. During preparation and execution of operations commanders and officers commanding take measures to prohibit and sanction such and similar events whereas military chaplains primarily exert their influence on strengthening awareness of members of their damage.

Participation in planning operations

The military organization and chain of command are characterized by a high level of representation of planning as a process function. Military chaplains, according to the issues from the field of functional competence, take part in all forms of planning in the military, which is also related to definition of tasks and activities, whose execution enables freedom of religion during operations of their forces with respect of specificity of their status. In order to contribute to optimization of capabilities of planning, execution and support to operations and exercise of freedom of religion during their conduct, military chaplains participate in planning operations, which encompasses the integration of chaplaincy activities in joint efforts of different forces in all assigned missions and tasks in order to contribute to their successful conduct. In conditions of establishing personal staff groups or without them military chaplains perform tasks under the direct command of a commander and they cannot perform the role of a coordinator or specialist staff officers. Furthermore, they cannot be engaged in *intelligence preparation of battlefield, definition of performed and main tasks, preparation of an operational model and formulation of a mission statement, development of a commander's idea, elaboration, comparison and analysis courses of actions and definition of centres of gravity*. However, they can exert an influence on *definition of restrictions and risk assessment* in operations and *identification of facts and assumptions*. Their engagement in *the assessment of available forces* is particularly important. Moreover, it is necessary that during orientation phase they have the results of the work of *the teams for target selection* not to affect their choice, but only to give their opinion which of considered targets should not be in a list. Thus, chaplaincy makes a contribution to eliminate possibilities for potential breach of *the international humanitarian law* provisions and fulfillment of one more condition that *the social dimension* of operational environment should be favourable, and that is *legitimacy of the selected targets*. During the phase of drafting documents military chaplains take part in creating appendices about human resources with operational order and they are responsible for drafting the point about religious issues.

propose measures to commanders to eliminate conditions, which may lead to extraordinary events and elimination of consequences of extraordinary events, which have already happened. They pay special attention to members with already noticed problems. The teams perform an advisory role. They have regular meetings and keep records of their work. Military chaplains, should be included in the mental hygiene teams.

Participation in training

In order to strengthen the military collective, spiritual and moral values and motivation of the armed forces members, cherishing their military virtues and patriotism, as well as developing civil responsibility, military chaplains during preparation phase of operations participate in training of their members through *organization of lectures and talks on spiritual and moral topics*.¹⁴ The aforementioned practice can be conducted in two ways: according to the principle of *obligatory content* and the principle of *volunteerism*. The obligatory content of training is conducted in the form of preparation for the upcoming tasks in operations with the focus on training for adequate behavior in concrete religious environment. Due to the sensitivity of the topic military chaplains of the confession that in the area of an operation prevails with local population are engaged. This type of training should be obligatory for all members of the armed forces, who participate in operations, especially in *multinational operations*. Furthermore, one of the regular peacetime topics of training, which is intensified in commands, units and institutions during preparation phase of an operation, is *internalization of the values of the military profession*. The objective is to reach the defined ethical norms of behavior and thus turn the mentioned values into personal virtues of the armed forces members. During preparation phase of operations military chaplains are engaged in delivering lectures on the subject matter, but only for members of their confession. Thus, one of the obligations defined by the Code of Honour is performed.¹⁵ Training according to the principle of volunteerism is conducted with the focus on the engagement of military priests on covering issues from the field of relation between religion and war, faith and morals, and behaviour in concrete situations during operations, which, in this case, is related exclusively to members of their confession.

Chaplaincy in execution phase of operations

During execution phase of operations the planned forces carry out the assigned mission and at the same time chaplaincy activities is conducted, which directly contributes to execution of an operation with optimal manner of engagement of its resources. Commanders are the only ones who have the capacities of chaplaincy in operations at their disposal. The coordination of the work of military chaplains within chaplaincy is carried out according to the staff-functional line. Furthermore, one should not ignore and neglect canonical responsibility to the traditional church, that is, religious community which military chaplains belong to. It has already been emphasized that, in difference to preparation phase and stabilization and disengagement phase, *worship and religious rites* during execution phase of operations has greater intensity. Therefore, one of the following issues should consider this, as well.

¹⁴ *Regulation on the chaplaincy in the SAF*, general quote, Article 22, Paragraph 1, Indent 3, Point 1.

¹⁵ *Code of Honour of the SAF members*, Official Military Gazette", No. 29/10, Article 8, Paragraph 1.

Chaplaincy in function of command and control

On the basis of specificity of their status military chaplains during execution phase of operations perform the function of an *adviser* to a commander on religious, moral and motivational issues of members of a unit, which affect the success of an operation.¹⁶ They perform the function of personal staff officers at all levels of command with the possibility to have direct contact with a commander, and what is very important to stress, *without mediators* in considering sensitive theological issues. They are under the commander's direct control and without possibility to be subordinated to other staff officer. As *personal staff officers* they organize chaplaincy activities within his thoughts and by exerting feedback on the ethics of decisions, as well as preservation of humanitarian aspects of command and control during execution phase of operations. On the basis of the guidelines of commanders they inform other staff officers and officers in subordinate units, coordinate and monitor preparation and execution of planning processes within their functional responsibility. They perform the function of command only with their assistants. It is significant to emphasize the need that military chaplains should not propose members of the armed forces, who stand out during operations, for stimulating measures. When it comes to disciplinary measures and measures in responsibility of military disciplinary and civil courts, they cannot make statements in relation to taking measures against the armed forces members, which also includes the engagement in the function of a juror. Moreover, they cannot be engaged in conduct of inquest or investigation except in the field of Canon law and traditional church autonomy law, that is, religious community regarding worship and liturgical rites in subordinate commands, that is, institutions. During operations military chaplains provide commanders with observations on the issues of exercising freedom of religion, as well as potential violations of the Code of Honour provisions. Furthermore, they propose the appropriate measures without stating data, facts and circumstances which they come by during conduct of the Christian sacrament of Confession, which may reveal the identity of a person who has made a confession. Through the function of a commander's adviser military chaplains take care that during operations all members who wish so can exercise the right to freedom of religion guaranteed by the Constitution and law. Military chaplains exert an influence on command in order to prevent, detect and eliminate potential harassment, discrimination or privileges of other people due to their religious beliefs and belonging or not belonging to the church, that is, religious community. It also means detection and prevention of potential attempt of coercion, which would be used to make individuals state their confession and religious beliefs or their absence. Furthermore, one of the activities conducted by military chaplains in the function of a commander's adviser is taking measures to eliminate procedures and statements of the armed forces members, which are offensive to religious feelings of others including cursing and use of rude language about religious values, which are sacred for believers, as well as the attempt to carry out activities with the objective to influence other people to change religion. All these activities can be considered as regular peacetime tasks. However, during execution of operations, due to characteristics of an armed conflict, they become increasingly important. One of the

¹⁶ Regulation on the chaplaincy in the SAF, general quote, Article 14, Paragraph 1, Indent 3.

other religious activities is monitoring and control of the work in subordinate units.¹⁷ In this sense, they control the level of undertaken measures in the field of organization of exercising freedom of religion of the armed forces members, creation of conditions for chaplaincy activities during operations, respect of the prescribed time, structure and chaplaincy and liturgical rites practice in the correct manner, level of the cooperation with military chaplains of the same rank and local priests, as well as keeping the prescribed documentation and material records. Moreover, they also consider potential attempt of making military chaplains practice *worship and religious rites* which are contrary to the autonomous regulations of the church, that is, religious community they belong to, cases of their disruption and the attempt to stop them, or holding them responsible by a superior officer for the manner in which they practice *worship and religious rites*, as well as all other potentially expressed activities, which would hinder the structure and autonomous regulations of traditional churches and religious communities. The methodology of conducting control, which is actually intensified during preparation phase of operations is in accordance with by-laws, which have defined this field in the Serbian Armed Forces.

Worship and religious rites in operations

Military chaplains carry out *worship and religious rites* exclusively in compliance with autonomous regulations of traditional churches and religious communities whereas by-laws stipulate only *conditions* for their conduct, not the *manner*. The conditions are principally the same during execution of all assigned missions and tasks, without difference in circumstances. However, the area of operation represents in a certain sense *specific environment*. Therefore chaplaincy and liturgical rites during this phase are carried out in specific conditions, although according to the manner of officiating there is no deviation in relation to provisions of the autonomous regulations of traditional churches and religious communities, as well as conditions for their conduct in the Serbian Armed Forces, which has already been stipulated by the by-law regulation. Actually, the internal structure and organization of traditional churches and religious communities cannot be affected by chaplaincy and liturgical rites practice. Military chaplains practices liturgical rites in peacetime conditions only in *an exceptional situation* or with *special consent* of traditional church, that is, religious community they belong to. Worship during *execution phase* of operations represents *an exceptional situation*. The requests for funeral and the Christian sacraments of baptism, anointing and marriage during operations can serve as an example. It means that during funeral of the armed forces members of the Orthodox confession the military priest can do requiem in regular circumstances in accordance with a wish of the family of the deceased and ex officio, but with the consent of a local priest. However, the specificity which characterizes execution phase of operations due to great dynamics and characteristics of an armed conflict does not allow time for getting special consent, and they can be considered to be exceptional situations. In such case, at the end of operation, military priest subsequently regulates administrative issues in relation to the structure and organization of church. However, during operation he is mainly engaged in practicing chaplaincy and litur-

¹⁷ *Ibid.*, Article 22, Paragraph 1, Indent 2, Sub-Indent 7, Point 5.

gical rites which demand consent in regular circumstances. The situation is interesting when it comes to the Christian sacrament of Communion, which military priests practice during the Holy liturgy. It can be practiced for the sick people, who are not capable of participating in the Holy liturgy, as well as for the dying according to a special procedure. However, during combat operations such type of practicing the Christian sacrament of Communion is common, especially with high dynamics of combat activities and dangerous situation with high mortality rate of participants. In such conditions, besides requiem, military priests spend the greatest amount of time on practicing the Christian sacraments of Confession and Communion.

Chaplaincy and CIMIC

CIMIC is the function which links and coordinates activities between *the armed forces* and various participants in *civil environment* in order to create conditions for support to missions in peacetime, state of emergency and war.¹⁸ CIMIC is the content of combat activities, which is planned, organized and performed in all operations of the Serbian Armed Forces.¹⁹ The effects of CIMIC are not decisive in operations. However, they affect their result and reaching the set goals. *The social dimension* of operational environment in which an operation is executed exerts a special influence on CIMIC. It can be concluded that it connects two functions of the defence system during operations (*CIMIC* and *religious*) to a certain extent. The connection between the armed forces and *actors of environment* is especially emphasized according to CIMIC function whereas chaplaincy is primarily focused on *its own armed forces*. However, an element of CIMIC is the support to its own forces whereas chaplaincy can be practiced within CIMIC activities. In other words, military chaplains can be engaged, if the situation requires and allows so, for the needs of CIMIC teams and centres in the area of an operation according to the order of the force commander. This shows not only the interaction between *chaplaincy* and *CIMIC*, but also the perspective of further development of their joint engagement. The scope of the engagement of total military resources in conduct of CIMIC activities depends on whether operations are *combat* or *non-combatant*.

Combat operations are characterized by the high intensity of activities, which engage all available resources of the armed forces to the maximum. Therefore, focus of the forces on execution of combat tasks leaves less possibility for their engagement for CIMIC needs.²⁰ However, CIMIC activities in *non-combatant operations* are broader and more complex than in *combat operations*. The limited military resources, greater presence of media, expectations of local and international community, a high number of international, governmental and non-governmental organizations, everyday relations with local population and other civil authorities will be of key importance for conduct of CIMIC.²¹ The type of *chaplaincy activities*, which will be included in performance of *CIMIC*

¹⁸ *CIMIC Doctrine of the SAF*, general quote, p. 10.

¹⁹ *Ibid.*, p. 27.

²⁰ *Ibid.*, p. 30.

²¹ *Ibid.*, p. 32.

tasks, depends mainly on whether operations are *combat* or *non-combatant*. It has already been said that during execution phase of combat operations the requests of their participants for *worship and religious rites* are more expressed. However, chaplaincy during execution phase of *non-combatant operations* is available to less degree than in execution phase of *combat operations*, which creates conditions for strengthening the intensity of the *other religious activities*, and their inclusion in *CIMIC* activities.

Worship and religious rites can be practiced within *CIMIC* during operations. However, *the other religious activities* have much greater significance in *CIMIC* activities. The aforementioned *social dimension* in the area of an operation is defined by actors of civil environment such as: population, authorities, companies, international, non-governmental and religious organizations, groups and associations. The population, international, governmental and religious organizations, groups and associations come to the fore as actors which have more expressed interaction with chaplaincy during operations, that is, chaplaincy exerts a greater influence on their preparation and execution through them. Thus, during operations one of *the other religious activities* of chaplaincy comes especially to the fore – *collaboration with local priests*. Chaplaincy in coordination with organizational elements in charge of *CIMIC* also exerts a positive influence on execution of operations by engagement in the activities of providing assistance to civil authorities during evacuation of people and material resources, rendering humanitarian assistance and all other measures which influence the provision of basic living needs. It is significant that in such cases military chaplains of the same confession that local population belongs to are engaged.

Chaplaincy in stabilization and disengagement phase

Stabilization and disengagement phase represents the phase of an operation in which, after reaching the objective of the operation, a political solution of a problem is considered, as well as elimination of consequences produced during execution of the operation.²² Stabilization and disengagement phase can last differently and depends on a level of operations, their type, period of an armed conflict and a great number of conditions, which define the desirable end state. During this phase, and in compliance with the reached degree of stabilization and disengagement, besides the disengaged personnel of its units, activities of military chaplains can gradually start to include members of their families, as well. The interaction between *CIMIC* and chaplaincy from *execution phase* of operations continues to exist even after its end. More precisely, it reaches its fullness in *stabilization and disengagement phase*, which completes a wide range of positive effects of chaplaincy on operations. In absence of local priests, military chaplains can practice chaplaincy for the needs of local population, especially in emergencies, but exclusively for the confession they belong to under condition that they do not affect the structure and internal organization of church, that is, religious community. In cooperation with governmental organizations, churches and religious communities and logistics authorities, they can also be engaged from the expert advisory aspect in the infrastructural reconstruction of religious facilities damaged in operations, but once again exclusively within confession

²² *Army Doctrine*, general quote, p. 107.

they belong to. In order to eliminate consequences with local population caused by execution of operations, military chaplains may collaborate with doctors and psychologists by conducting certain activities.

The work with members of the Serbian Armed Forces and their families

In order to solve problems caused by participation in operations, military chaplains render assistance to their members, as well as members of their families by carrying out the pastoral and advisory work.²³ It is done in cooperation with military psychologists in order to render psychological assistance on spiritual bases by integration of faith healing and contemporary psychology and psychotherapy. This manner of their engagement as certain spiritual improvement of secular psychological understanding and solving problems of the armed forces members and members of their families is focused on eliminating consequences of stress, fear, post-traumatic stress disorder, depression, grief caused by farewells and loss and psychological problems, which arise in operations. During the pastoral and advisory work military chaplains pay special attention to the dying members and the heavily wounded. The pastoral consultancy is organized during all phases of operations. However, the maximum of its influence is reached in stabilization and disengagement phase. Due to the nature of their occupation and characteristics of an armed conflict, it is necessary that military chaplains know the basis of psychological sciences and the nature of the human psyche, and to have constant collaboration with military psychologists, who are responsible for psychological work in the Serbian Armed Forces. It is significant having in mind that a man is a three-layer being composed of the soul, body and spirit, and the pastoral and advisory work is exactly focused on the field of the human soul. Contemporary research of the level of trauma and post-traumatic reaction experienced by people and manifested in different ways shows that level does not depend on gender or age, which means there is no the armed forces member who can be "immune" to post-traumatic stress disorder during operations regardless of the position in hierarchy.²⁴ The specificity of *the Christian sacrament of Confession* is that it draws a clear line in responsibilities and possibilities of *military priests* on the one hand and *military psychologists* on the other hand. Members of the armed forces – Christian believers know that priests have been given the spiritual authority through *the Christian sacrament of ordaining* to dispel people from sin, and that no one else can have such authority, not even psychologists. The confession, that is, repentance during operations, inter alia, represents a very efficient cure for a believing traumatized member of the armed forces. If he still experiences desperation, the feeling of helplessness and especially strain of consciousness after confession, *the military chaplain* then sends him to *the military psychologist*. Actually, it means that in the concrete case we have loss of the

²³ *Regulation on the chaplaincy in the SAF*, general quote, Article 22, Paragraph 1, Indent 2, Sub-Indent 8.

²⁴ Adjustment disorder in combination with anxiety and depressive behavior can include sleep difficulties, a high level of irritation and anger, difficulties in general functioning and concentration while working and doing everyday work, the increased level of alertness in the form of general excitability (great excitement), great fear, a high level of anxiety, a low level of tolerance to frustration and physiological reaction to events which symbolize or remind of a traumatic experience.

faith and doubt in the Christian sacrament. Therefore, besides confession, it is necessary to carry out therapy. In addition, in the situation when there is no a psychologist in the vicinity, and his urgent engagement is necessary, which is the common case in operations, military chaplains should be ready to conduct the first phase of pastoral approach.²⁵ Everything that is said in relation to the pastoral and advisory work with the armed forces members is completely applicable to members of their families under the condition that the situation in the area of an operation enables it and that a unit of the traumatized one is meanwhile disengaged.

Participation in R&R programme

Rest and recuperation (R&R) programme is conducted in the full scope after the end of an operation, when forces are disengaged completely. However, certain topics can be covered in the final part of *stabilization and disengagement phase* or in the part of the area where an operation is not executed any more. Chaplaincy takes part with its activities in R&R of the armed forces members. If conditions in the area of an operation permit, visits to sacred places of spiritual importance for their confession can be organized for the disengaged members in free time, and the military cemeteries and places of suffering of members of our armed forces throughout history. The aim is to provide conditions for stabilization of the mental state of the armed forces members through prayers and spiritual content. During R&R period there is more intensive practice of thanksgiving and memorial service (requiem, mass of the dead and rahmah) to the members killed during execution of operations and the Christian sacraments of Confession, Confirmation and Anointing. Besides worship and rites, the pastoral and advisory work is continued and military chaplains are engaged in the work of the mental hygiene teams. In addition to chanting, during chaplaincy and rites church choirs can perform in the events of cultural character in the part of the area where an operation is no longer executed, which is also significant for the moral component of its military strength.

Conclusion

Chaplaincy represents a strong cohesive factor with the possibility of a simultaneous impact on strengthening each of three components of the military strength separately and their mutual connection, which indicates its significance for the total military strength

²⁵ It encompasses a group work with the traumatized. In the beginning they are explained that what they feel in most cases can be "normal" (so-called intervention of normalization), and not pathological. The objective is that the traumatized Army members accept there are ways to overcome a problem or at least "deal with it" without a psychotherapist. Therefore, here we talk about certain psychological "first aid", where a group of the traumatized without psychologists or psychotherapists can begin the process of relief and discussing problems with the military priest, that is, assistant priest. In this manner the problem will be later in work "metabolized" more easily, accepted, discussed, revealed and overcome. The point of the mentioned group work is to encourage the traumatized to express their pain, shock, anger or other content which follows the problem of the post-traumatic stress disorder, which is, of course, run in parallel with prayers and spiritual content of chaplaincy.

of the Serbian Armed Forces. The influence of chaplaincy on *the moral component* of the military strength is the most comprehensive and the most important. The moral component of the military strength is based, inter alia, on the moral principles and the most significant values of the military profession proclaimed in the Code of Honour. By compliance with the norms resulting from these values and preserving them at the same time, conditions are created for a member of the Serbian Armed Forces to accept the aforementioned values and turn them into personal virtues.

It can be concluded that the capacities of chaplaincy in eliminating *danger, stress, chaos* and *friction* during operations are remarkable. During contemporary operations chaplaincy activities are conducted in conditions of rather *multidimensional* operational environment. The type and intensity of those activities depend to a great extent on the *social* and *time* dimension of operational environment, types and phases of operations, the scope of activities and CIMIC actors. The level of intensity of chaplaincy and CIMIC activities is almost the same in stabilization and disengagement phase, which creates conditions for opening a new chapter of the future simultaneous theoretical considerations of the mentioned field. Chaplaincy in coordination with organizational elements in charge of CIMIC can exert a positive influence on execution of operations by engagement in the activities of providing assistance to civil authorities during evacuation of people and material resources, rendering humanitarian assistance and all other measures which influence the provision of basic living needs. It is significant that in such cases military chaplains of the same confession that local population belongs to are engaged. *The social dimension* of operational environment in which an operation is executed exerts a special influence on CIMIC. It can be concluded that it connects two functions of the defence system during operations (*CIMIC* and *religious*) to a certain extent. Explication of chaplaincy in planning, preparing and executing operations, and other similar topics which are used to consider different aspects of operations and chaplaincy simultaneously, exerts undoubtedly a positive influence on the development of the operational art as one of the defence sciences.

Having in mind that military chaplains at an operational and tactical level are directly subordinated to commanders, it is necessary to improve modalities of their cooperation with officers responsible for moral and psychologists within the groups formed in the commands of the forces executing an operation by upgrading the by-law regulation, which defines operational planning in the Serbian Armed Forces, as well as by development of standard operating procedures. Furthermore, from the aspect of the engagement of the resources which chaplaincy has at its disposal, it is necessary to upgrade the set of doctrinal documents in the field of operations, service, CIMIC and human resources management doctrines.

In order to use the capacities of chaplaincy in operations to the maximum, there should be no coercion when it comes to chaplaincy because it is defined according to the principle of volunteerism, that is, religious content can be practiced exclusively on the basis of personal beliefs of the Serbian Armed Forces members. Moreover, during planning, preparing and executing operations, making a compromise in relation to specificity of military chaplains should not be allowed. Despite being the Serbian Armed Forces officers, they can have *non-combatant status*, which applies not only to prohibition of carrying and using weapons, but to several other stipulated specific things. Chaplaincy

can only in this manner exert a positive influence on planning, preparing and executing operations. Otherwise, disrespect of such specificity would cause numerous problems: violation of the Geneva Convention provisions, lack of capacity to counter religious extremism, even its favouring, disharmony in relation between command and control and canonical provisions, interference of military chaplains in command without responsibility, and commanders in canonical issues, support to proselytism, etc. In order to create conditions for a comprehensive positive influence of chaplaincy on planning, preparing and executing operations, and having in mind that chaplaincy in the Serbian Armed Forces has recently been established (introduced again), it is necessary to invest efforts to enhance the level of competence of military chaplains as *staff officers*.

Taking into account characteristics of contemporary conflicts, a high level of dynamics that characterizes modern operations, a wide range of potential actions and abundance of the spiritual capacities which traditional churches and religious communities have at their disposal from dogmatic aspect, and rather high percentage of the Serbian Armed Forces members who are believers, it can be concluded that chaplaincy has exceptional possibilities to exert a positive influence on planning, preparing and executing operations.

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**PRIORITIES IN EXECUTION *WORSHIP AND RELIGIOUS RITES*
DURING PREPARATION AND PERFORMING OF
*COMBAT OPERATIONS***

ACTIVITY	PHASES OF OPERATION		
	Prepa- ration	Exe- cution	Stabiliz. and diseng.
1	2	3	4
Chaplaincies (Holy Liturgy, Holy Mass, Jummah)	Higher level of priority	Lower level of priority	Medium level of priority
Daily Religious Services (Vespers, Orthros, Daily Mass, Islamic Daily Prayers)	Medium level of priority	Lower level of priority	Higher level of priority
Holy Sacraments (The Eucharist, Baptizm, Chrismation, Marriage, Confession, Communion, Tewba, Sharia Wedding)	Medium level of priority	Higher level of priority	Lower level of priority
Special Services and Blessings	Higher level of priority	Medium level of priority	Lower level of priority
Anointing of the Sick	Lower level of priority	Medium level of priority	Higher level of priority
Memorial Services	Lower level of priority	Medium level of priority	Higher level of priority
Funerals	Lower level of priority	Higher level of priority	Medium level of priority
Ordination (Priests, Chaplains, Imams, etc.)	Higher level of priority	Lower level of priority	Medium level of priority

Legend:

Higher level
of priority



Medium level
of priority



Lower level
of priority

**PRIORITIES IN EXECUTION *WORSHIP AND RELIGIOUS RITES*
DURING PREPARATION AND PERFORMING OF
*NON-COMBATANT OPERATIONS***

ACTIVITY	PHASES OF OPERATION		
	Prepa- ration	Exe- cution	Stabiliz. and diseng.
1	2	3	4
Chaplaincies (Holy Liturgy, Holy Mass, Jummah)	Lower level of priority	Higher level of priority	Medium level of priority
Daily Religious Services (Vespers, Orthros, Daily Mass, Islamic Daily Prayers)	Lower level of priority	Medium level of priority	Higher level of priority
Holy Sacraments (The Eucharist, Baptizm, Chrismation, Marriage, Confession, Communion, Tewba, Sharia Wedding)	Medium level of priority	Lower level of priority	Higher level of priority
Special Services and Blessings	Medium level of priority	Higher level of priority	Lower level of priority
Anointing of the Sick	Lower level of priority	Medium level of priority	Higher level of priority
Memorial Services	Lower level of priority	Medium level of priority	Higher level of priority
Funerals	Lower level of priority	Medium level of priority	Higher level of priority
Ordination (Priests, Chaplains, Imams, etc.)	Higher level of priority	Lower level of priority	Medium level of priority

Legend:



Higher level
of priority



Medium level
of priority



Lower level
of priority

**PRIORITIES IN EXECUTION *OTHER RELIGIOUS ACTIVITIES*
DURING PREPARATION AND PERFORMING OF OPERATIONS**

ACTIVITY	PHASES OF OPERATION		
	Preparation	Execution	Stabiliz. and diseng.
1	2	3	4
Operations Planning Process	Higher level of priority	Lower level of priority	Medium level of priority
Advising of Commanders on Religious matters subjects	Lower level of priority	Higher level of priority	Medium level of priority
Lectures and Preaching (Spiritual and Ethics Topics)	Higher level of priority	Lower level of priority	Medium level of priority
Chapel Equipping and maintaining	Medium level of priority	Lower level of priority	Higher level of priority
Supervising of Chaplains and Chaplains Assistants	Higher level of priority	Lower level of priority	Medium level of priority
Engagement in Preparation for the Execution of Complex Tasks, in Emergency Prevention, Unaccepted Behavior and Negative Phenomena Measures	Higher level of priority	Lower level of priority	Medium level of priority
Cooperation with Officers Responsible for Moral and Psychologist	Higher level of priority	Lower level of priority	Medium level of priority
Cooperation with Chaplains and Local Priesthood	Lower level of priority	Medium level of priority	Higher level of priority
Pastoral care (Army members and their families)	Medium level of priority	Lower level of priority	Higher level of priority

Legend:

Higher level of priority



Medium level of priority



Lower level of priority

AN APPROACH IN THE ANALYSIS OF COMMUNICATION-INFORMATION SYSTEM MODEL IN MILITARY OPERATION

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This paper describes an approach to the analysis of performance of the modelled communication-information system (CIS) in military operations using RIVERBED simulation package. The basis of military operations concept and the CIS model to meet the needs of command and control (C2) have been discussed. In order to analyze the possibilities of the CIS for transfer of information the methods of analysis, modelling, operational research and simulations have been applied. The graphs of dependence on load links, the amount of transmitted information (packet) and packet loss depending on the duration of a simulated military operation are shown. The importance of the applied methods of modelling and simulation is represented by the possibility of the CIS modelling, and an analysis of its performance without using a real system due to high economic costs. The only limitation in the paper is the assumed network connectivity between the CIS elements (the effects of relief, vegetation, weather conditions, etc. on telecommunications have not been considered). In a broader sense, the paper is designed for everyone involved in modelling and simulation in order to evaluate an approach to practical application of methods of solving specific problems, and in a narrower sense to persons engaged in the CIS design and telecommunications planning in various types of operations in order to analyze the possibilities and optimize the CIS elements.

Key Words: model, simulation, telecommunications, communication-information system, military operation

Introduction

The communication-information system (CIS) is an association of functional elements that include collection, transmission, protection, electronic processing, presentation, storage and distribution of information for the system of command and control in military operations. The CIS architecture is determined by the structure of the

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Army forces, which are used in carrying out various tasks. This paper has modelled the forces of three levels of command (battalion-brigade-operationalgroup) in a defensive operation.

The modelled CIS is characterized by mobility, ability to work in field conditions and the provision of telecommunications capacity and customer service to meet the needs of command and control in an operation. The elements of the telecommunications system include access and network nodes (Mobile Switching Center – MSC) linked by radio-relay links. The nodes consist of ATM (Asynchronous Transfer Mode) switches that implement TDM (Time-Division Multiplexing) and IP (Internet Protocol) component in the ATM system of transmission and switching. The access nodes of all three levels of command provide various customer services (voice, file, email, data, video streaming, etc.). The methods of operational research and simulation have been applied in order to analyze the performance of the CIS model for the purpose of C2 (Command and Control) in military operations. The theory of mass service is applied to determine a capacity for voice traffic whereas the software package Riverbed Modeler 17.5 Academic Edition has been used to simulate capacities of the CIS model in IP data transfer. The simulation scenario defines the network elements, the traffic types (services and applications), as well as the mode of operation of various user profiles and their needs for service. The target performance of the model has been followed with a special emphasis on the commitment of the most critical links in terms of the maximum traffic load. The results of the simulation scenario are presented by the adequate graphs in order to analyze packet data transmission by the described network. The analysis of the system performance using simulation software is very significant because it provides a simpler, more efficient and cost-effective consideration of the possibilities of the system and optimization of telecommunications network in an operational use.

Military operations

A military operation is a specific social phenomenon that can solve armed conflicts by application of different content of warfare. Modern management theories enable definition of an operation as a single project (enterprise, process), which fulfills the unique general objective by a variety of combat and non-combat activities engaging human and material resources under the single command, in certain space and at certain time. The application of the project management concept establishes an effective organization, which enables the best use of the available methods of planning, organizing, managing and supervising in order to implement the project effectively. [1]

In principle, military operations have the following phases: preparation, conduct, stabilization and disengagement. The operations planning, forces organization, provision of the required resources, training and operational development of forces are conducted in the preparation phase of an operation. The execution of a military operation involves the organization of command and control, action and counteraction, logistics, maneuver, combat support, force protection and civil-military cooperation. In the last phase, the gradual disengagement of forces is done after reaching the objective of the operation and elimination of consequences of a military operation. [2]

The first step of operational planning is creation (formation) and development of an operational model. It is the result of a thought process, which has carried out the analysis of the operational environment and set their own and the enemy forces in a logical relationship. In other words, it represents visualization of the basic commander's ideas for the conduct of an operation, which relates tasks of the forces and the end state. "The operational model in all cases should be a reflection of the commander's understanding of the operational environment displayed textually and/or graphically". [3]

Formulation of an operational model is done by definition of the operational environment, defining, identifying and solving a problem operationally. On the basis of the operational model, the concept (draft) of a military operation is produced, which defines the specific objectives and activities and actions that have to be undertaken in order to reach each of the defined objectives, that is reaching the defined objective.

Modelled forces in the Army operation conduct defense operation in the area of 100x150 kilometers. The analysis of the telecommunications system for the purpose of command and control in these conditions was processed for a three-level command (battalion-brigade-operational group). Each of them has specifics in terms of the number of people that require communications services and bandwidth.

Communication-information system model

Telecommunications-information support of military operations is a process in which communication-information system is planned, organized and implemented for transmission, protection, electronic processing, storage and presentation of information. This creates the necessary conditions for functioning of command and control of the engaged forces in military operations. An optimal model of communication-information system is found by planning, organizing and implementing telecommunications-information support, an organizational structure is created, the CIS elements in the area of operations are set in the single technical-technological structure, and telecommunications and user services are established, maintained and used. [4]

Modelled forces in an operation determine the model of telecommunications system. The important characteristics of the system are that it enables operation in the field conditions (climatic-mechanical properties of the device), that it is movable (mobile) in the sense that the elements of the system enable monitoring commands and units in the area of an operation and it provides the necessary telecommunications capacity and user services. [5] An approach in modelling telecommunications systems for needs of forces in a military operation in support of civil authorities is shown by Karović and Pavlović. [6]

The CIS model consists of an integrated radio-relay network (transport network) that connects nodes, that is mobile switching centers (MSC). The access nodes are deployed at command posts of modelled forces in an operation, and network nodes (level one and two) in the area of an operation. The services that are discussed in this paper are voice communication and data exchange through the IP part of the network. Although they are enabled through the same transport network in switching, they are separated.

The radio-relay component has the function of interconnecting the switching nodes per each type of interface. The radio-relay component is composed of TADIRAN GRC-408E 8Mb/s devices, connected in a ring structure, which have the following interface: G.703 E1, G.703 E2 and V.11. V.11 interface rate 8192 kb/s was used in the model. The link flow is 8192

kb/s including 512 kb/s reserved for voice applications and 7680 kb/s for data transfer. The codec that is used for voice applications is G.711 and 8 simultaneous calls can be established per link. The quality of service in MSC nodes is defined in such manner that voice services and service data are completely separated by the bandwidth reserved for them.

MSC consist of MTIS (Military Tactical Internet Switch) switches, which are essentially ATM switches with a special IPC (Internet Protocol Card) intended for routing IP traffic. MTIS stations enable circuit voice service to be switched through ATM connection and IP traffic through IPoATM. [7] Besides digital and analog telephones that provide voice service, Local Area Network (LAN) for data is set at command posts (access nodes). All devices are networked via MSC. Local area networks contain 34, 19 and 10 users, depending on the level of command. The exchange of data through the IP part of the network consists of two types of services, e-mail and web (http) service.

E-mail is exchanged through the network in two ways, continuously throughout the period of preparation and conduct of an operation (exchange of smaller messages) and in discrete time intervals when different levels of command exchange typified orders and reports (messages of mostly higher memory value). WEB service consists of searching various data on servers continuously during preparation and conduct of an operation. Network elements, which are interconnected in a mobile telecommunications system is shown in Figure 1. [8]

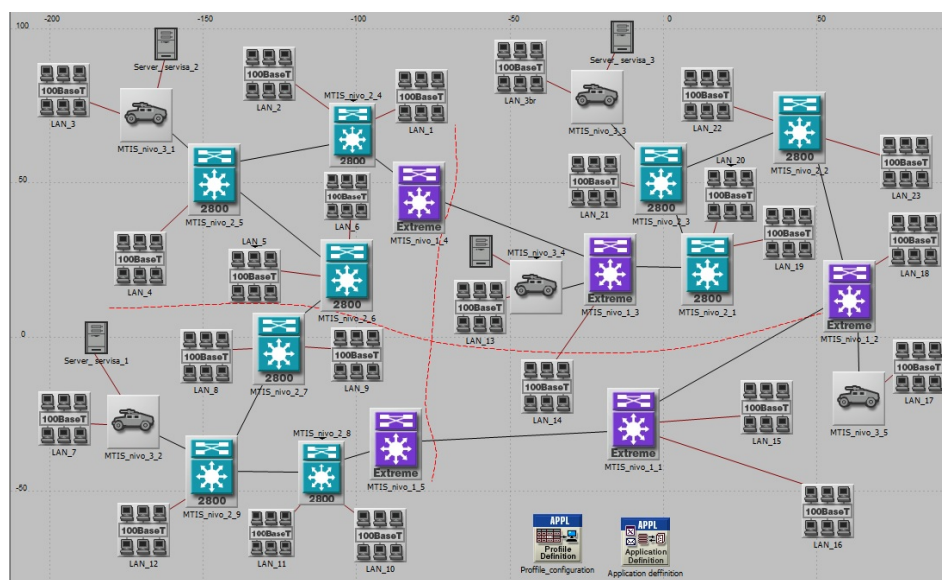


Figure 1 – Topology of communication-information system (CIS)

The network nodes of the level one are displayed in purple, the level two nodes in blue color and the access nodes of all three levels of command (battalion-brigade-operational group) as combat vehicles. All access nodes have the LAN segment with a corresponding number of users. In the network there are four redundant servers at the command posts of the level two and three. Servers enable applications in the telecommunications system.

Application of RIVERBED simulation package in the analysis of the communication-information system capabilities

Riverbed Modeler 17.5 Academic Edition is used for the simulation of telecommunications system. It is designed to simulate different types of computer networks. Academic Edition software has the following limitations: there is no support for LTE, UMTS and Wi-MAX; the total number of nodes in the simulation is 80, including 20 interconnected with the other elements (routers and switches); the number of events in the simulation is 50,000,000, which significantly limits the duration of the simulation. The software package meets structural and replicative validity, veracity and adequacy of its application. The development and establishment of the CIS, checking network connectivity and verification of network and C2 services has been carried out on the simulation without affecting the environment (relief, vegetation, weather conditions), as well as the electronic warfare of an enemy. An experiment on the real system would require huge costs.

Computer simulation has been performed through several phases and activities: definition of a scenario (defining nodes, LAN, links, servers, applications, user profiles, connection of LANs, service and profiles, definition of telecommunication traffic), determination of the target points of measurement (definition of the measurement of nodes, links, applications), simulation of the process of information transmission and display of the simulation results. In order to define the telecommunications traffic, empirical data on the type and amount of information – documents (operational orders, additional orders, reports, other information) to be exchanged between the elements of three levels of command in a military operation have been collected. Operational orders have been contemplated with the scheme of an operation on a topographic map (without and with compression). Five different e-mail services and a Web service for the preparation phase and execution phase of a modelled military operation have been defined in the simulation model as shown in Table 1. [8]

Table 1 – Summary of service in the simulation model

Type of service	The runtime service	Number of PC to perform service in the LAN segment	Stored value service
Mail of additional orders	Continuously throughout the duration of an operation	One terminal in the LAN	100 kB
Background mails	Continuously throughout the duration of an operation	Whole LAN	2 kB
Operational order level 1	1 minute after starting the simulation (in preparation of an operation)	One terminal in the LAN	4MB / 1,2MB
Operational order level 2	3 minutes after starting the simulation (in preparation of an operation)	One terminal in the LAN	3,5MB / 0,75MB
Operational order level 3	5 minutes after starting the simulation (in preparation of an operation)	One terminal in the LAN	3,2MB / 0,3MB
Report 1	After the first phase of execution of an operation	One terminal in the LAN	80 kB
Report 2	After the second phase of execution of an operation	One terminal in the LAN	80 kB
WEB (http) servis	Continuously throughout the duration of an operation	Whole LAN	Searching (default)

Configured LAN segments are defined by a corresponding number of PC terminal and associated user profiles, which have the implemented applications with various modes of operation. Thus traffic characteristics are defined and the simulation model is described in a given network, there are also four redundant servers that enable applications listed in Table 1. Servers operate for segments in their part of the network. However, they are also redundant. It means that in case of failure of a server, other servers take over the functionality of its services.

The objective of a simulation is to determine whether such network of major links with capacity 7680 kb/s and the predefined traffic, can respond to the demands that are set in terms of telecommunications services. The parameters that are monitored are clogging of the busiest links, load time of e-mail application and the total packet loss in the system.

Results of simulation

When establishing links of MTIS nodes the capacity is defined separately for voice service and data service. Reserving the link capacity for voice service has been done by application of operational research method – the queuing theory. Bolch and associates have further analyzed Erlang distribution. [9, 10]

On the basis of the empirical data on voice traffic between the elements of three levels of command the intensity of voice traffic ($\alpha < 5$) is defined. By using Erlang formula for sufficient probability of servicing ($p_{op} > 0.9$) and availability ($k_s \approx 1$) it is necessary to provide 512 kb/s (8 telephone channels of 64 kb/s) for voice traffic on link. The remaining capacity of 7680 kb/s is used for IP transmission. Figure 2 shows the analysis of the dependence of the parameters: service probability (p_{op}), the intensity of voice traffic (α) and availability (k_s) for the channel number $n = 8$. [8]

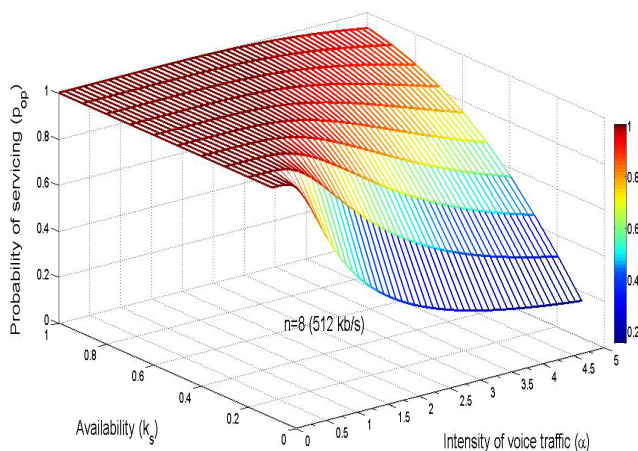


Figure 2 – The dependence of the parameters of voice traffic

The results of the measurement of target points after the simulation of the information transmission in the scenario are shown in the following figures.

Figure 3 shows the results of the analysis of the utilization of the most loaded link (the link between MTIS nodes of the level one command) for e-mail service and the bulk e-mail service and web service in the preparation phase and conduct of an operation. The figure clearly shows peaks of the link load when operational orders are handed over in the preparation phase of an operation between the different levels of command in the telecommunications system (Figure 3 left). Then the load of the link comes up to 100%, i.e. the link is fully occupied. For other e-mail and Web services in a given duration time of simulation (particularly during the conduct of an operation) the capacity of the most loaded link enables completely smooth transfer of information (Figure 3 right).

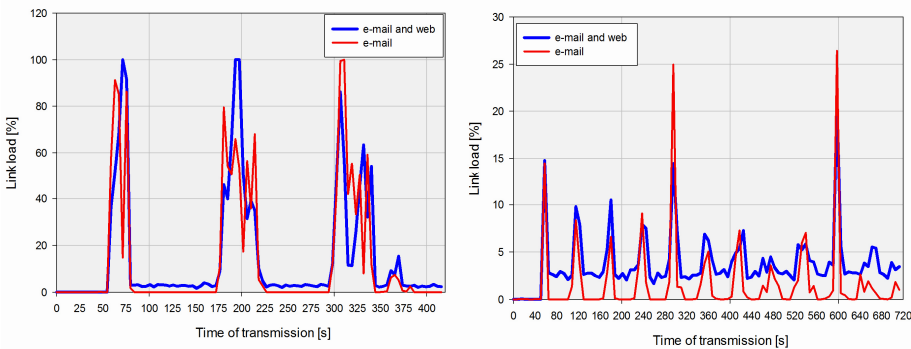


Figure 3 – Review of the most loaded link bandwidth in the network

The amount of information traffic, i.e. the total number of packets per second to be transmitted in the CIS model in the preparation phase of an operation is shown in the following figure.

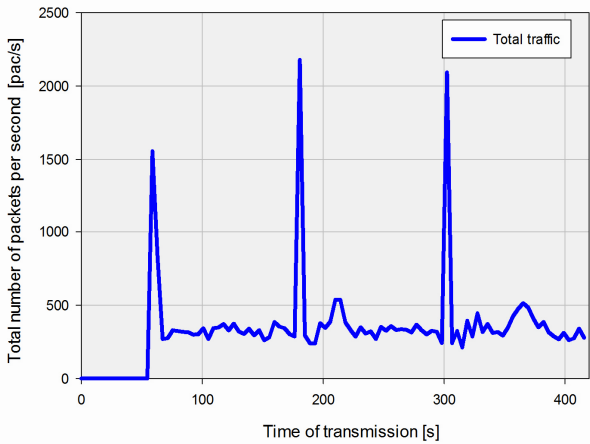


Figure 4 – The amount of information traffic during the preparation phase of an operation

Figure 5 shows the time required for the submission of e-mails of different sizes. The e-mail timings at the critical moments of submitting reports come up to 38 seconds.

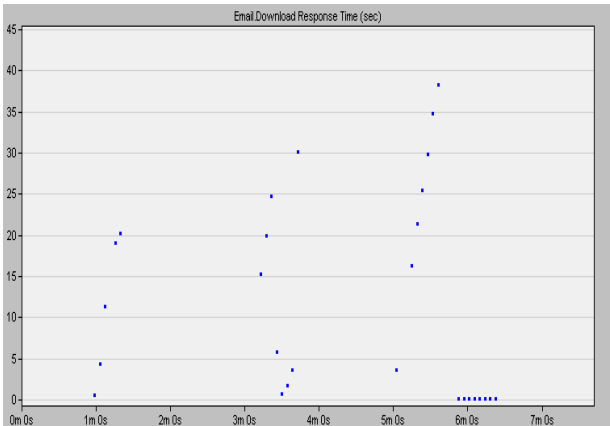


Figure 5 – Time of e-mail applications download in runtime operation

Figure 6 shows the results of comparative analysis of the packet loss per second for e-mail and the bulk e-mail and web services in a model of the telecommunications system (preparation phase and conduct of an operation).

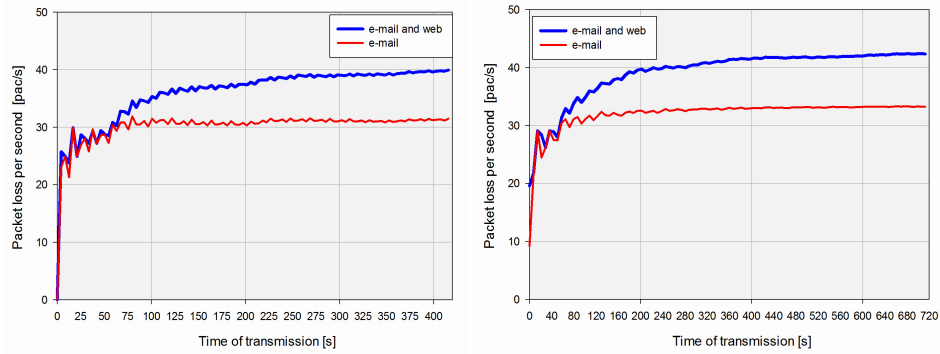


Figure 6 – Number of lost packets in the telecommunications system

We can conclude that the packet loss is small, constant and with a minimal difference in the use of both services. Loss of traffic relates primarily to packet losses of routing protocols (OSPF – Open Shortest Path First Protocol in the simulation). It results in minimal loss of user applications. Having in mind that these are TCP (Transmission Control Protocol) oriented applications, the losses had no impact on the performance of e-mail and Web (http) service.

Conclusion

It can be concluded that in order to have successful command and control it is necessary to connect all forces deployed in the area of a military operation by the CIS, which enables integration, transmission, delivery and presentation of relevant information and creates unique information dimension of operational environment. The simulation on the shown model has proved that the model provides the efficient flow of information and transmission of voice and IP data for C2 in military operations.

The simulation program has proven to be a good software solution for simulation of the telecommunications network in all its aspects: applications, user profiles, network elements, etc. The modelled telecommunications system enables the transmission of traffic that is defined and fully meets the requirements and performance services. The load of the main links of the level one and two of command is complete at certain moments. Moreover, the loading time of e-mail applications in these periods grows up to 38 seconds. However, the minimal total packet loss in the network shows that telecommunications system in the period of maximum traffic load will not be in failure.

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Acknowledgments

The paper is based on the research of the author's doctoral dissertation and the research conducted as part of the implementation of scientific research project under document number VA-TT/1-17-19, which is funded by the Ministry of Defense of the Republic of Serbia.

DESIRABLE ATTRIBUTES OF AN EFFECTIVE INTELLIGENCE ANALYST

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The role of analytics in business and intelligence communities is more important than ever. The process of analyzing and evaluating a large quantity of data, as well as finding relations, trends, patterns and correlations is very complex. Processing a great amount of information and evaluating its reliability represents an additional problem. Bearing this in mind, preparing analysis is extremely difficult and requires high attention, trained personnel and application of modern scientific methods and techniques.

Key Words: intelligence, business analysis, Big Data, forecasting, decisionmaking

Introduction

The process of globalization and fast developments in modern technologies available to various governmental institutions, non-governmental organizations and individuals have enabled a fast flow of information and increased the data availability. In addition, there has been an increase in the quantity of data that are generated worldwide with different contents and formats passed on via web pages, blogs, social networks, etc. The complexity of topics, contents, formats, scope and quantity of data have created new problems for analysts that could be solved only if the existing methods and techniques would be adjusted to new conditions. Moreover, analysts should be prepared to assess validity, select and process the data in an adequate manner, make analysis and create forecast. It means that selection of analysts and their later career development (training, education, career management, etc.) require taking these changes and new circumstances into consideration.

This problem is present both in business and intelligence communities. The modern security and business environment is affected by emergence of new, non-traditional and non-state actors, who take advantage of benefits of modern time and tend to create a more unstable and unclear situation. Reduction of uncertainty in those circumstances is a very difficult task, which is the reason why both the intelligence and business communities are trying to find a way to improve understanding of important actors, events and processes.

The dynamic environment and an increasingly unstable and competitive situation stimulate intelligence analytics to find new methods and tools for increasing confidence in their product by providing timely and accurate analysis for decision-makers.

Contemporary Analyst Environment (PN)

Modern business conditions contribute to faster development of some disciplines that should be able to offer an answer based on scientific principles regarding the issue of how to make a business decision with less risk. Development of business analytics is very important to this end as it includes the opportunities of informational technologies, the demands of managers and the challenges of making business both at present and in the future.

There is a growing trend in business environment that requires analytical competencies and skills in jobs at using a large quantity of data. These analytical jobs are being more and more paid. According to the annual *Glassdoor* research, a list of the best paid jobs in the U.S. has been made on the basis of a few criteria such as income, a number of vacancies and content of employees at workplaces. The second year in a row the best ranked job is the one of *Data Scientist*, and the high ranking ones on the list of the best paid jobs are also analytical jobs (Data Engineer, Analytics Manager, Solutions Architect, Intelligence Analyst, Security Analyst) (1). However, the trend of high demand for analysts in the market has also resulted in the problem for organizations and institutions to provide the necessary number of high quality analysts. The labor market registers the lack of Data Engineers. Therefore, 40% of the companies involved in the poll invest great effort to find and keep the experts in this field (2). According to the research conducted by the company *MGI*, by 2018 there would be the lack of 140.000 to 190.000 persons with the special analytical skills and some 1.5 million managers and analysts with the knowledge of management and usage of a great number of data for supporting decision-making at the labor market (3). Due to work specificity, the analytical jobs in the US Intelligence Community are numerous, and analysts are highly demanded. Former US Intelligence Community Director James Clapper believes that it will be, for various reasons, more and more difficult to attract young people to work in the intelligence agencies (4).

The aforementioned confirms the fact that the number of jobs which require general and specific analytical knowledge and skills will increase and that the demand for experts with analytical skills will grow in the upcoming period.

Power of Business Analytics

The increase in amount of information is generated nowadays in an electronic form. The explosive rate of data growth and variety of information represents a great challenge. Transactional data (financial and business), environmental data (captured by many sensors), geospatial data, scientific results, different types of news and diverse public data are available to customers. They are presented in various types as texts, images, audio and video and can be found on the web, social networks, cameras and other devices (5). GPS coordinates generated by smart devices and data provided by the devices equipped with various remote control sensors (Internet of Things) enable us to have easier and simpler life, but at the same time contribute to a huge increase in an amount of electronic data. This phenomenon is known as Big Data (6).

Due to private sector interests, a great progress in processing and analyzing data has been achieved. Commercial sector makes use of new technologies' potential, especially in monitoring customers' behavior and consuming routines. On the basis of sophisticated algorithm and advance software, a marketing expert can explore, analyze, explain and provide understanding of customers' behavior and consumption pattern. As a result, they can predict customers' wishes, suggest appropriate approach to a client and prepare customized offers.

Business analytics is now more affordable for common use than ever before. The usage and analysis of a large quantity of data is not the field dealt with by scientists anymore, but it now represents the possibility available to analysts and managers in companies. The evolution of business data into the cloud has started and there is less need for big capital investments in servers, dedicated software, support and maintenance, which makes a powerful financial argument (7). The development of voice interface can help customers minimize the need for programming, traditional querying and reporting tools, complex filters and algorithms in order to analyze data. According to Zion Market Research, the value of business intelligence market in 2015 accounted USD 16.33 billion and is expected to rise by an annual rate of 8.4% in order to reach USD 26.5 billion by 2021 (8).

Thus, the development of modern manager-oriented tools intended for processing of a great amount of data enables faster decision-making for businesses and secures better positions versus their competitors.

The Role of a Modern Analyst

The modern intelligence analytics is expected more than ever before to recognize in a large quantity of data the confirmed ones and those of quality and to put them in a wider context, relate them to the existing knowledge and timely prepare analysis and estimates that should help making the right decisions. Due to fast and difficult-to-predict changes, various forms of the existing threats and emergence of new ones, this job tends to be harder and it is not possible to solve it only by use of classical methods.

Intelligence analysts participate and have a great role in decision-making process but in a way that they are the decision-makers themselves. Analytics is a continuous process of opinion creation based on available but incomplete information on complex problems and phenomena. Analysis and estimates of events that are yet to happen make up the basis for decision-making (9). Political forecasting is very complicated and without ability to generate prediction by which we could neither interpret the past nor plan the future (10).

Better results can be achieved, as well as more objective analysis and more accurate estimate of probability by combination of several intelligence disciplines and exchange of information with different organizational units and agencies. Unknown details or hard-to-notice processes are more obvious if different data are analyzed from the early stages of the intelligence cycle and if analysts with different knowledge and skills are involved, who can contribute to creation of a clearer picture of the current and future developments. As the large quantity of data processing approach has changed, the importance of setting priorities, more precise direction and involvement of analysts with different competencies into making complex analytics products has grown. The various data integration skills offer an opportunity for important processes to follow up in an appropriate manner and register the changes that may represent potential threat in early stages.

Analyst Key Challenges

In modern conditions, analysts face many old and new challenges that are the consequence of the changed circumstances. Two basic problems that analysts traditionally face are that they need to perceive the problem from the point of view of a customer, their needs and expectations and to be aware of some risks during preparing and writing analysis or oral briefings (11). A particular problem is making analysis from the domain of national security because they are done in complex conditions with limited number of credible data, often faced with disinformation and attempts at deception (12). Fast and hard-to-predict changes impose in almost all areas of life greater demands on analysts and make production of analysis, in particular estimates, more difficult.

Consumers Needs and Expectations

Information customers are nowadays more demanding and up-to-date and have a range of possibilities of choosing a piece of information, but also confirming the quality of analysis.

Rapid technology developments available to everyone enable customers to have an approach to a wide range of information, and great competitiveness of information of media, specialized agencies, various governmental and non-governmental organizations impose high standards for intelligence analysts. Customers and their requests are constantly changing, which is the reason why analysts should establish and keep the integrity for each of them (13). Intelligence consumers seek a more in-depth analysis, whose focus is on methodology, assumption and forecast. Providing a high level of credibility of an analytical product in the eyes of customers is a long-standing goal (14). There is a higher degree of competitiveness between private companies and agencies, which offer collecting and processing data services.

On the other hand, customers often form an opinion as all other people do: based on media and publicly available reports that are not always reliable and usable without additional analysis and check. The former CIA employee M. Petersen thinks that policymakers do not often understand intelligence mission, values or standards and tend to be skeptical, especially if they are new in that world (13).

Big Data Challenges

Besides the possibilities of better follow-up to interesting processes, a great rise in quantity of data has brought up additional problems in identifying the key parameters changes. The US Defense Intelligence Agency (DIA) Director General Vincent Stewart thinks that we have more data than we can process and it makes decision-making more difficult (15). Some data are available to other users and a significant part of data is of suspicious value, hard to check and thus of small value. During collection and processing of a great quantity of data it is necessary to check and select them a few times at different levels. It is possible that some data contain informative value but do not seem interesting or usable at that point, so they may be ignored, i.e. the necessary attention may not be paid to them (16). A special problem is the possibility to fabricate data and place them intentionally in order to create confusion and make

taking an objective view on some event or phenomenon more difficult. Integration of various information systems, data bases and communication channels enables an unauthorized approach and distortion of gathered data and its own data, which imposes the need for the system protection and constant check and verification of information. From 2006 to 2015 a number of security incidents directed at the US governmental institutions information systems has been increased by more than ten times (17).

Therefore, an ability of modern analysts to take part in collecting, assessing and using available data and preparing information is of crucial importance in decision-making process. Analysts who possess great knowledge about specific or various areas together with those who can use and process a few types of information, identify trends and contribute with new insights by the application of advanced methods, techniques and modern technological solutions are the key to progress in making high quality analytical products in modern conditions (18).

Modern analytical techniques

A set of techniques known as Structured Analytic Techniques was developed for the needs of the US Intelligence Community, i.e. for making timely, reliable and high quality analytical products. This was the response to modern circumstances (complex environment, incomplete information, bias, various limitations, etc.) and unwonted intelligence failures (19) and (20). Authors emphasize that the application of techniques does not guarantee the accuracy of information, but it increases the reliability and quality of estimates, and therefore has a higher value for users. Techniques are grouped into the following three categories: diagnostic techniques used for hypothesis setting, contrarian techniques for application of critical thinking and imaginative thinking that develops new views on problems and possible scenarios (21).

The very techniques and their application are often taught at specialized courses. However, their application and how they can be used on real problems depends on abilities of analysts to apply them in real situation and current condition like limited available time. Decision-makers strive to have more time to decide, so that analysts are pressured to produce information as soon as possible (22). The process of initial analysis, analyst coordination and synchronized application of different techniques, as well as production and correction of output analysis, require time that is often longer than users expect. Making decisions in situations when it is necessary to react quickly implies the urgent preparation of analytical products, and then it is not possible to use all the available techniques unlike the situation when there is no such time limit. When the deadline is too short for the complete application of one or more techniques, Peterson proposes the use of five basic techniques (The Five Habits), whose application can help reach the response results in a shorter time (23).

Standards

In order to examine the desirable skills and knowledge of analysts, several institutions and authors have sought to establish the standards required to define the necessary competencies of analysts. The most common standards for research and analysis are the standards of the US intelligence community.

Major changes in this area have been created on the basis of the Intelligence Reform and Terrorism Prevention Act (IRTPA) after the terrorist attack in the United States in 2001. One of the newer standards of analysis in the intelligence community is the Intelligence Community Directive (ICD) 203 of 2015 (24). The Directive defines the process of managing and evaluating analytical products, as well as the competencies and responsibilities of the participants. This directive represents the basic guidelines and principles of intelligence analytics used in the US intelligence community.

Office of the Director of National Intelligence has published several standards defining the necessary characteristics of analysts, which are covered by the Intelligence Community Directive No. 610. The analyst characteristics are detailed in ICS 610-3 (Core Competencies for Non-Supervisory Intelligence Community Employees); ICS 610-4 (Core Competencies for Supervisory and Managerial Intelligence Community Employees); ICS 610-5 (Core Competencies for Intelligence Community Senior Officers) and ICS 610-7 (Analysis and production) (25). The mere existence of standards does not guarantee their comprehensive implementation because there is no body that has the authority to control their implementation. Most agency managers are more interested in improving existing procedures for the production of information than for the long-term and comprehensive professionalization of the analytical process (26).

A high-quality comparative analysis of the character of an analyst of the American intelligence community and the Association of American Colleges and Universities was presented by Kaspar, which shows that there is a high degree of correlation between them (27). There are also the views of other authors, who emphasize that existing standards do not respect changes that occur and do not take into consideration circumstances from the end of the twentieth century (28).

Characteristics of a modern analyst

In discussions on desirable characteristics of intelligence analysts, a comprehensive overview of basic abilities, knowledge and skills was presented by authors Moore and Krizan (29). The offered model shifts the focus from the previous consideration of analytics as an activity, process or organizational unit to the analysts themselves and their basic competencies. The authors have identified three abilities, eight skills and five types of knowledge that are desirable for a successful analyst.

In subsequent studies, the necessary levels of individual skills, knowledge and skills for various forms of analytical process were analyzed in detail, and more comprehensive linkage and harmonization were performed. This is particularly important in circumstances, where due to a large number of available information, it is necessary to verify, select, process, prepare and present analyses that satisfy the needs of increasingly demanding users. Ideally, analysts should dispose of all these characteristics, but in practical terms it is important to identify more precisely the necessary skills for certain types of analytical work. The acknowledged expert Moor has established these links and proposed minimum standards for describing, explaining, interpreting and estimating analytics (30).

Based on this, it can be concluded that certain characteristics are more significant for some types of analytics and knowledge and skills can be improved in direction towards future needs, i.e. career development plans and advancement of analysts. In descriptive

analytics, special attention is paid to the skills of collecting, selecting and processing data. Good organization of work, as well as knowledge of searching and processing techniques of a large number of different types of data, is also important. Analysts, who work in explanatory analytics, need to establish certain patterns and monitor the ongoing changes in their topics, which is the reason why they need to work more with others. For them, the ability to work in a team, as well as knowledge of internal procedures and functioning of data collection and processing, were important. In the case of interpretive analytics, which should answer the question "what is happening", in addition to the use of known structural techniques, the intuition of analysts comes to expression. In addition, for the preparation of analyses of this type, great intellectual effort and cooperation with others is needed, which requires both good communication skills and great knowledge of the field of analysis. Making estimates represents the highest level of analytical work, and the estimates themselves are key analytical products that enable decision-makers to make the most important decisions. Therefore, it is very important to recognize the needs of users, the capacities and activities of other participants, and in cooperation with others, prepare and present various scenarios and possible consequences. Due to the significance of the analytical products themselves, as well as the need to engage analytics and other organizational units in accordance with the procedures and interests of customers, they need to be well aware of the policies, plans, constraints and agency capacities and the intelligence community as a whole.

An Analysis of Analyst Job Description

The results of the research conducted in Australia with the aim of establishing what employers consider necessary for the analytical workplaces are interesting (31). To this end, they analyzed over 300 public announcements (from 2009 to 2015, 45 different state agencies in Australia) for intelligence analyst jobs, paying particular attention to the required qualities.

The main role of analysts is to analyze data and prepare various analytical products for decision-makers. Types of data analyzed differ in relation to the business environment and the purpose of the analysis, so that the required characteristics differ in part. The authors believe there are no universally accepted standards, which are the required qualities, but they are based on the assumption that analysts need to be educated, know well the area they are dealing with, have the ability to solve a problem and have the ability of written and verbal expression.

According to research results, advertisers are expected to seek the university education, experience in intelligence analysis, management and information management. When it comes to the necessary knowledge, the greatest attention in advertisements is dedicated to knowledge of intelligence principles and practice, state administration and knowledge of the area in which the analysis is carried out. Knowledge of analytical methods and research techniques is much less interesting for employers, as this is probably the subject detailed in the job training. Among the necessary skills, the most wanted ones are the persons with expressive communication, analytical and research skills. Computer skills, organizational and leadership skills are much less sought after. As far as personal qualities are concerned, integrity and initiative are more respected and flexibility and productivity less.

Difficulties in achieving analyst full potential

Analysts in contemporary conditions can, in addition to other important factors, contribute to significantly better positioning of companies in the modern business environment. The changing business environment and the expansion of the amount of various data generated in various forms and platforms make analysts more difficult to work and at the same time create many problems, but they also offer enormous potential and opportunities. However, the success of overcoming these problems depends on the ability of analysts to adapt to new circumstances, as well as to the attitude and activities of leaders in relation to the role of analytics. According to the estimates by the famous McKinsey agency in 2011, the EU member states could cut costs by 15-20% and save over 100 billion euros by increasing efficiency, transparency and using the potential of processing large amounts of data by 2021 (3). In the new report from 2016, it is concluded that 10 to 20% of the potential is used in regard to this issue. The main reasons are the complexity of the existing administrative system in the EU, as well as the problems in providing high quality and talented analysts (32). Therefore, in order to successfully fulfill the existing potentials, it is necessary, in addition to investment in technological solutions, to carry out the required organizational changes and select, prepare and adequately motivate analysts with the necessary knowledge and skills.

Conclusion

In modern conditions, technology plays a significant role in the process of collecting and processing data, as well as producing analytical products. The multiplicity and variety of data available to analysts enable the production of timely, accurate and quality information. However, the full potential of technology and the environment "enriched" with various data imposes the need to adjust existing procedures and modify known methods and techniques. Analysts who need to quickly adopt new technologies and apply their capabilities are very important in these processes. Being aware of the required characteristics, knowledge and skills of individuals working on various analytical tasks is important for the proper selection, training and career advancement of analysts. The famous author Heuer emphasized the importance of improving analytical abilities, but also warned that if the attention is not paid to the quality, the precision of analytic products will be reduced, and occasionally greater intelligence failures should be expected (33).

In the modern business and intelligence environment characterized by rapid changes and abundant information, it is possible to create the conditions for analyses to contribute to making better decisions and creating new values only with the appreciation of the increasing importance of analytical process and the ability of analysts. Organizations that recognize this trend and adapt their business processes and procedures will be in a better position than those who do not accept the possibilities that new technologies bring with them. In a creative atmosphere, talented and motivated analysts, who have good knowledge of the field of analysis and who recognize the needs and expectations of the customers, can, using appropriate techniques, prepare timely and accuracy information.

Data mining, Machine learning, Data Visualization, Artificial Intelligence can help in overcoming many of those issues, but what is and will be crucial is the role of humans with knowledge, abilities, skills and passion to find appropriate methods how to avoid traps and utilize the opportunities, which the new era brings.

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OVERVIEW OF ELEMENTS OF NATIONAL LOGISTICS SYSTEM IN THE REPUBLIC OF SERBIA

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There are various interpretations of the concept of national logistics. According to one of such interpretations, national logistics is a system which is comprised of resources, infrastructure and economy as its elements. This system functions in a general milieu set by the regulatory framework while interconnections of the system elements are established on the basis of mutual conditionality and interaction. Consideration of the elements of national logistics of a particular country renders the given term more concrete and specific features.

This paper addresses the elements of the national logistics system of the Republic of Serbia. Thus, a general overview of the system concerned is being presented since an elaborate description is not possible within the given framework. Such a general overview of the elements of the national logistics system provides the basis for assessment of different systems in the country, from economic to security systems.

Key Words: national logistics, system elements, resources, infrastructure, economy

Introduction

There are various interpretations of the concept of national logistics. Some authors view national logistics exclusively as available resources, others as infrastructure, while third ones attempt to identify the national logistics with the economy as the basis for the entire corpus of state. There are also numerous additional combinations of understanding of this notion. However, that is beyond the scope of this paper. When speaking about national logistics, it is very difficult to speak about certain national logistics system. When considering the national logistics through the concept of a logistics system, it becomes immediately evident that this is an amorphous system. There are no solid links among the system elements and no solid structure established within the system. In this case, elements of the system function

under identical spatial, regulatory, legal and other conditions. Interrelationships between the system elements are established on the basis of their functions within a general milieu set up by a state. At this level of discussion about the elements of the system, it has to be understood that the elements concerned are already highly complex systems themselves.

Many of these elements (in complex systems) are independent, most often, business entities. However, there are also elements that are centrally managed (also complex systems themselves), which most often include protection, security and defense systems. Consequently, to consider logistics and logistics systems in centralized systems (mostly business entities) on the one hand and national logistics on the other hand in the same manner would be very complicated. Therefore, it necessarily follows that national logistics itself needs to be defined differently both in terms of category and concept.

National logistics may be determined by its potential, which are resources and infrastructure, and by operational use of the resources and infrastructure, and that is the economy of a country. Resources, infrastructure and economy are the elements of this system. The system operates in a general milieu provided by the regulatory framework. The regulatory framework is determined by spatial, regulatory, legal and other conditions at the state level and various mechanisms at the international level to which the state concerned has committed itself. Connections between the elements are established according to their mutual conditionality, influence and relationships that are determined by the regulatory framework.

Resources imply everything that is provided by nature and everything that has been created as a result of interstate and international relations. This includes mineral reserves, agricultural land (in all its forms), energy sources, etc. Resources also include watercourses, location, climate, etc. The infrastructure comprises everything that people have created to enable the exploitation of existing resources, roads, railways, power plants, large irrigation systems, etc.

The economy of a country and its economic system imply operationalization of the use of these resources and infrastructure. Certainly, these two are not independent of each other. Resources are the factor which leads towards a greater or lower level of development of certain industries. Economic development directly influences the development of infrastructure, which, in turn, affects the conditions and level of resources utilization. National logistics can also be viewed in that sense.

The subject of this paper is the elements of the national logistics system of the Republic of Serbia in line with the interpretation of the national logistics given above. The intention is to provide an overview of various aspects of these elements. Certainly, this cannot be done without offering a glimpse of the regulatory framework and links between the system elements. The aim of the paper is to provide a general overview of the status of these elements. A more elaborate overview would require a lot more space.

General indicators of Serbian economy

The economy of Serbia generally follows the principles of a free market model. The largest sector is the sector of services /tertiary sector accounting for a total of 63.8% of GDP. Then the sectors of industry (19-23.5% of GDP) and agriculture (12.7% of GDP) follow.

According to estimations, Serbia's nominal GDP in 2015 amounted to USD 44.1 billion (according to the Ministry of Economy it is EUR 32.9 billion for the same year [1]). On the

basis of the former amount Serbia is ranked somewhere between 80th and 90th place on the list of countries ranked according to GDP (sources of IMF, World Bank, CIA, etc.). The overall economy of Serbia accounts for 0.2% of the economy of Europe and 0.056% of the world economy, which makes it marginal when considered at a larger scale. Such economic potential substantially limits its potential political, military and security roles.

Major economic issues include the high unemployment rate and the foreign trade deficit. Also, there are high risks of so-called "education gap" due to abrupt lowering of investments into human resources, research and technological development as the basis for economic growth.

Regional imbalances are highly pronounced given that two-thirds of economic activities are concentrated in Belgrade and South Bačka District (Novi Sad) [1].

The average real growth rate in the last 15 years was 3.1% [1]. In recent years, the investment rate was at the level of 16-18% of GDP. It is considered that in order to overcome the current technology gap, it would be necessary to achieve the share of investment of 25% of GDP [1].

The total level of foreign trade in goods is over USD 30 billion. We export about 43% of everything we produce and import about 54% of everything we use. Over the recent years, the import - export coverage ratio has been about 55-77%, which places Serbia on the list of import-dependent countries. Foreign trade in goods is the largest with the EU members and it is about 60%. In regard to exports, our largest foreign trade partners are: Italy, B&H and Montenegro. Our main export categories are automobiles, iron and steel, cables, metals, electrotechnics, car tyres, cigarettes, cereals, fruit and vegetables. Technology indicators for 2015 showed that almost 80% share belonged to low-technology and medium-low technology industries [1].

Agriculture, arms industry, computer science, wood and textile industries are the branches of industry that generate foreign trade surplus. Trade deficit is created by energy, chemical and metal industries. At the same time, the most dynamic sectors are: computer science, tobacco industry, manufacturing industry, textile manufacturing and manufacturing of machinery and equipment, as well as manufacturing of basic pharmaceutical products and pharmaceutical preparations.

The top import categories include oil, natural gas, vehicles, metals, electrical machinery and devices, telephones, machinery and equipment, steel and iron, which are primarily imported from Russia, Germany, Italy, China and Hungary. Our largest trade deficit is with China due to imports of cell phones and computers and with Russia due to imports of energy products – oil and gas.

A mere glimpse of the geographical map would be sufficient to realize that mainland Europe, Mediterranean Basin and Black Sea Basin are the areas of vital importance for Serbia since it has done its largest trade there so far.

General characteristics of the current status of logistics and logistics organizations in Serbia

In Serbia, logistics is still understood in a segmented manner and there is no agency or state authority that would oversee all related activities.

Due to its geographic location, networks of road and railway transport, airways and inland waterways, Serbia has the potential to become the logistics center of the region. However, it might be noted that, considering the current condition of railway and road networks, the area around Belgrade still represents the bottleneck for overall transportation of goods.

At present, there are numerous logistics "providers" in Serbia, both national and foreign ones that offer the following services: transport, storage, processing of goods (product declaration and packing, sorting, repacking, etc.), implementation of reverse logistics, freight forwarding, customs brokerage, shipment monitoring, ensuring traceability, support to planning and creating a distribution and sales network, reporting on all aspects of movement and attributes of goods, as well as the services of building an entire logistics chain tailored to the specific needs of individual companies. These companies justify the need for using their services by the following benefits: improved forecasting, shorter delivery times, cost reduction based on loss and damage prevention, reducing response time and the number of complaints, and other benefits which help their customers achieve a competitive advantage.

The use of logistics management software such as routing, vehicle and cargo tracking has become commonplace in national logistics companies, as well as in the public administration for issuing various types of documents (for example, electronic declarations - 2 million customs documents for about 800,000 transportation vehicles that annually travel through Serbia).

"Logistics industry" is also responsible for its own environmental impact and it has to be transformed into the industry that efficiently decreases carbon dioxide emissions. Unfortunately, the implementation of the plan for decreasing the carbon dioxide emissions has not progressed far enough. Although many manufacturers and distributors continue to use their own delivery services, outsourcing logistics has become a global trend, i.e. companies transfer the responsibility for implementation of physical distribution to logistics „providers“. Many companies believe they make savings in this way.

Characteristics of the regulatory framework

As a part of the EU accession negotiations, our country has largely harmonized its national legislation with the EU directives by adopting numerous laws, strategies and by-laws. The outcomes will include provision of free access to Serbian infrastructure (power grid, gas pipelines, oil pipelines, roads, railways, ports, etc.) for all interested entities that meet the requirements related to trade in materials to be transported by such infrastructure. In addition to national public and other companies, a large number of foreign companies are about to enter the Serbian market in the area of transport and gas and electricity supply. This means that practically there will not be any national monopolies embodied by state-owned utilities.

Also, incentives will be introduced with the aim to improve the combined (intermodal), railway and river transport. The incentives concerned are intended for economic entities that will implement this type of transport. In turn, this will result in the development of this area, as well as in energy savings and reduction of emissions of harmful gases.

Importance and characteristics of infrastructure in Serbia

Serbia is located at the crossroads of the main transportation corridors, i.e. of the shortest road and railway interconnection between the Western-Central Europe and Southern Europe and the Middle East.

In 2015, 70.2 million passengers and 24.7 million tons of goods were transported. In Serbia, railway transport accounts for 52.8%, road transport for 33.5% and river transport

for 13.7%. The explanation for the prevalence of railway transport can be found in the report of the World Economic Forum, where, according to the quality of the railway infrastructure, Serbia is ranked 83rd out of 144 countries, and even 111th in regard to road infrastructure and 127th regarding river transport infrastructure. To some extent this is certainly influenced by the structure of the goods that are currently mostly transported in Serbia, that is ore, wheat, iron and petroleum products.

According to the same report, Serbia is in the 26th place in terms of the landline and in 57th place in terms of mobile telephony. Faster information flows have led to the use of more efficient business processes such as e-commerce, facilitating sales channels, optimizing distribution networks, introducing remote operation, online purchasing, online banking, more efficient logistics, e-government, and more.

In Serbia there is the following transport infrastructure:

AIRPORTS (Source: Civil Aviation Directorate of RS): 27 civilian (three international: Belgrade, Niš, Priština) and 7 military.

HELIPORTS 2015 (Source: Civil Aviation Directorate of RS): 2 (Dobanovci, Požega).

RAILWAYS (Source: PE Serbian Railways): 3,809 km (electrified 1,196 km) including 3,526 km of single-track and 283 km double-track lines.

ROAD NETWORK (Source: PE Roads of Serbia): total of 43,839 km including 15,018,510 km of state roads and 669,113 km of highways.

TUNNELS (Source: PE Roads of Serbia): 78 tunnels with the length of 10,053 m.

BRIDGES (Source: PE Roads of Serbia): 2,638 (7 across the Danube and 5 across the Sava River), 800,000 m long.

WATERWAYS (Source: Waterways Directorate of RS): 9 ports and 13 Harbour-master's Offices.

POSTAL TRANSPORT AND TELECOMMUNICATIONS (Source: Chamber of Commerce and Industry of Serbia - the largest operators: PE Post of Serbia, Telekom, Telenor, VIP mobile, SBB).

Transportation accounts for about 15% of Serbia's GDP, which means that this sector is an important part of the economy. About 6,500 enterprises are registered in the field of transportation, employing 124,000 employees, which represents 11.21% of the total number of employees [3].

Intermodal transportation in Serbia is at an early stage of its development. The infrastructure of the railway and ports – Belgrade, Novi Sad, Pančevo and Prahovo is only partially built. Under national ownership there are only about 1,000 containers, 200 railcars and 100 road vehicles that generally do not meet the standards for international transport. Therefore, intermodal transport in Serbia accounts only for 0.5% of overall transport, while in the EU the share of this type of transport amounts to about 9%.

The length of road network per number of inhabitants in Serbia is 2.5 times smaller in comparison to the EU countries. (5,500 km/mil inhabitants). In terms of density of road network per area of the territory, Serbia has three times fewer roads than the EU. (500 km/1,000 km²).

The Statistical Yearbook for 2016 states that the national fleet consists of slightly more than 9,000 buses, 53,000 mopeds and motorcycles, 140,000 freight carriers, 14,000 towing vehicles, 40,000 auxiliary vehicles and 7,000 official vehicles. The number of passenger cars is close to 1,800,000, i.e. about 240 per 1,000 inhabitants (virtually the entire population of Serbia can be

transported by passenger cars in one round), which is, certainly, much lower than in the developed countries, where there are 500-600 vehicles per 1,000 inhabitants.

It should be noted that, if the plans for the construction of highways were realized, it would be possible to redirect the flow of goods and passengers from the western part of Romania through Vršac and Belgrade to Italy and the Adriatic. Similarly, a part of transport could, more easily and efficiently, through Serbia, reach the port of Bar and the Adriatic Sea via the route Sofia-Niš-Pojate-Požega-Bar. The connection with Bosnia and Albania (highway Niš-Priština-Durres and Bar-Durres) would also redirect a part of transportation through Serbia.

The speed of railway transport in Serbia is still low. The allowed speed limit exceeds 100 km/h on just 3.2% of the railroad, while on the largest part (about 50%) of the rail network a maximum speed of up to 60 km/h is allowed [24].

In 2015, there were 748 passenger railcars (45,000 seats) and 8,486 freight railcars (carrying 432,000 tons) in Serbia. The power of locomotives is 892 MW. The availability of everything is approximately one third lower than in 1990 and quite obsolete.

The railway network of Serbia is connected with railway networks of 7 neighboring countries. There are plans for the construction, modernization and rehabilitation of 874 km of railway infrastructure, as well as procurement of new and overhaul of existing trains, locomotives and railcars. This refers to the railroad on Corridor 10 and railroad to Bar with the aim to revert it to the design parameters, especially in terms of speed. The construction of the Belgrade-Budapest double-track railway has been announced with a speed of up to 200 km per hour. The extension of the fast track from Belgrade to Thessaloniki is also planned. Electrification and modernization of the Niš-Dimitrovgrad railroad, construction of the railway bypass around Niš, as well as the continuation of the construction of the railway station BelgradeCentre (Prokop) should be expected.

Similarly, when it comes to roads, in order to redirect a part of transport and trade to its territory, in addition to what has already been mentioned, Serbia needs to invest a lot of efforts into the modernization and construction of the Belgrade-Timisoara and Belgrade-Doboj-Sarajevo (B&H) railways.

There are 9 ports in Serbia (the most important ones are: Belgrade, Pančevo, Novi Sad and Smederevo). The common characteristic of all our ports is the low utilization of existing capacities, i.e. about 30% on average. The Port of Pančevo, besides Duisburg, has the most favorable position for operation and development of a port on the Danube. There are plans to invest in the development of a port near Belgrade, as well as the development of the Port of Smederevo in order to facilitate the work of the Steel mill.

Yugoslav River Shipping Belgrade is one of 5 largest shipping companies on the Danube and the largest in our country [25]. It has 100 vessels for the transport of various types of goods including oil and petroleum products. In total, 184 freight vessels have been registered in Serbia with a capacity of 184,000 tons out of which 28 are pusher boats and tugboats.

In regard to inland water transport, we should not neglect the fact that via the Danube Serbia has the exit to the Black Sea in the ports of Reni and Constanta. The Danube has the status of an international waterway.

At present, the river Danube is used as a transportation route for transport of all raw materials for Smederevo Steel mill in Serbia, and also for shipment of a large part of its products. Traditionally, smaller volumes of fuel used to be transported by the Danube to

Serbia, especially during the sanctions. Also, certain quantities of oil products exported from Serbia are transported through the ports of Reni and Constanta.

Air Serbia [26], as the most important national company, currently owns the fleet of 22 aircraft while 10 airplanes have been ordered. Private airlines also have fleets. The total number of registered passenger seats in Serbian airlines is slightly below 2,000, and the cargo load capacity is around 700 tons. Unfortunately, Serbia has 3 aircraft/million inhabitants, while the EU average is 13 aircraft/million inhabitants.

Current development plans in this area include improvements at Niš and Morava airports.

Telecommunications

According to RATEL's data for 2014, the number of equivalent lines in 2014 amounted to about 2.85 million [27]. The total number of mobile phone users at the end of 2014 was 9.34 million, which exceeds the total number of inhabitants. The number of internet subscribers in 2014 amounted to almost 6.2 million, which is about 8% more than in 2013. According to these records, there is an increase in the number of internet and mobile users unlike the landline and cable television, where the number of users of these services has been declining in recent years. In 2015, 66.3% of the Serbia's population and 99.1% of companies were using the Internet, which is lower than the EU average, i.e. 81%, but higher than the EU economy, where the average Internet use in companies amounts to 97% [1].

In 2015, 78% of all households in the EU had access to broadband Internet lines, while the figure for Serbia was 56%. Serbia also strives to reach the EU target in terms of Internet speed of around 30 Mbps by 2016 and 100 Mbps by 2020.

At present, the network fiber optic cables mounted on the OHL network of about 6,000 km in total length, which could be used for the set-up of a national broadband network, are underutilized. The Serbian academic network, at present, has infrastructure spanning of 50 cities. However, currently only institutions of higher education are connected to it, but it could be the basis for its development.

At present, there are about 120 TV and about 250 active radio stations. In addition to the improvement of communication connectivity across the country and creation of opportunities for widespread use of advanced services in the field of e-business, it is necessary to pay attention to the development of a network that would enable undisturbed transmission of TV, radio and other signals in case of electronic interference and destruction of individual hubs. This is important given the experience with the planned destruction of TV and radio stations and transmitters during the NATO bombing in 1999. A similar situation can be caused by natural disasters, so this is necessary for the sake of continuous, true and timely information flow and warning of the population.

Storage facilities in Serbia

The Republic of Serbia has a storage capacity of just over 4.3 million tons, while estimates show that the country needs about 10 million tons of storage space. According to the Census of Agriculture 2012, the total number of silos in Serbia was 5,677 (400 large), 10,539 drying kilns and 2,162 cold stores. Some storage capacities are existing and some are currently being built for all types of goods including petroleum products and pallet warehouses. Serbia currently

owns about 300,000 m³ of storage capacity for petroleum products (out of which Petroleum Industry of Serbia owns about 200,000 m³). However, it lacks the capacity for the storage of oil products such as emergency oil stock in the amount of about 300,000 m³.

The Directorate for Commodity Reserves of the Republic of Serbia is the Central Stockholding Entity for all necessary commodities. The Directorate maintains the stocks of oil and oil products, food, medications, materials for defense purposes, etc.[19].

Logistics resources

Monetary-financial resources

According to the Report on the banking sector in Serbia [2], 8 national and 21 foreign-owned banks are registered. The total capital of banks amounts to about EUR 24 billion. The ownership structure in the insurance sector is similar.

Household savings are at the level of EUR 8.7 billion. This practically means that each citizen of Serbia has savings of somewhat more than 1,200 EUR on average. At the same time, the level of household credit debt is one of the lowest in Europe [1].

The government budget is slightly less than EUR 9 billion (RSD 1,117,597,581,000 for 2016). Budget expenditures have been higher than income for many years. The highest expenditures are for salaries of employees - 22.5%, pensions - 19.6%, subsidies - 7.75%, interest on loans - 12.5%, social welfare - 10.4%, use of goods and services - 8.6%, repayment of principal - 3%, transfers to municipalities and cities - 3%, etc. The previous shows that the budget is socially oriented (about 87% of revenues are spent on "preserving status quo").

Serbia's foreign exchange reserves are at the level of EUR 9-12 billion depending on the policy of the National Bank at certain points (today slightly over EUR 7.5 billion belongs to the National Bank, and the rest are required bank reserves). Even though it can be said that these reserves provide coverage of money supply by more than 200% and for six months of imports of goods and services, the question remains how big the amount that would be available in an emergency situation is since the money supply is either bound by long-term contracts or could even be subject to sanctions and bans. It should be kept in mind that potential non-ability to "cover money supply" can result in a drastic decrease in the value of the local currency, which is the scenario that has been repeatedly seen in recent history.

Military expenditures have been in the range of 1-2% of GDP for years. In developed countries and countries with stronger armed forces allocations for defense are at the level of 2-4% of GDP.

In emergency situations, such it was in 1999, the allocation for military and security forces could be increased by more than double by introducing additional taxes (in 1999 an additional VAT of 3% was introduced). That could be the maximum amount available in emergency situations, which is at the level of the present Croatian military budget and less than the Bulgarian military budget.

Human resources

The share of working age population in Serbia is in the range of 2.8 to 3.3 million. Agriculture accounts for 24-30%, industry 27-46% and service sector 24-50% (data from different sources vary).

The 2011 Census data shows that the decline of population trend continued (by 4.2% between two censuses) and increase in average age (42.2 years).

About 34% of the population is at the basic educational level or below. A positive trend is shown by the number of inhabitants with the secondary education, as well as with the first and second level of tertiary education, with a simultaneous drop in the share of the population with an educational minimum.

Serbia (based on life expectancy of 73.7 years and the current level of GDP) is in the group of middle income countries with a high level of human development (HDI index 0.735).

Given the existing (insufficient) demographic potential, Serbia needs to put in long-term efforts in order to develop the "human capital" infrastructure, which is a critical factor for sustainable economic growth and improvement of the quality of life. In line with such development is also the estimation that human resources in Serbia are not the decisive factor of national competitive ability, i.e. that they do not represent a sufficient comparative advantage.

In regard to the vocations that are particularly important for the military and security sectors, there are about 20,000 licensed engineers in Serbia (according to the data of the Serbian Chamber of Engineers). It is estimated that around 5,500 students annually enroll in IT studies. Currently, around 12,000 scientists and researchers work in Serbia, and about 240,000 students are being educated. Unfortunately, the structure of fields of study is also unfavorable because in some of the fields, particularly the technical one and mining, there are almost no students enrolling.

Serbia has a significant human resources potential, which is university-educated and trained to perform various logistical jobs and tasks. Such resources are educated at the Faculty of Transport and Traffic Engineering – University of Belgrade and the Military Academy.

Another source of human resources trained for the majority of jobs in the area of defense and security are private security companies. According to the data of the Serbian Chamber of Commerce, there are currently 314 companies in this field employing 274 people. These organizations can serve as a significant source of staff and information, and they can perform certain security tasks either independently or in coordination [3] (according to some sources this sector employs between 40 and 60,000 people).

Agriculture and forestry resources

Agricultural land area amounts to 5,734,000 hectares (0.56 ha per person), out of which about 4,867,000 hectares are arable land (0.48 ha per person). About 70% of the total territory of Serbia is agricultural land, while 30% is under forests.

Serbia is ranked 17th out of 206 countries and territories according to the surface of arable land per person, with 48 ares, which is more than double the world average and the highest level in the region. The highest-ranked countries are large-area countries with low population density: Australia, Kazakhstan, Canada, Argentina, Niger and the Russian Federation. It is interesting that the USA are ranked 14th with 51 ares per person [4]. These relative ranks are corrected by other factors: land cultivation intensity, soil quality, land plot size, etc.

The total agricultural area (0.54 ha) and the used agricultural land per person (0.48 ha) are relatively satisfactory for the food self-sufficiency of the population in Serbia (it is estimated that 0.2 ha per person is necessary for food self-sufficiency) [4].

The main agricultural products of Serbia are corn (about 7-8 million tons per year), wheat (about 2-3 million tons per year), sunflower (about 0.5 million tons per year), sugar beet (about 3.5 million tons per year) soybeans (about 0.5 million tons per year), potatoes, fruit and grapes (about 1.3 million tons), vegetables (about 1.7 million tons per year), pork, beef and poultry meat (about 6 million of headage, and around 400-500,000 tons of meat) and milk [3].

The Serbia's production of seed material mostly meets the needs of the national market. Mainly, significant quantities of vegetable seeds are imported.

According to the Census of Agriculture (2012), in Serbia there are 593,378 single-axle and two-axle tractors and 31,241 combine harvesters. Revitalization of agricultural machinery is worth USD 10-15 billion. Serbia has significant livestock processing capacities (1,176 facilities for slaughtering and processing meat of cattle, pigs, poultry and fish).

In regard to forestry, as a raw material basis for wood processing, it should be noted that Serbia is among medium reporting countries with a total of 29.1% of forest area, i.e. 2.2 million hectares of forests. Besides agriculture and food industries, wood industry is the second most important sector in the country and it has a constant trade surplus.

Water resources

"It is often said that future wars will be fought over water. Therefore, presumingly, countries that are poor in drinking water, and rich in weapons would attack water-rich countries incapable of self-defense. We could simulate future wars by mapping population and drinking water across countries." [5].

World supplies of drinking water are decreasing and demands are growing. According to the UN data, water consumption will increase by 58% by 2025 as compared to current consumption, and some countries like Saudi Arabia will completely run out of the water. There is an interesting case of Lesotho, the country whose main export product is water. Namely, rivers that had been naturally flowing into the Indian Ocean were rerouted via an underground tunnel in order to fill artificial lakes in South Africa, which does not have its own water resources sufficiently.

Serbia, including Kosovo¹, accounts for 0.3% of world drinking water resources, while it accounts for 0.13% of world population and has 137% more drinking water per person than the world average. According to the UN classification in regard to the reserves of healthy and drinking water, Serbia is ranked 47th. "In the region, only Croatia is 30% richer in drinking water than Serbia. In Europe, only Iceland, Norway and Russia are richer in drinking water than Croatia. Beyond that, Sweden and Finland are also richer in drinking water than Serbia. "[6] Germany, France, Italy, Turkey, Bulgaria and Macedonia lack water resources.

Serbia's water resources per person amount to 1,500-2,000 m³ [7,8], out of which 8% are domicile and 92% transit waters. Accordingly, Serbia belongs to the group of "vulnerable countries" in terms of availability of the resource, i.e. Serbia is ranked at the borderline between the countries having sufficient water resources and those where they are relatively scarce.

¹ In the text the official name Kosovo and Metohija is replaced with Kosovo to bring it closer to the English readers. Authors fully respect the official name and have no political intentions in that regard.

Serbia, however, is at the very top of the list of countries rich in high quality mineral water [9]. The total production of all mineral water bottling plants is over 400 million tons a year and about 10,000 people are employed in water plants in Serbia (300-400 sources and about 30 bottling plants). This branch of the economy records permanent growth. The significance of this is best shown by the data provided by the Ministry of Mining and Energy according to which nine of ten applications for licences in the area of exploration of mineral resources are submitted specifically for the exploration of mineral groundwater [10].

On average, the population of Serbia consumes about 300 liters of water per day, while in Europe this consumption is between 120 and 150 liters of water [11]. Such data illustrates that the water resources are being used irrationally, primarily because of low cost, but it also signals to potential savings. However, the quality of water is a large concern since 30% of water supply and watercourses have maintenance issues.

Industry and mining

The field of industry and mining includes the extraction of ore and stone, the processing industry and the production and distribution of electricity, gas and water [3].

Mining

Except for copper, antimony, lithium, lignite and some basic non-metals (magnesite, limestone, dolomite, calcite, quartz sand, construction gravel and sand, ceramic and refractory clay, gypsum, borates, zeolites, anhydrite and phosphates), the raw material base for the development of the mineral industry in Serbia is insufficient, both in terms of quality and exploration level. Taking the territory of Kosovo into account the situation improves due to lead and zinc, chromium and nickel ores, especially the fifth largest reserve of lignite in the world. From the point of view of the mining industry, newly discovered deposits, which were unknown until recently, could be highly significant. These are: lithium, borates, wollastonite, zeolite, phosphorus and fluorite.

According to experts' speculations, there is a possibility of 5 and 10 new mines to be opened in Serbia. It is the fact that a world - class mine can contribute to the increase of GDP by several percent, while a few large mines could completely change the outlook of the Serbian economy.

It is likely that Ćirkovac lignite mine near Kostolac and Štavalj brown-coal mine near Sjenica are likely to be opened. In comparison to the demand, Serbia produces a negligible amount of hard coal in Ibarski rudnici in its territory. There is hope that the hard coal mine Jerma near Babušnica will soon be rehabilitated, as well as the somewhat smaller mine Ilino brdo near Rtanj. Considering that there are plans for the construction of a petroleum coke production plant within Pančevo Refinery, together with the production of hard coal from new coalmines, Serbia will have an opportunity to meet its own needs for hard coal and coke (up to 1.5 million tons), which is a strategic raw material for the production of iron and steel in the Steel mill Smederevo. Unfortunately, Serbia does not have a plant for the production of coke (from coal) in its territory. The closest plant is located in Lukavac (B&H), which was designed to meet the needs of former Yugoslavia for this material.

Steel accounts for 50% of all technical materials and 10% of total demand for raw materials in the world. Therefore, it represents one of the most important raw materials for the economy, especially for the machine industry and construction. The nearest iron mines for Serbia are located in the Republic of Srpska, more precisely in Ljubija. The amount of iron ore obtained in that mine should meet the capacities of the Still mill in Smederevo. Within the region, there are several additional smaller iron mines in the Federation of B&H and Macedonia.

A special group of ores consists of alloy steel elements, which are used to improve certain characteristics (conductivity, elasticity, corrosion resistance ...). Most important alloy steel elements include chrome, manganese, molybdenum, nickel, cobalt, cadmium and tungsten, and some non-ferrous metals such as copper or zinc. Alloy steel elements (manganese, chrome, titanium, vanadium, nickel, molybdenum) are mainly imported into Serbia.

Molybdenum is a rare and valuable metal, whose deposits in Serbia are still in the stage of exploration (the mine near Surdulica was in operation during the Second World War).

Nickel deposits in Serbia are significant and widespread: Stragari, Kadina Luka, Ba, Željin, Stolovi and Kosovo (Uroševac, Orahovac, Goleš, Kosovska Mitrovica). Despite significant reserves and proven profitability, the opening of a nickel mine in Serbia is questionable due to public opposition because of adverse environmental impact of the mine.

Bor used to be the largest copper mine in Europe. The secondary extraction of precious metals from copper ore is also significant. After the latest explorations carried out by the US companies around Bor, it can be said that a new copper mine, and one of the largest in the world, with high-grade gold ore, could be opened soon.

Aluminum ore (bauxite) has been detected in Kosovo, but it has not been exploited yet. The imported aluminum is processed in the Copper Mill in Sevojno near Užice. The nearest bauxite sites in the region are located in the Republika of Srpska and Montenegro.

In Serbia, without Kosovo, lead is exploited (together with zinc) only on the mountain Rudnik.

Antimony belongs to a group of rare metals. Serbia has reserves of this ore, which are internationally significant.

Magnesium is also a rare and important metal. The most important mine is located in Baljevac, being the only such mine in Europe.

Lithium is an extremely light metal, which is used today for the production of lithium batteries that are being increasingly used in the automotive industry and energy sector. The deposits of this metal in Serbia are of a more recent date and are related to the deposits of a newly discovered mineral Jadarit. Serbia can meet about 20-30% of the world's demand for lithium.

A profitable borate deposit was discovered in the Ibar valley near Baljevac.

Currently, a phosphate mining project at Lisina, near Bosilegrad is being developed for some time – a primary raw material for the production of phosphoric acid and mineral fertilizers. Considering the fact that the nearest deposits of phosphate ore are located in the north of Finland and the North African Belt, Lisina is of the exceptional strategic importance, as the only significant deposit in continental Europe.

Gold is an important and expensive metal, and one of the gold mines – Lece mine, is located on the Radan mountain. Silver in Serbia is mostly co-produced with lead and zinc.

Serbia has internationally significant reserves of zeolite ore. "Nemetali" V.Banja can produce zeolite tuff and bentonites.

In Serbia, approximately 200 mines actively produce non-metallic mineral raw materials. To various extents, 48 raw materials have been explored, out of which 16 are continuously exploited, 16 are exploited occasionally, while 16 raw materials are insufficiently explored and are not exploited either.

Despite general decline of the industrial production in Serbia, the construction materials industry represents a significant and profitable branch of industry, which is based primarily on non-metallic mineral raw materials, i.e. mining. These are the cement factories in Beočin, Kosjerić and Novi Popovac, the brick industry in Kikinda, Novi Bečej, Novi Pazar, Ruma, Kanjiža with about 300 brickyards, etc. Exploitation of technical and architectural stone takes place in open pit mines near Ub, Topola, Jelen Dol, Arandjelovac. We have sufficient stone reserves for meeting building-technical needs, while the reserves of decorative stone are scarce.

In economically developed countries, the value of total annual production of non-metallic mineral raw materials has exceeded the value of metals obtained in the same countries long ago. In some cases, this difference is 1.5 to 10 times in favor of non-metals. A reverse ratio (when the value of the obtained metals exceeds the value of non-metals) is considered to be a characteristic of countries with colonial or semi-colonial economies [12].

Industry

Industrial production is at 40% of the one before 1990. It accounts for 19-25% of GDP. However, it should account for at least 30% if we compare ourselves with the fastest growing economies today. The average age of the machinery park is 20-35 years. The share of low-tech industries amounts to 50%, while the share of medium-low technology industries is 27%.

The most important export products are cars, hulls and military equipment. There are limited possibilities for the production of trucks, locomotives, railcars, hydraulic equipment, equipping of ships and production of light aircraft. The production of tractors and combine harvesters is almost completely diminished despite potentially high market demand in the future.

The company EI Niš has gone bankrupt, so virtually the entire production of home appliances in Serbia has stopped except for some plants for the assembly of Gorenje appliances. MINEL from Belgrade, which produces almost all types of transformers and other electrical equipment, is in pre-bankruptcy stage.

As the "electrical engineering" industry is concerned, the production of cables, pipes and other products based on copper and aluminum still partly survives owing to availability of national or raw material base in the immediate vicinity.

The metalwork and electrical sectors are always concentrated on large systems that gather clusters of subcontractors around them. The lack of such systems and subcontractors today is a huge obstacle to revitalization of the sector.

The national chemical industry is import dependent (about 80-90% of raw materials are imported), but also export-oriented. The largest exports, as well as imports, are present in the field of manufacturing plastics and plastic products. It should be noted that Serbia imports

cement (for USD 100-150 million), fertilizers, and particularly urea (for over USD 220 million), rubber (about USD 300 million) and glass and ceramics (for more than USD 200 million).

The production of inorganic (artificial or mineral) fertilizers is of key importance for agricultural production. The basic raw materials for the production of fertilizers are natural gas, sulfuric acid, phosphates and phosphoric acid, ammonia, nitric acid, magnesium, etc.

In order to achieve yields at the European level, we need to use nearly 300 kilograms of fertilizer per hectare. It is estimated that we lose at least 3 (if not twice as much) billions of dollars a year because of the sub-optimal fertilization of land.

According to the Statistical Office of the Republic of Serbia, the production of artificial fertilizers and nitrogen compounds in 2015 amounted to 815,263 tons, which is twice less than in the 1980s and far below the installed capacity.

It should be noted that Serbia does not have all raw materials required for the production of artificial fertilizers in its territory, i.e. phosphates and natural gas. The production of sulphuric acid is largely conditioned by operation of the Bor mine, i.e. in case the operation stops, one of the most important sources of acid is interrupted. The issues in regard to the supply of natural gas could be overcome by establishing a certain level of strategic stocks of natural gas, which is possible under current conditions. The opening of a phosphate mine near Bosilegrad would completely change the situation, perspectives and possibilities of producing NPK fertilizers for the better.

In Serbia, powder and liquid detergents are produced in the Henkel plant in Kruševac, Beohemija in Belgrade and Aktavis (formerly Zdravlje Leskovac).

There are several manufacturers of car tyres in the country. The most prominent ones are Trayal from Kruševac and Tigar Pirot. They practically produce tyres for all types of vehicles. Trayal also produces agents for chemical protection. Certain types of explosives and anti-air rockets are also produced in this plant.

In Serbia, there is a large number of undertakings that are engaged in manufacturing plastics including packaging, construction plastics and car covers and tents. There are almost no plastic products that are not being or could not be manufactured in Serbia.

The situation in the Serbian glass industry is such that all three plants, in Paraćin, Zaječar and Pančevo are under bankruptcy or pre-bankruptcy.

Lube oils and lubricants are produced in Serbia at one plant in Novi Sad Refinery, Oil Refinery Belgrade and FAM Kruševac. In these plants, Serbia can produce almost all types of lube oils and lubricants that military technology requires. The future of these companies and production programs is currently uncertain.

Production of weapons and military equipment

In terms of export value, arms and military equipment reached the level of USD 755 [13] million in 2014 and became ranked as one of the top industries alongside the export of steel and petrochemical products in Serbia. Serbia is ranked somewhere between 15th and 20th place in the world according to the export of weapons and military equipment [14].

The production of arms and military equipment in Serbia [15] includes the following products: multiple rocket launchers, self-propelled artillery, tactical rocket systems up to 50km range, systems for surveillance of battlefield and areas, CBRN equipment, lightweight 60mm mortars, uniforms and footwear, bullet-proof vests, all types of rifles,

pistols and machine guns, light AD systems, artillery command combat systems, optical and optoelectronic equipment, quartermaster equipment (mobile kitchens and other), off-road vehicles, several types of combat vehicles, several types of upgrades for combat vehicles including tanks, guided and unmanned rockets and grenades, airborne containers and weapon carriers, unmanned aircraft, school planes, parachutes, light vessels, electronic warfare equipment, power generators, mines, multiple types of infantry and artillery ammunition and bombs, landmine detector robots, firefighting and protective equipment, special purpose oils and lubricants, as well as overhaul of a large number of models of weapons, military equipment and ordnance.

The most important entities that are engaged in the research, development, production, equipment and overhaul of weapons and military equipment in Serbia are the Military Technical Institute – Belgrade and Technical and Aviation Test Center. Arms and military equipment manufacturers consist of 45 companies in Serbia [16]. Additional 3 overhaul institutes should be added to this group.

Considering the abovementioned it is possible to conclude that Serbia can meet its own demands for all types of infantry weapons, protective equipment and necessary ample ammunition. Production of some highly sophisticated systems such as armored combat vehicles, missiles or unmanned aerial vehicles is also possible. The production of other types of weapons depends on the import and economic standing of a manufacturer.

Construction industry

In the past, the construction industry used to be one of the most expensive and propulsive export industries. Despite all its advantages, it would still not be able to meet the entire demand in emergency situations without being provided with the supplies of raw materials and intermediate goods, especially asphalt.

Manufacture of clothes and footwear in Serbia

In the period from January to June 2013, the value of Serbia's footwear export was nearly USD 159 million, and at the same time the import value of the same product amounted to USD 11 million. The surplus was generated by manufacturing approximately 2 million pairs of footwear [17]. The leather manufacturing industry of Serbia is export - oriented. However, when the chemicals, which are used for leather tanning, finishing, dyeing etc. are concerned, Serbia is import-dependent. Serbia has significant resources of raw and fine leather, as well as pigskin leather, which is of exceptional quality and there is a high demand for it. In terms of quality, particularly exceptional is "baby beef" leather. Additionally, all kinds of ready-made leather, which have wide application in the garment industry, furniture industry, etc. are produced.

In 2015, Serbia exported USD 1 billion worth of clothes and it was ranked 18th on the list of the EU textile suppliers. The raw material base in Serbia is very poor. Therefore, 79% of wool, 95% of cotton and 100% of jute are imported for the needs of national production [18].

It could be concluded that in emergency situations Serbia would meet the needs of its population and the armed forces in clothing and footwear provided that the supplies of raw materials were secured.

Healthcare resources

According to the data of the Health Insurance Fund of the Republic of Serbia, there are 158 medical centers, 77 hospitals (40 general hospitals and 37 special hospitals), 6 clinics; 4 clinical centers (Belgrade, Kragujevac, Niš and Novi Sad) and 29 institutes (for public health, forensic medicine, transfusion, etc.) with 38,875 hospital beds in Serbia. These entities employ 20,645 medical doctors, 2005 doctors of dental medicine and 2,186 pharmacists [21].

The private sector includes 1,020 medical practices, 2,000 pharmacies, 2,500 dental practices, 200 laboratories, 155 polyclinics, 18 health centers, 12 general and 76 special hospitals, as well as 5 radiological diagnostic institutes. The private sector permanently employs 4,233 medical doctors alongside about 7,000 part-time doctors [20].

It could be said that every municipality in Serbia has a medical center or at least a sort of medical practice, and that on every two or three municipalities there is one hospital. This means that the coverage of the territory by medical care is satisfactory. An important indicator is that on 100,000 inhabitants there are 289 medical doctors, 28 dentists and 31 pharmacists in the public sector of Serbia [21].

According to the IMS data for 2015, the market for medications in Serbia amounts to cca EUR 788 million. In terms of quantity, national medications account for 62%, and imported ones for 38% (in terms of financial value the situation is reverse). Hospital and state pharmacies distribute about 52% of the total amount of medications, and the rest is distributed by private pharmacies. The largest manufacturers of medications are Hemofarm, Zdravlje and Galenika (more than 95% of national production). The value of medications export is over USD 212 million, and imports amount to about USD 185 million.

The previous considerations lead us to the conclusion that in the event of a crisis or emergency Serbia would have sufficient healthcare capacities. The availability of equipment is also at a satisfactory level. The problems could arise in the supply of medications from import and the maintenance of equipment.

Residential and accommodation resources

In Serbia there are 3,243,587 housing units according to the 2011 census [22]. Practically, there is one apartment of 72.3 m² floor area per 2-3 inhabitants on average. There is the total of 2,423,208 apartments in use, i.e. 80.4% of apartments intended for permanent dwelling. It is important to note that, according to the Ministry of Finance, 318 categorized hotel-type facilities operate in Serbia with 29,440 beds. These facts confirm that Serbia has the sufficient number of housing units for accommodating the armed forces under an irregular (practically guerrilla) schedule. This conclusion was also reached on the basis of the studies conducted after the NATO bombing. The number of apartments, accommodation units and beds in hotels is significant from the point of view of providing accommodation for the army members and displaced persons in emergency situations.

Potential of Information and Communications Technologies – ICT Industry

According to the data of Microsoft Serbia, in 2011 554 companies in the IT sector with about 6,000 employees (if employees in the field of manufacturing calculating machines and telecommunications are included that number amounts to 15,000) generated slightly more

than EUR 200 million of income [24]. Corporate IT departments should be also added here. The number of employees in the IT sector grows at the rate of 23% per year. This sector is one of the most promising high - tech industries in the country. The biggest increase is recorded in the software development sector followed by companies engaged in the production of computer machines and telecommunications. Today computer manufacturing in Serbia involves the assembly of computer units from imported components and increasingly the production of industrial computers that are used for process control and management.

It is expected that this sector will witness the biggest "boom" given the global orientation towards knowledge societies and the so-called Third Industrial Revolution based on further automation of the process. Military-security terminology has started to include the terms such as 'cyberwarfare' or 'war on the Internet'. Russia and the United States use drones of all sizes for both scouting and tracking of the terrain, as well as for attacks on targets far in the depths of an enemy territory. What has been just said may greatly affect the appearance and content of future wars and security operations in general. Some countries such as Russia and China have already set up special units in order to carry out actions in this field. Everyone has started to fear not only cybertheft or data espionage, but also the situations that would be caused by breakdowns of information systems of banks, stock exchanges, transport systems, etc.

The Serbian specificity is such that for dynamic development to be achieved, it is necessary to educate several times more experts than it is currently the case. Also, national production of computers, phones, sensors, drones and other electronic equipment should be encouraged in every possible way.

Meteorology

The most important organization in the field of operational meteorology is the Hydrometeorological Service of the Republic of Serbia (RHMS). The operational department of RHMS is responsible for the efficient implementation of anti-hail systems, the integrity of technical equipment and network of anti-hail stations with radar centers, supply of anti-hail rockets, etc. It is interesting to note that the meteorological service of the Republic of Serbia has never been under sanctions.

Veterinary Medicine

According to the available data, there are about 150 veterinary stations (in 150 cities-municipalities) with about 700 veterinarians in Serbia. These numbers are potentially even higher, but the authors could not check them. Most of the veterinary stations in Serbia have been privatized and are in an unenviable state. The possibilities of this service are limited, and practice is lagging behind the ones in the developed countries except in the case of dogs and cats.

Energy

The annual demand for primary energy in Serbia excluding Kosovo and Metohija in 2013 was approximately 14.9 million tons of oil equivalent. The high share of national lignite (over 50%) enables relatively high (in comparison to other countries) energy independence of the country and electricity generation with relatively low and stable costs

(75% of electricity produced). On the other hand, the use of lignite increases the impact on the environment. This fact, in the long run, also increases the risk of increased costs of carbon dioxide emissions, i.e. gases that globally cause the greenhouse effect.

In 2013, Serbia's energy net import dependency amounted to 24.1%, which is lower than in the vast majority of European countries (EU 54%). Import dependence has been reduced mostly due to the increased national production of oil and natural gas. In 2014, the costs of net energy imports amounted to EUR 1.76 billion. Serbia is ranked fourth least dependent on foreign energy sources country in Europe. This result should nevertheless be considered in the context of the industrial production being reduced to one half as compared to 25-30 years ago.

Unlike coal, about three-quarters of oil and oil products and four-fifths of natural gas are supplied from abroad. At the moment, the majority of imported gas is supplied from Russia, and there is the tendency of developing total dependency on Russian gas. The similar situation is with oil and oil products (the share of crude oil and gas produced in Serbia will decline in the coming years due to the depletion of national deposits). Currently Serbia depends on imports of gas from Russia, as it is connected to the pipeline system from Russia. Oil can also be obtained from other sources.

The largest oil and gas reserves were discovered in Vojvodina, while somewhat smaller reserves were found in the Danube and Morava river basin. Oil shale deposits have been best explored in Aleksinac and Vranje basin, but at present there are no available economical technologies for processing. Potentially, about 600,000 tons of shale oil in Aleksinac basin can be obtained from oil shale, but this technology is cost-effective only at high prices of crude.

Article 267 of the Criminal Law of the Republic of Serbia prohibits any construction of nuclear facilities, and Serbia is the sixth country in the world that has removed highly enriched uranium from its territory. Accordingly, systematic geological exploration of nuclear mineral resources (uranium and thorium) was interrupted.

Considering other energy products, the most important ones are hydropower and biomass, i.e. wood (together they account for about one-eighth of the primary energy consumption).

A significant issue is that the consumption of primary energy per unit of GDP in Serbia is 15% higher than the world average and almost twice as high as in the European OECD countries. This illustrates low energy efficiency.

A significant difference in the structure of final energy consumption, as compared to the European Union, is Serbia's high share of household consumption and lower share of energy consumption in the transportation sector than in the EU. At the same time, it should be born in mind that the industrial production in Serbia is significantly lower than at the end of the 1980s. Accordingly, it can be concluded that in the event of an energy crisis, Serbia could provide sufficient energy for the sectors of transportation and agriculture, while electricity rationing would mostly affect the industry and the population.

It is estimated that the share of imports within the final consumption of energy for the following decades will be slightly increased and that, in accordance with the Energy Strategy of Serbia, it will reach 37.4% in 2030. According to the 2014 World Energy Outlook estimates, it is expected that by 2040 the demand for primary energy will increase by 37%, with natural gas consumption increase of 50% and oil consumption of 10%.

These trends will have unfavourable consequences for Serbian energy security. The estimation in the 2014 Energy Strategy of Serbia is that the import dependence on natural gas will be as high as 97.6% in 2030, while imports of oil will reach more than 90% of total consumption due to the depletion of national reservoirs.

In order to reduce Serbian energy dependency, it is necessary to fulfil several conditions: to increase energy production from its own sources (primarily from hydro and other renewable sources), change the structure of energy consumption, especially by reducing gas consumption and irrational energy consumption (energy efficiency). In the transportation sector, electrification of the railways, as well as the introduction of electrically powered vehicles and national biofuels can generate significant effects. All of these measures will not change the fact that Serbia, despite the progress achieved so far, will remain highly dependent on imports of oil and to a lesser extent on imports of natural gas. The situation could be somewhat changed by the exploitation of oil shale for which Serbia has the potential and by establishing larger stocks of oil products and gas. The developed countries tend to resolve the issue of shortages of oil and gas by acquiring concession rights to these resources in the less developed countries through their oil and gas companies. Unfortunately, Serbia has acquired only one small-scale concession in Angola so far.

(Un)fortunately, depending on whether it will be implemented, Serbian greatest energy resource lies in the potential raising of its low energy efficiency level. While the developed countries consume less than 100kWh per square meter, Serbia consumes between 150 and 180 kWh. Out of the total energy consumed, almost one half accounts for household consumption, out of which even 60% is used for heating. The latter points to the development of a possibility of heating based on solar energy and other renewable sources for which Serbia has the potential.

In Serbia, there is one pumped hydroelectric storage HPP (Bajina Bašta) of 307 mW, which is also highly important for the operation of the system.

By OHL networks, Serbia is connected to all neighbouring countries and represents a kind of a power hub. By increasing the transmission capacity and construction of an undersea connection between Montenegro and Italy, the importance of Serbia as the country through which power is being transmitted will only grow.

The development of the market for oil and oil products is largely impacted by the Law on Commodity Reserves ("Official Gazette of the Republic of Serbia", No. 104/13), which transposes the Directives 2006/67/EC and 2009/119/EC related to the provision of minimum emergency stocks of oil and oil products to the national legislation. This Law stipulates that by 2023 Serbia will provide stocks of oil and oil products in the amount of 61 days of average annual consumption.

The Directive 2009/28/EC, which refers to the mandatory share of biofuels in motor fuels in order to reduce the greenhouse gas emissions, has not yet been transposed to the national legislation. According to the Renewable Energy Action Plan a commitment to achieve 10% of the share of biofuels in motor fuels by 2020 has been undertaken, but the share of biofuels in the oil product market is still negligible.

Oil transport is carried out mainly by the oil pipeline that starts in the Adriatic port of Omišalj. It enters Serbia in Bačko Novo Selo and continues to extend through Novi Sad to the refinery in Pančevo. A smaller share of oil imports is carried out by barges on the Danube, and national crude oil is transported by tank trucks from national oil fields to oil refineries.

At present, the only underground gas storage, Banatski Dvor, is located inside the depleted gas deposit. The current available capacity amounts to 450 million m³. After the stage two of development, the storage will be able to receive 800-1,000 million m³. In Serbia, there is the storage capacity of about 6 billion m³ across several storage facilities, among which the most promising ones are Itebej and Ostrovo.

Our country has two interconnections with other gas pipelines (one entry point and one exit point each). These gas pipelines are Hungary-Serbia (Kiskundorozsma) – the entry point and Serbia-B&H (Zvornik) – the exit point.

Perspectives

It is not difficult to conclude that the development of economy has a favourable effect on the capacities of national logistics and vice versa. The more production and roads we have the greater capacities for meeting material needs in crisis and war situations are. The development of the economy is therefore crucial for increasing the overall potential of logistics. The greater demand for transport of goods and passengers will condition the development of transport infrastructure, and the development of infrastructure will lower the costs of transport per unit of production and thereby create positive feedback.

When considering the state of the Serbian economy, which has already been elaborately discussed above, we can clearly distinguish several main drivers or generators of development. These drivers of development are determined on the basis of the comparative advantages that Serbia has in these areas in relation to the broader surroundings. An additional argument for their identification was the historical investigation of trends in the Serbian economy for the last century. It is clear that most of what had been developed until 1990 was precisely based on national resources, low national logistics costs and an increase in processing inside the value chain, which generated overall comparative advantages. The existence of comparative advantages facilitates the survival and development, but does not guarantee it because it is necessary to achieve and maintain the competitive ability. The historically confirmed self-sustainability of these areas provides guarantees that the development should be based on them. The acceleration of development in these areas can only be expected with higher investments and state support.

A summary of the drivers of development in Serbia is given in Table 1.

Serbia has the potential to produce agricultural products displaying a clear comparative advantage such as baby beef (cattle breeding in general), berry fruit and fruit and vegetables in general, which are considered as more expensive products from the "extra demand" group that results from the increase in welfare. Serbia has a "surplus" of arable land per capita due to which it is in a position to produce sufficient food for its needs, as well as to export surplus to foreign markets. The increase in agricultural output in a more general sense will reflect on the development of the manufacturing industry, production of wood fuel and biofuels. The new possibilities for revitalizing the production of agricultural machines, especially the already existing capacities, should be added here.

Mineral water is the resource in which Serbia is one of the leading countries in the world. The price of bottled water is up to 25% of the price of motor fuel, which demonstrates the value of the resource. The biggest issue in regard to the development in this

area are high transportation costs. The development of the transport infrastructure should open new possibilities in this respect. We should not forget the fact that investments in water supply and wastewater treatment are necessary.

Table 1 – *The drivers of development of Serbia based on the analysed comparative advantages, character and technological complexity*

Resources	Infrastructure	Low Tech industries	Mid Tech industries	High Tech industries
Agriculture and animal husbandry Mineral water Hydropower Solar energy, wind and biomass Mining: copper-gold, coal, oil shale, borates, zeolite, nickel, phosphates, molybdenum, lithium (Jadarit), non-metallic raw materials	Road and rail corridors 10 and 11 Telecommunications Power transmission Oil pipelines and gas pipelines Water supply	Textile Wood Footwear Construction materials	Power generation Artificial fertilizers Steel Electro-mechanical Defence industry Agricultural machinery and vehicles	ICT Defence industry Lithium batteries

Exploitation of copper and gold in the Bor region can result in the survival and development of the cable industry, production of copper pipes and other types of production based on these raw materials. Sulphuric acid, as a by-product of copper refining, provides the raw material for the production of artificial fertilizers, for which there are serious and under-utilized capacities in the country. Opening a phosphate mine would simply enable additional impetus for the development.

It should be noted that steel mills represent incubators for the development of numerous plants that use iron and steel as a raw material such as the factories producing pipes, boilers, structural construction elements, but also the entire machinery and electro-mechanical industry. The factories producing pipes and similar structures have remained in Kosovo and are out of operation, which provides an opportunity for opening new ones in other parts of Serbia. If the Steel mill manages to produce certain types of steel for the automotive industry and other machine industry, it would be possible to revitalize this segment of the economy. The national copper and steel production should provide a good raw material base for the revitalization of electro-mechanical industries such as Minel. The comparative advantages of this branch of industry could be achieved, besides investing in new products, through the revitalization of hard coal mines, national coke production, as well as through vertical integration with the iron mines in the Republic of Srpska, thus creating an adequate, more favourable raw material base.

In order to meet the electricity demand, Serbia firstly has to "replace" around 1,100 mW in obsolete power plants that are under the scope of the EU Directive on Large Combustion Plants and are at the end of their lifecycle with new production capacities. In case Serbia took the advantage of all potential at its disposal, it could meet its national

electricity demand, which would be at the level of the demand in the developed countries, but under the condition that it raises its level of energy efficiency up to the level of those countries. This demonstrates great development and investment opportunities that would be beneficial for the machine, electro-mechanical and construction industries.

The manufacturing of weaponry and military equipment has been first developed in Serbia and proved to be the most resistant high-tech industry because it survived in spite of all challenges of the modern era. The largest potential for generating development in the field of industry and high technologies is precisely this branch of economy in Serbia, as well as practically self-originated IT industry. The existence of huge lithium reserves (Jadarit) in our territory provides great opportunities to enter the rapidly growing production of lithium batteries that serve as energy storage for cars and solar energy.

Given the parameters such as the area of arable land or the availability of water, Serbia is an insufficiently populated country. The population is one of the main economic resources because it provides labour and increases the number of entrepreneurs. For this reason, one of the main generators of development would be to increase the population of Serbia and its level of education. Given that trends in this area are extremely negative, and that control measures are neither economic nor related to logistics, they will not be considered in more detail.

The infrastructural projects that have been contracted so far will lead to the completion of the road corridor 10, a bypass around Belgrade and a section of Corridor 11. The construction of the Budapest-Belgrade fast track railway and the modernization of the Belgrade-Bar and Niš-Dimitrovgrad railways are relatively certain.

In regard to the energy supply, it can be said that the increase in the gas storage capacity and the construction of the gas interconnection Niš-Dimitrovgrad-Sofia will probably be implemented in due time. The similar thing goes for the OHL network through Serbia. Serbia is currently building a 350mW Kostolac thermal power plant, which, along with renewable energy projects, could guarantee the replacement of 1,100mW of outdated production capacities with new national capacities.

Serbia has a gas pipeline that connects it to Ukraine and Russia through Hungary. An interruption to the gas supply by this pipeline in winter periods, at present, would be a serious threat to the Serbian energy system since the volumes of electricity produced would not be sufficient to meet the energy needs in case of a disrupted gas supply, and the production of national gas is far below the level of demand. To a certain extent, such situation might be overcome merely by providing large gas reserves, or even dramatically improved if some of the internationally important gas pipelines such as the planned "Turkish Stream" or the frozen "South Stream" would go through Serbia.

Today, almost all volumes of imported oil are transported to Serbia by the pipeline from the Croatian port of Omišalj. The interruption in this route of supply would restrict Serbia to national oil production and potential imports by barges on the river Danube. The situation could be overcome over a limited period of time by large reserves of oil and petroleum products. For similar reasons as with gas, the support should be given to the construction of the Pan-European Oil Pipeline - PEOP (capacity of about 50 million tons a year) and Pitesti-Pančevo oil pipeline (capacity of 10-15 million tons per year), which would satisfy a significant part of the European needs and overcome problems and congestion in transport through Bosphorus and Dardanelles. The projects are currently frozen or in the early stages of consideration. The routes of these two oil pipelines virtually overlap in the section through Romania, Serbia and parts of B&H and Croatia.

Conclusion

The national logistics of the Republic of Serbia could be basically viewed in peacetime and emergency situations caused either by natural disasters, shorter armed conflict, war, blockade, etc.

The peacetime would have been characterized by general growth as the result of a good position of the country and economic growth. The increase in transport of goods and passengers would likely reach the rates higher than the economic growth rate (in 2015 5.9% growth in road transportation and 1.1% in railway transportation vs 0.8% of GDP growth) as the result of favourable geographical position of the country and growth of cross-border transportation. Road transportation will be dominant despite the strategic determination of Serbia to increase the volume of rail and river transport. Bearing in mind the existing infrastructure and the one which is currently under construction, it can be concluded that there is a surplus of capacity for the next few years almost in all transport segments. Telecommunication capacities also meet the current needs of the economy. Energy supply should also be stable despite some minor problems caused by technical disturbances or the consumption, which is higher than expected, especially in winter. In short, if the infrastructure were to follow the development of the economy, the national logistics would not be the bottleneck of the Serbian economy.

If it manages to bear the burden of a prolonged war and blockade, the national logistics of Serbia will also be able to meet the challenges implied by shorter conflicts and natural disasters. The problem of shorter conflicts is that they can be much more intense such as the 1999 bombing. In order to be able to provide support in high - intensity conflicts or major disasters, it has to rely on reserves and stocks of required materials and equipment because there will be no time to wait for them to be manufactured or imported. The question of protection of reserves is a specific and highly important matter.

It is interesting to consider which possibilities and logistics the Serbian economy may deploy in order to meet the needs of its population and security forces in the event of a breakdown in global relations or in the case of a long-term crisis as it was the case during the sanctions and wars in the 1990s. On the basis of what has been previously stated, all the needs could be classified into three groups according to the probability of being met. This is shown in Table 2.

Table 2 – *Probability of meeting the needs based on current state of national logistics in Serbia*

Needs mostly met with national potential	Needs partly met with national potential	Needs that cannot be met with national potential
Food Drinking water Electricity Construction of smaller structures, road construction and repair Staffing of security organizations and providing services to population IT needs Needs for medical care of people Needs for animal care Needs for housing Meteorological services Needs for all modes of transport Telecommunications needs	Light infantry weapons, artillery, military equipment repair ... Ammunition Manufacture of vehicles Manufacture of rubber, batteries and chemicals Petroleum products Natural gas Heat energy Needs for clothing and footwear	High-tech military and security equipment such as planes, tanks, helicopters, etc., as well as spare parts Communication and computer equipment and parts

The first group includes the needs that can be met on the basis of national potential if stocks of certain materials would be supplied. Thus, for medical care, it is necessary to have supplies of medications, and for agriculture the supply of diesel and natural gas for the production of fertilizers. It is also necessary to have stocks of spare parts for machines, equipment and means of transport. A good portion of these supplies can be provided from own production.

The second group includes materials and equipment that can be produced in the country, but raw materials-resources are lacking. In this case, we would have to rely on supplies, as well, but much bigger ones. The third group consists of materials that cannot be produced in the country since technologies, production capacities and the critical level of knowledge and skills are not available.

Although Serbia can partially meet its own needs for oil and gas (about 25%), these two materials remain critical because the lack of them affects the capacities of performing agricultural work, the production of artificial fertilizers, all forms of transport (and thus all branches of the economy and the movement of passengers and security forces), but also the heating and thereby survival of the population. It should be kept in mind that the lack of heating can cause the population to turn to the electricity consumption for heating, which would endanger the existing power system. Apart from oil and gas, the supplies of some types of ammunition, missiles and spare parts are also critical because without them the potential of existing weapons, vehicles and all kinds of equipment cannot be used.

From the security point of view, it would certainly be desirable if the government would do more to build national capacities for oil production and refining (especially oil shale), the production and transmission of electricity, as well as to create larger stocks of oil, oil products, gas, medications, seeds, food and other critical materials and equipment. In the long term, investments in the production of copper, Jadarit (lithium), phosphates, coal and iron mining in the region are also interesting. Investments in the IT industry, the production of computer and communication equipment, as well as the capacities for producing critical types of ammunition and missiles would have a positive effect on increasing the country's independence in crises. From the communication-infrastructure point of view, oil pipelines, gas pipelines, communication by the Danube, Corridors 10 and 11 represent the national necessity.

The general conclusion is that elements of the national logistics system, except in some cases such as oil and gas, are not the limitation to ensuring normal operation. However, the system also comprises the regulatory framework and established connections between system components. Therefore, in addition to continuous work on the creation and finish of system elements, equally and perhaps even more important it is to work on the regulatory framework and establishment of good connections between the elements of the system.

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MILITARY PSYCHOLOGISTS NECESSARY AS SERBIAN SOLDIERS PREPARE FOR PEACEKEEPING MISSIONS

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This paper advocates the participation of the military psychologists in peacekeeping missions. It has compared the peacekeeping mission tasks performed by the military psychologists in the Serbian and Austrian Armed Forces and it has highlighted the main differences. The conclusion is that the engagement of the military psychologists in the preparatory work of the Serbian Armed Forces members should be increased, and the military psychologists should participate in peacekeeping missions or be given the opportunity to collect data in the field. Additionally, it would be useful to study the selection process and preparatory programs for peacekeeping mission participants in the Nordic countries and the USA.

Key Words: peacekeeping mission, Serbian Armed Forces, psychological preparation, military psychologist, United Nations

Introduction

The experience of the Serbian Armed Forces medical corps in the UN peacekeeping mission in the DR Congo has demonstrated a significant need for the military psychologists. The most common problems faced by soldiers who returned to Serbia in 2006 were caused by psychological issues. These problems were important in 20% of the cases according to the data from this mission.

Military observers are exposed to extraordinarily stressful conditions. To be in an extremely uncertain situation leads to tensions and irritation, and frequently this "daily" stress can accumulate and result in more chronic complications. Long-term stress can lead an individual to have problems with his or her environment and into depression. Strong and sudden psychological or physical events can cause "traumatic" stress. Soldiers must also deal with "post-traumatic" stress, which is caused by "long-term consequences after one or more episodes of traumatic stress."

The most important stress factors are "difficult and complex tasks, a lack of professional training, intolerance of the locals, insecurity, stress caused by the presence of the armed men, everyday repression of emotions, lack of privacy, separation from family members and friends, cultural differences, language problems, and lack of recreation."¹

¹ Serbian Armed Forces Peacekeeping Operations Center, MONUC, AMET 9, May-November 2007.

After their experience in Congo, the Serbian Armed Forces medical corps concluded that psychological readiness is the key factor for successful conduct of mission tasks and an important determinant in significantly minimizing (or multiplying) risk factors.”²

15 people have come back with neurological problems, 12 with bone fractures, 11 with heart conditions, 9 with tuberculosis, 6 with diabetes, 5 with epilepsy, 3 with cancer, 2 with dermatological problems and 1 with hepatitis.³

Peacekeeping mission tasks performed by psychologists in the Serbian Armed Forces

Currently, psychologists have two main tasks regarding peacekeeping missions: they participate in the selection process of future Serbian Armed Forces mission participants and their preparatory program. Experts from the Air Medical Institute (Academy for Military Medicine) conduct the selection and in addition to the standard interview they test the candidates' personality, focusing on their ability to adapt to difficult situations and resist stress. Candidates are subjected to complete somatic and toxicological testing, meaning that those who are successful will not suffer from any psychosomatic disease or be addicted to psychoactive substances. Psychologists from the Institute prepare the list of candidates on the basis of all test results.⁴

The psychologists from the General Staff Human Resources Department provide training in psychological preparation. They are engaged in individual conversations with potential participants in peacekeeping missions and they focus on the questions of how to overcome stress, panic attacks and fear. They pay particular attention to possible personal and family problems and to those personality aspects significant for successful interpersonal relations.⁵

Tasks of Austrian Armed Forces military psychologists regarding peacekeeping missions

In 1999 the Austrian Armed Forces established the position of a military psychologist at a battalion level. This officer provides support during periods of selection and preparation, as well as during peacekeeping mission and afterwards. The Human Resources Agency, which is directly responsible to the Ministry of Defense, selects the candidates. One of the main goals of this Agency is to “decrease the risk for soldiers and their surroundings during military operations” (Ebner, 2007 a:10). Its scope of work includes recruitment, selection and making final decisions on candidates for peacekeeping missions.

Selection criteria are social intelligence, attention and concentration, stress resistance and social integration abilities.

² Ibid.

³ Ibid. 33

⁴ Data collected during an interview with the psychologist from the Air Medical Institute (Academy for Military Medicine), January 22, 2008.

⁵ Data collected during an interview with the psychologist from the Serbian Armed Forces General Staff Human Resources Department, February 19, 2008.

The selection procedure includes three components:

- The first one is a written test that is three and a half hours long and it consists of sections examining intelligence, concentration and attention, personality and health condition.
- The second trial is a “bunker test,” which examines group dynamics, stress resistance and social integration abilities. This test simulates psychologically stressful situations. Candidates have to spend 13 hours continuously in the bunker without sleep, food or cigarettes. Observers monitor each candidate’s behavior and measure his or her stress level.
- The third component is a psychological interview. On the basis of these three tests, it is possible to make a decision about the candidate’s capabilities to participate in peacekeeping mission.⁶

Future participants work on anti-stress techniques and they are trained to minister psychological assistance to themselves and others.

Commanders receive different psychological training than the other soldiers. For three days they work in small groups, discuss general issues such as situations that are difficult to manage, a perfect leader’s personality, appropriate behavior during peacekeeping missions abroad, conversational skills, work as a part of a crisis staff, conduct complex individual conversations, cope with death and serious injuries, handle the extension of peacekeeping missions, techniques for accepting new members into the group, and self-reflection.

All soldiers have to be present at introductory lectures⁷ in the following fields: general stress, military intervention stress, measures against stress, traumatic stress, post-traumatic disorder, psychological self-help and helping other colleagues. Group exercises mostly focus on discussions about the experience of peacekeeping mission veterans, coping with stress and practical training in relaxation techniques. Before a team travels abroad it performs a final exercise as part of the overall training process, which is monitored by a military psychologist. This exercise lasts for two weeks and includes an emphasis on different skills such as behavior during demonstrations, implementation of security measures, search for vehicles and individuals, etc. It is the job of psychologists to emphasise possible problems that could appear as participants conduct these tasks and they explain how to resolve them. The point of the battalion psychologist’s engagement during preparations for the mission is to establish trust between him/her and the staff. During this phase, the psychologist should note the work style and potential problems of each soldier. The psychologist should identify the problems in advance, point them out to the commander, formulate a strategy and the eventual activities for addressing them.

The Austrian military psychologists also prepare a special brochure that informs soldiers about the potential problems they may face during the mission, noting the various stress factors, and particularly providing advice on how to deal with kidnapping or prison situations. It is important to prepare family members for both separation from their loved ones and the soldier’s return from his/her mission.

The brochure includes a “list of critical situations” with explanations of potential incidents, possible physical and psychological reactions and measures for their prevention.

⁶ The Austrian Armed Forces Preparation Center (ZEV) plans and conducts training sessions to prepare soldiers for their missions.

⁷ Data based on Peacekeeping Mission description on Kosovo AUCON10/KFOR 2004 (April-October) according to Ebner, 2007a.

In the Austrian Armed Forces the military psychologist participates in the actual peacekeeping missions. They are responsible for the soldiers' psychological treatment and their cooperation with the commander, priest⁸, doctor, personal adviser and lawyer.

This psychological support includes special counseling in relation to individual and group problems and interventions in crises.

Urgent psychological measures should be taken as soon as possible, especially in the cases of car accidents, suicide attempts, severe injuries or crippling. In the case of hospitalization, a psychologist is obliged to take care of soldiers while they are in the hospital.

The military psychologist informs the commander and the staff about the troops' psychological condition (psychological climate) and highlights potential factors that could lead to changes. They can warn about possible consequences of specific orders and explain some basic psychological causes in order to elucidate soldiers' comportment in the best way. The psychologist makes a weekly report on the contingent's psychological condition, advises the commander during crises and offers solutions for overcoming problems. In cases when it is not possible to solve a problem, the psychologist can dismiss a soldier from the mission and justify this action in a written diagnostic report. Interestingly, the psychologist also participates in conversations with national and international representatives during official visits to the mission.

Main differences of military psychologists' work in Serbian and Austrian Armed Forces peacekeeping missions

While the Serbian military psychologists participate only in the selection and preparation phases, the Austrian psychologists participate in the mission itself, and that is the main difference between these two armies' practices. The second difference are longer and more complex selection and preparation phases in the Austrian Armed Forces, and therefore psychologists' tasks are more difficult. The qualifications required of the Austrian military psychologists involved in peacekeeping missions are rigorous. In addition to mastering clinical, health and urgent psychology and the psychology of work, a military psychologist must be a stable and healthy individual, having passed an obligatory general physical and psychological examination.

They should have practical experience in therapy and counseling, be fit for teamwork and cooperation, and display empathy, an analytical way of thinking and flexibility in new situations.

Having the military education is not required at present, but will be eventually since it will facilitate psychologists' work and their relations with other participants in the mission.

If the psychologist has the military background, communication with the commander will be easier. The knowledge of English is also necessary. During seven days of preparations for peacekeeping missions psychologists' special training covers a variety of general and special skills. The psychologist is trained how to write a report from the field, taught which information they should send to their home country and briefed on telephone communication rules. The training covers the experience of other psychologists' work in the field, particularly examining those who were unsuccessful and had to return from their missions early. Military psychologists' success in preparing members of the

⁸ A priest is an obligatory member of the Austrian battalion and his task is to prevent post-traumatic reactions.

armed forces for peacekeeping missions depends on several factors. A solid academic background and special additional training are required.

However, in order to be able to give the best advice, it is necessary that the military psychologists have insights into the military observers' tasks and the conditions in which those duties must be performed.

Information exchange between field doctors and psychologists in the target country is particularly valuable. Specialized foreign literature can also be a useful source of knowledge. Due to the importance of psychologists' special knowledge and the cultural characteristics of the country that military observers come from, military psychologists can get the most complete data only from their own observations.

Conclusions and recommendations

A) Military psychologists' engagement in the preparation phase of sending the Serbian Armed Forces members to participate in peacekeeping missions should be increased. The small group "anti-stress program" should become obligatory considering the high risk from stress and the possible consequences of not dealing with this problem. Staff should be trained to help themselves and the other members of the mission. Seminars organized for spouses who stay at home could be very useful because they would help improve communication within families. Additional psychological work on relationship problems could significantly improve the Serbian Armed Forces members adaptation to the challenges of peacekeeping missions.

B) The military psychologists should participate in peacekeeping missions or in research teams in order to collect data about the concrete positions in the mission. They also need information about how individuals cope in the mission. For the time being, the Serbian Armed Forces military psychologists get only subjective assessments from the people who have participated in the mission. It would be extremely useful for psychologists to be present during the first month of the mission or to visit the national contingent in the field if and when it is needed.

C) Studying other selection and preparation programs would be also useful. The participation of military psychologists in peacekeeping missions is a neglected issue. Besides the Austrian experience, it would be interesting to examine the Nordic and the US practices. Such analyses would improve our understanding of the role of the military psychologists in peacekeeping missions.

The qualitative work of the military psychologists can improve the quality of the Serbian Armed Forces participants in peacekeeping missions and also ensure the improvement to a level that would facilitate the active participation in the Partnership for Peace and NATO. Peacekeeping missions is not only the military, but also a political issue since it engages our country in the process of ensuring the regional and world stability. Moreover, it is one of our obligations as the UN member.

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ECOLOGICAL CONSEQUENCES OF WARFARE

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During 20th century several wars were conducted in the world. It can be claimed that these wars caused serious ecological consequences, which affected the quality of the environment, the health and life of people, a decrease in population, slowing down the development of economy and many others.

Four wars were waged solely at the territory of the Republic of Serbia: from the Balkan Wars via World War I and II to the NATO aggression in 1999. The NATO bombing caused the most severe consequences for the environment.

Due to a rather negative effect of warfare on the environment, such effect is visible at the beginning of most famous wars. However, it was present in some wars and remained the threat for many years. This paper deals with the examples of warfare in the world that data and concrete indicators exist for and it focuses public attention to problems and consequences of warfare.

Key Words: environment, warfare, consequences of warfare, environment protection

Introduction

In the history of mankind people have suffered more from consequences of conflicts – wars than natural disasters. Therefore, it can be said that war is a phenomenon, which has constantly been present in the history of human society. It is assessed that more than one hundred million people lost their lives in the warfare during last century.

The question can be asked whether the passion, which people use to research, construct and progress is of the same intensity as the one, which they use to wage wars and destroy. It seems that war is a part of human existence and according to many people the response to the abovementioned question would be affirmative.

War as the phenomenon has been studied from many aspects. Many great thinkers have implied and justified war. Ancient Greek philosophers thought that war had been the natural phenomenon used by slaveholder class to fulfill its interest. The church had sometimes justified war by God willing. There is also understanding that war is a conse-

quence of self-sustaining human kind, psychological characteristics of people and effects of geographical factors. The decision to wage war is made on the basis of faith in a positive outcome and benefit. However, there are numerous opponents of war, conscious of its, often global, consequences, especially the consequences on the state of the environment. Many think that all people lose in war.

The other aspect, as the consequence of war is the harmful effect on other forms of life and on the planet Earth. These are, among others: destruction of forests, other plants and the animal world, water and air pollution. Finally, the question arises: are a man and the society that they belong to conscious of their connection with the whole of life and will their future be sustainable?

War in general

According to the definition, war is an organized conflict of states, military alliances or different social powers of a state in which aggression and armed struggle is applied in an organized manner in order to reach political, economic, military and other objectives. According to theatre and use of military equipment and weapons, war can be total, local and restricted. According to its character, war can be liberation, defensive, civil, imperialist, colonialist, ethnic and religious. According to the type of weapons it can be conventional and unconventional. According to mobility, it can be manoeuvring and position, offensive and defensive. Wars can be fought on the ground, at sea, in the air and space. The special types of war are: cold, special (media, psychological, war against terrorism, hybrid war, IT war, etc.), customs, economic, etc. The unconventional wars include guerilla, asymmetric, nuclear, biological and chemical (NBC) and ecological war.

In 20th century the use of contemporary weapons, mainly nuclear one, brought massive annihilation and forced many people to consider the negative effects of warfare and negative attitude to war. According to the rule, only defensive war is justified. However, there are such people, who think that war is a negative phenomenon and that not even defensive war should be waged, that is, war and warfare would not exist if there were not armed resistance.

When the doctrine about peace and non-violence is studied, as well as the history of non-violent movements, it is obvious that it is not easy to win a victory. The conqueror-adversary is extremely strong and powerful; such state seeks non-violence actors, true paragons of sacrifice, steady and persistent actions. Gandhi called this way and method "double blessed because it releases both perpetrator of evil and victim". It is harder to be a good man and an objective person. Gandhi left the only oath to followers of peace: to follow the path of non-violence and truth and thus give hope to the ones who have to live in this world of violence, hopes, utopia and many veils of evil.

Nowadays many people think that only the so-called just war is legitimate, that is, they believe that it can be conducted solely through international organizations such as the United Nations (UN), which should stop wars and unjust aggression. However, the others think that international organizations are burdened by the same ethical problems like sovereign states, having in mind their practice in recent decades. Therefore, they do not have any right to judge what is, and what is not just war (Jovanović and other authors. 2012).

Ecological warfare

All wars result in environmental degradation to different extent. Ecological warfare is the process of devastation and pollution of the environment (water, air, land, plants and animals) in order to create unfavourable conditions for life of population and fight of the armed forces of adversary (Pavlović. 2012). The term *ecocide* is used as the synonym to ecological warfare and is derived from the Greek word *oikos* which means house, habitat, residence and Latin word *occidere* – to kill, destroy.

As an analogy to the classification of warfare, ecological warfare can be strategic and tactical, which is related to scope of action and consequences to the environment. In relation to the type of openness there is an open and secret ecological warfare, that is, the means of special war and subversive activities. The term “*ecological subversive*” is most often understood as the efforts of the developed countries to export their “*dirty technology*”, whose damage to the environment has been proved, to the developing countries (which includes disposal of “hazardous waste” outside country such as nuclear and chemical waste, which are very dangerous). Combat activities can focus on biological and abiotic components of the environment.

Depending on the type of weapons in use, ecological warfare can be:

- biological warfare, which includes the use of biological weapons – pathogens (bacteria, viruses or other organisms which cause diseases) or toxins, which can be found in the environment as weapons in war for the sake of killing, incapacitating or seriously damaging combat ability of enemy;
- chemical warfare focused on incapacitating enemy by chemical substances such as chemical agents, herbicide, defoliant and desiccant;
- nuclear warfare, which represents a conflict in which nuclear weapons is used, and nowadays this term also involves every armed conflict in which opposing parties are equipped with nuclear weapons;
- geophysical and meteorological warfare, which involves the use of means, methods and procedures for military purpose that can cause changes to physical characteristics or processes in the atmosphere, lithosphere and hydrosphere of the Earth. These weapons include meteorological and climatic means, storms, artificial waves, etc.

Therefore, various types of geophysical warfare can be classified according to the type of primary effects into three categories: seismological, climatic meteorological and hydrological forms.

Contemporary warfare involves the mass use of conventional weapons. Classic bombing from the air and artillery effects have rather *ecocide* character. In addition to destructive effects of conventional weapons, devastation of the environment can be done indirectly if industrial plants and facilities containing dangerous substances are destroyed. Thus, a large quantity of toxins and pollutants gets into the environment. It is possible to evaluate the scope and consequences of such phenomena in the environment only by application of the scientific approach, the so-called ecological risk assessment (Bakrač 2012, p. 296-305). The ecological security of a state or wider space represents the additional consequence of contemporary warfare, which is directly connected to environmental contamination (Bakrač 2010, p. 314-28).

Despite adoption of the United Nations Conventions on the environment protection in the second half of 20th century wars which have rather ecocide character are waged. Some military analysts (in the USA and Russia) have realized and included advantages of “*ecological warfare*” (particularly the so-called geophysical warfare) in their strategies. According to those opinions, the advantages of such warfare (globally) are numerous. It is possible to create vast energy by relatively small and cheap resources. The preparatory works, even experiments, can be covered as research for peaceful purposes, and potential mistakes can be attributed to natural disasters.

Examples of ecological consequences of warfare

The Vietnam War (the first: 1945-1954 against French colonialism and the second: 1955-1975 for the unification of North and South Vietnam in which the USA were the main enemy) is an example of conscious devastation of the ecosystem. The US Armed Forces used Vietnam as the range to try out the latest weapons at that time including various types of chemical agents. The bomb called “Commando Vault” is a conventional warfare agent which had rather negative effect on the environment. It kills all living organisms under great pressure in around 1km diameter, and it flattens the surface of the ground at 60m distance from the epicentre, making it suitable for a helicopter landing zone. The CBU-55 bomb binds oxygen at the area of about 1 km², and thus kills the majority of living beings. According to many analysts, the programme “Rome plough” using a tractor with two double ploughs had the greatest efficiency in the environment destruction. More than 500,000 hectares of forests in South Vietnam were destroyed by it. The use of chemical agents, herbicides and defoliants has the significant place when it comes to the effects to the environment in Vietnam (Vuruna and other authors. 2012). The most famous one among them is “Agent Orange”. This chemical was sprayed across Vietnam jungles and had the effect of abscission. Despite this, nature was more resistant than many US soldiers, who later proved that this agent was the cause of cancer. Weather warfare was used for the first time during the Vietnam War. More than 50,000 rain bombs were used, which caused downpour and consequently great floods that had wiped out the whole of the countryside along with the population from the face of the Earth. The experiments with the so-called “fire-storms” were conducted, as well. Large fires were generated in which vortices, vacuums and shocks were created that rocked the trees from the roots, demolished the buildings and consumed oxygen on large surfaces.

Ecocide was committed in this war by destruction of the environment with the objective to incapacitate adversary. The confirmation of this attitude can be found through the following consequences of ecocide: the natural conditions have been changed; population of many plants and animals has become scarce; rich forest ecosystems have lost their biodiversity; many animal species have come to the verge of extinction. In short, ecological consequences were catastrophic.



Picture 1 – A detail from the Vietnam War

The Gulf War was conducted in the Persian Gulf since the beginning of August 1990 until the end of February 1991 (540 air strikes were focused on oil plants and transport). The bombs destroyed the important dams, the majority of oil rigs and many wastewater treatment plants. More than 700 oil rigs were set on fire and burned more than 8 months. These were the catastrophic fires, which resulted in the environment pollution.



Picture 2 – US planes above oil rigs set on fire

During withdrawal the Iraqi Armed Forces dropped 11 million tons of crude oil into the Gulf and made the greatest oil spill so far, which polluted 800 miles of the coastal area of Kuwait and Saudi Arabia. The ecosystems were damaged in such a way that a long period is necessary to establish a balance. The use of munitions with depleted uranium had negative effects on the health of people. After the war, the number of malignant, respiratory and cardiovascular diseases increased (Žakula 2001).

The War in Bosnia and Herzegovina started on 1st March 1992 and lasted until 14th December 1995. An unprecedented ecocide was executed. Endemic plant and animal species were destroyed to a great extent. Forests were used in military purposes and for heating of civilian population. The vast areas of forests are still polluted by unexploded ordnance, whose clearance will last half a century. The great areas were polluted by unwanted substances, which have been incorporated into the food chain that includes a man, which seriously disturbs the ecological balance. During bombing NATO used munitions with depleted uranium (Picture 3), whose consequences are disastrous. During this war the living space on the Balkans was turned into “large world experiment landfill” (Nedović 2001).



Picture 3 – Munitions with depleted uranium

NATO bombing of FRY

NATO began air strikes on the Federal Republic of Yugoslavia on 24th March 1999 by cruise missiles and aviation in several areas under the code name “Operation Allied Force” (UNEP 2001). The name of these strikes in the USA was „Operation Noble Anvil”, and in Serbia „Merciful Angel” or „NATO aggression”.



Picture 4 – Bombing of oil refinery in Novi Sad

During 79 days of the aerial bombing 2,300 strikes on 995 facilities across the country were launched causing irreversible consequences to the environment. In addition to proven locations and the quantity of the used munitions with depleted uranium there were other great consequences (Marinković and Nešić 2014). For instance, devastation and the environment pollution were rather high during the bombing of the following industrial locations: the oil refinery in Novi Sad, heating plant “New Belgrade” in Belgrade, TPP “Kolubara” – Veliki Crljeni in Poljane village in the vicinity of Belgrade, mineral fertilizer plant “HIP-Azotara”, “HIP-Petrohemija”, oil refinery in Pančevo, “Jugopetrol” warehouse in Prahovo, oil derivatives storage “Jugopetrol” and power substation “Elektroistok” in Bor, automobile factory “Zastava” in Kragujevac, warehouse “Beopetrol” in Bogutovac in the vicinity of Kraljevo and power substation “Elektroistok” in Niš.

Much more space would be required to detail the scope and consequences of the NATO bombing of the FRY for the environment (Marinković and Nešić 2014) than it is allowed by the subject and content of this paper. Thus, there remains an obligation to dedicate special research time and space to analyze the environmental consequences and damage inflicted in that war.



Picture 5 – Bombing of the heating plant in New Belgrade

It should be pointed out that the awareness of the need for environmental protection started to develop only in the second half of the twentieth century. Regulations on environmental protection in armed conflicts were clearly defined for the first time in the '80s. More specifically, one of the first international environmental agreements known as the ENMOND Convention (The **E**nvironmental **M**odification Convention) or the Convention on the prohibition of military or any other hostile use of environmental modification techniques, was signed in 1976.

Conclusion

In wartime, enormous amounts of various dangerous substances affect the environment. Many of them, in their unchanged or modified, but often not less harmful forms, can persist for years. The harmful substances, affecting the ecosystems through food chains, disturb the natural balance and seriously endanger the lives of future generations.

In wars waged in the past, especially in the 20th century, plenty of harmful substances were used, which have significantly affected the environment. Some of them came directly from chemical weapons, while others were released from the destruction of industrial plants and warehouses.

On the basis of the established and presented facts, we can arrive at the conclusion that all wars: past, current, and possible future wars have had and will have serious consequences for the environment, posing a threat to its survival and sustainability.

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IMPORTANCE OF MILITARY VACATION FACILITIES FOR THE QUALITY OF LIFE OF THE DEFENSE SYSTEM MEMBERS

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Personal standard of the defense system members is a socio-economic category, which influences motivation to execute the most complex tasks. In addition to the primary existential motivators such as salary and status, the secondary, not less important motivators that significantly affect the quality of life can be identified, as well. They are expressed in the form of privileged leisure and recreation, subsidized and organized procurement of official uniforms and other garments, general procurement opportunities for consumer goods at lower prices and ensuring decent bachelor accommodation in garrison service in the course of an official trip. Analyses of the operation of military hotel facilities in the last decade indicate the downward trend in the number of users from the defense system, which has a negative impact on the quality of life and it is directly correlated to the quality of task execution. The focus of discussion in this paper is aimed at identifying the key parameters in the use of military hotel capacities of the Military Institution "Tara" (MI "Tara") and the possibilities of their improvement in order to be better used by members of the defense system.

Key Words: *Tara, hotels, vacation facilities, defense system, quality of life*

Introduction

The Military Institution "Tara" was formed on 7th June 1977 according to the order of the Federal Secretary for National Defence like a complex of hotels, tourist, catering, sports and recreational facilities situated on Kaluđerske Bare, one of the most attractive parts of the national park –Tara mountain¹, which is located at only a few hour drive from Belgrade (about 180 km).

During almost four decades long work, in addition to its core business in providing hotel, catering and tourist services in the hotels "Omorika", "Beli Bor", annexe "Javor"

¹ Mountain Tara is the largest natural park in Serbia with the total area of about 30,000 ha. In 1981 an area of 21,000 ha was declared a National park of the first category.

and restaurants "Javor", "National house", "Jeremičak" and "Radmilovac", the institutions have been intensively engaged in agricultural production at "Ponikve" and recognized for its production of seed potatoes. After the NATO aggression on our country, the production was reduced to its own security needs and partly to the needs of the Serbian Armed Forces until the military economy "Ponikve" was eventually handed over to the city of Užice. In early 2010, the composition of the MI "Tara" – Bajina Bašta attached parts are dismantled MI "Vrnjačka Banja" – Vrnjačka Banja, except for mess halls and the restaurant "Lađevci" in Kraljevo, which now operates within the institution as the hotel "Breza" – Vrnjačka Banja.

In its previous main work of the institutions the MI "Tara" has proven the quality of service, creativity, diversity of offer, care for the guests, development of material bases and proper attitude to nature and it is listed at the top in relation to other legal entities engaged in the same activity.

In order to protect the environment, bearing in mind the fact that mountain Tara does not have sewage infrastructure, the institution's hotel complex "Omorika" and "Beli Bor" built in 2004 two biodiscs² for processing sewage and other waste water. The capacities, overall attitude towards guests and nature of the MI "Tara" has greatly contributed to promotion and development of tourism and the total tourist offer on Tara mountain.

For its work in the sphere of development and promotion of tourism the foundation has won many accolades so far from the Ministry of Defence (MoD), commands, units and institutions of the Serbian Armed Forces (SAF), travel agencies, associations and suppliers including the distinguished "Silver snowflake", three "Tourist flowers", two "Golden tourist hearts", "Tourist Prism for quality", "Plaque of the Regional Chamber of Commerce Užice for achievements in economy" for 2007 and others. The confirmation of quality of service of the institution was the overall first place in Serbian championship in production and labor competition of catering and tourist professionals at the 26th Assembly, which was held in Vrnjačka Banja from 25th until 27th October 2007 (14 gold medals, 1 silver medal and 4 cups).

For the action "We choose the most successful in the hospitality and tourism of the Republic of Serbia, Montenegro and the Republic of Srpska", his work and the achieved results, the director of the hotel "Omorika" was declared "the manager of the year in the hotel industry and tourism for 2006" by the International Centre for Tourism and Hospitality Development SACEN.

Hospitality and tourist offers by hotel facilities of the MI "Tara"

The current production program of the institution is defined by the Decision on the establishment No. 366-3 issued on 23rd April 1979 by the Federal Secretary for National Defence at that time.

Among 11 tourist products from the Tourism Development Strategy of the Republic of Serbia, the MI "Tara" has anticipated opportunities in the products related to the use of

² The technological process and operation of those devices for protection of water quality "A" or rank water quality of the river Drina. The total investment amounts to around 500,000 euros.

nature and ecotourism, health, activities of special interest, rural and cultural tourism, as well as business tourism and tourism related to special interests (meetings, conferences, exhibitions).

Favourable climatic conditions with a large number of sunny days, a remarkable landscape, the healthy environment, beneficial air and pleasant elevation of Tara, which enables easy conditioning of visitors, makes this mountain very much suitable for sports, recreation and rehabilitation of the MoD and SAF members and their families, citizens of the Republic of Serbia and foreign ones.

In addition to its natural environment painted in the logo of the National Park Tara "a place where beauty begins...", comfortable hotel facilities, culinary specialties and kindness of the staff, guests of the hotels in the MI "Tara" have 549 categorized beds in modern rooms and suites, contemporary restaurants, cocktail bars, café-disco bars, discos, national restaurants, pastry shops, banquet halls, movie theaters, TV and other rooms that are equipped and designed for various professional conferences, an Internet cafe, a hairdresser, a beauty salon, rooms for children up to the age of 8, souvenir shops, supermarkets, post offices. Sports capacities include trim hall, bowling, table tennis, indoor swimming pool, sauna, room for darts and pool, trails for recreational skiing, two ski lifts of 200 and 400 meters length, walking and running in the length of 10 km, volleyball, handball, basketball, football, football fields and tennis courts. Within the institution there are also auto camping and children's wooden town with a grass football pitch, which is suitable for multipurpose use.

Table 1 – Number of beds in the MI "Tara" on Tara Mountain

No	Resort title	Number of beds
1.	Hotel „Omorika“	294
2.	Hotel „Beli Bor“	206
3.	Depadance „Javor“	49
TOTAL		549

In addition to good food and comfortable accommodation the tourist offer also encompasses the organized content of active holidays including descentrafting down the Drina River, walking tours and excursions to the nearby viewpoint and other interesting sites such as the monastery Dobrun, Rača Monastery, Mokra Gora, Mečavnik, Mitrovac, Perućac Lake, Zaovine, Zlatibor, Sirogojno and Višegrad. The capacities are adapted to all categories of guests: families, pre-school or school-age children, sports teams³, business users with possibilities to organize seminars, conferences and sports events.

In the past four decades, all tasks have been performed in a timely and high-quality manner. Challenges in business establishment did not have a negative impact on hospitality and tourist offer, which is constantly enriched with new content and quality so that a customer is satisfied and comes again.

³ Hotel complex is positioned at an altitude of about 1000 meters, which is ideal for high altitude sports training. During a year about 50 different sports teams and teams of all ranks use facilities of the MI "Tara" for this purpose.

Analysis of the structure of the MI "Tara" user

All facilities within the military institutions are designed and built with the aim to improve the quality of life of the defense system members and their families as primary beneficiaries in the aspects of recreation, health, sports and business tourism. The period from its inception to the present time can be divided into four phases:

- I. from establishment to 1990,
- II. from 1990 to 2000,
- III. from 2000 to 2010,
- IV. from 2010 until today.

During construction of its buildings the MI "Tara" was represented by the symbol of "prestige and security", especially bearing in mind the fact that they were unavailable to wide users outside the defense system. In fact, about 90% of users accounted for active military personnel, civilians serving in the military, retired military and civilian personnel and their families.

With the disappearance of Yugoslavia and the war in the early 90-ies of the last century there was a sharp decline in the number of users from the defense system, which resulted in the orientation of military institutions to civilian market. Thus they become "open for all" authorities and tourist services are offered to all potential users (members of the defense system, national and foreign guests). Service users have generally become citizens of the Republic of Serbia and foreign guests while few members of the defense system participated in the period from 1990 to 2000⁴.

The third and fourth phase of the life cycle of the MI "Tara" correspond to the period of transition in the Republic of Serbia and transformation of the defense system. They were analyzed through three five-year periods: 2000 to 2004, 2005 to 2009 and 2010 to 2014. The goal of the analysis is to process statistical data about the MI "Tara" according to the set criteria in order to emphasise certain trends in filling capacity and relative participation of certain categories of users.

At the beginning of the period Table 2 shows the highest percentage share of value of the SAF and MoD in the total number of users to the annual fluctuations of 2% to 3% of the share in 2004, which was the lowest.

Table 2 – The structure of beneficiaries of military hotel capacities of the MI "Tara" in the period 2000-2004

Year	2000	2001	2002	2003	2004	Average 2000-2004
Number of users	41,620	52,311	51,923	46,850	45,218	47,584
Number of half-board	162,012	194,546	185,209	174,532	155,503	174,393
average number of days	3.89	3.71	3.56	3.72	3.43	3.66
% SAF and MoD	17	13	15	12	10	13.40

⁴ In 1995 there was the relative share of 36% and in 1998 it was 21%. The primary reasons for drastic reduction in the number of members of the defense system as users of military hotel facilities are related to social status and existential problems of the time, which was characterized by a sharp decline in living standard and inadequate housing.

During the period 2005-2009 negative trends in the total number of users and participation of the defense system that culminated⁵ in 2009 may be observed.

Table 3 – *The structure of beneficiaries of military hotel capacities of the MI "Tara" in the period 2005-2009*

Year	2005	2006	2007	2008	2009	Average 2005-2009
Number of users	42,621	43,801	48,404	45,725	39,256	43,961
Number of half-board	166,788	145,489	171,905	160,473	140,129	156,957
average number of days	3.91	3.32	3.55	3.5	3.57	3.57
% SAF and MoD	12	11	11	9	9	10.4

Since 2010 until today a negative trend in the total number of users and half-board continues whereas the percentage share of the defense system has stabilized at 12%, which is 5% (relative to 34%) lower than in 2000.

Table 4 – *The structure of beneficiaries of military hotel capacities of the MI "Tara" in the period 2010-2014*

Year	2010	2011	2012	2013	2014	Average 2009-2014
Number of users	42,393	44,934	40,473	36,951	34,857	39,922
Number of half-board	139,386	138,325	139,604	133,966	118,856	134,027
average number of days	3.29	3.08	3.45	3.63	3.41	3.37
% SAF and MoD	15	13	13	12	12	13

On the basis of the analysis of the observed period 2000-2014 the most declining trends in the relative share of beneficiaries from the defense system can be seen .

⁵ The participation of the defense system of 9% despite significant improvement in personal financial and social reporting in the five-year period was at a level lower than before 2000. The examination of the reasons for this situation should take into account the fact that in the reporting period 2005-2009 there has been a significant reduction in the number of people employed in the defense system.

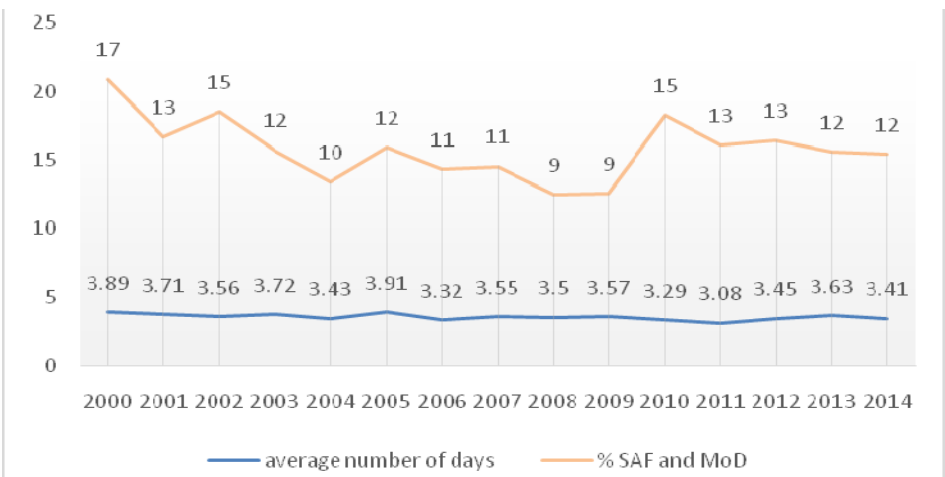


Figure 1 – Participation of the SAF and MoD in the total number of the MI "Tara" hotels in the period 2000–2014

Bearing in mind the fact that the capacity of institutions was built primarily for members of the defense system and that their learning relative until 1990, amounted to about 90%, on average, it can be stated that the assertion in the analyzed period, the average relative share of primary categories of users in the total number of half - board from 12% to an extremely low level.⁶

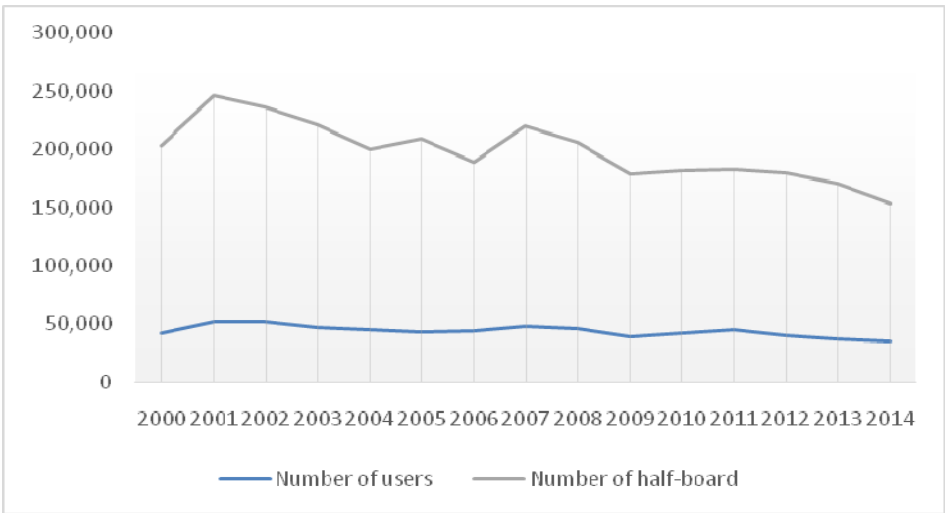


Figure 2 – Trend in number of users and half-board in the military capacity of the MI "Tara" in the period 2000–2014

⁶ The average total occupancy rate in the analyzed period was 83%.

The reasons for this situation are associated primarily with substantive standards of the defense system and the following regulatory military frameworks:

- Rules on military establishments operating on the principle of generating and distributing profit; (Official Military Gazette 05/1986 No. 5, p.177),
- Rules on changes and amendments to the Rules on military establishments operating on the principle of generating and distributing profit; (Official Military Gazette 31/1991, p. 974),
- Decision on changes and amendments to the Decision on utilizing part of the capacities of the military establishments subordinated to the Directorate for Tourism and Production in providing services required by the Ministry of Defence and the Serbian Armed Forces; (Official Military Gazette 11/2007, p. 157),
- Regulation on the transformation of the military establishments that provide production and services on the principle of generating and distributing profit and the rights and obligations of the civilian personnel of the Serbian Armed Forces employed in those establishments; (Official Military Gazette 25/2008, p.285),
- Decision on appointing the expert personnel responsible for drafting regulations and acts for the implementation of the Law on Defence; (Official Military Gazette 38/2009, p.831),
- Rules on the General Logistics Requirements in the Ministry of Defence and the Serbian Armed Forces - consolidated text; (Official Military Gazette 31/2011, p.505),
- Regulation on changes and amendments to the Regulation on transformation of the military establishments that provide production and services on the principle of generating and distributing profit and the rights and obligations of the civilian personnel of the Serbian Armed Forces employed in those establishments; (Official Military Gazette 02/2013, p. 13),
- and regulatory national frameworks determined by the Law on Tourism of the Republic of Serbia (Official Gazette of the Republic of Serbia , 14/2016) and the Law on National Parks (Official Gazette of the Republic of Serbia 84/2015), which determine business management skills of the MI "Tara" in the use of various management tools to increase the effectiveness and productivity of operations, cash flow, routing, agile promotion and pricing policy.

Case study "Military vacation facilities of the Republic of Bulgaria"

The Ministry of Defence of the Republic of Bulgaria (MoD RB) has received the standards in the field of social welfare from NATO that have to be met for admission to this organization. One of the first steps in the implementation of standards was the establishment of the Agency for Social Welfare as the executive authority of MoD RB. Capacities for recreation were upgraded to the required level and then integrated into the Association for Recreation States ("CLIMS"), whose task is to network the use of natural resources and build the capacity of members for the purpose of reciprocal exchange of its members with the aim of raising the living standard of individuals and creating additional motivation for the execution of military tasks.

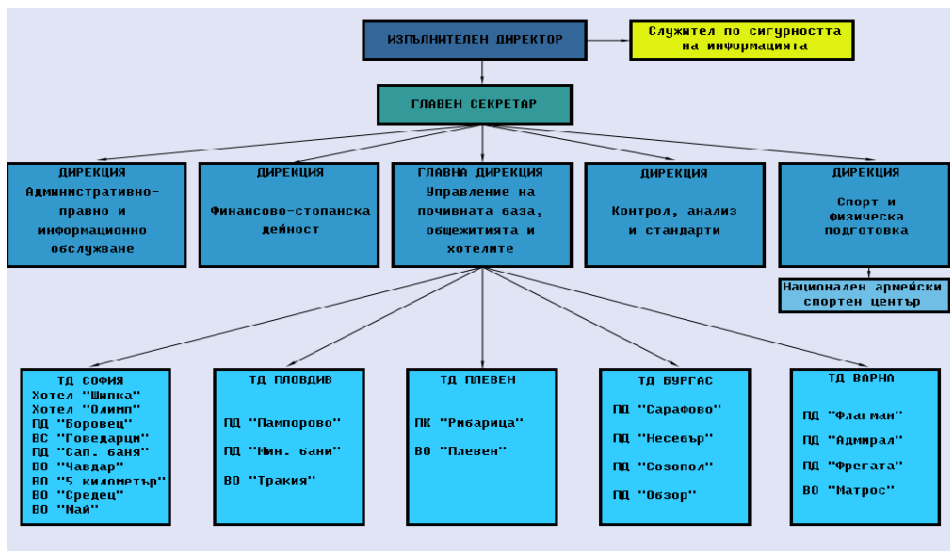


Figure 3 – Structure of the Agency for Social Welfare MoD RB

A number of missing units have been solved by adaptation of nonpurposive administrative buildings and abandoned warehouses.



Figure 4 – The exterior of the converted warehouse space



Figure 5 – *The interior of the converted warehouse space*

After the reforms MoD RB has, inter alia, 20 most modern hotel complexes and regulatory documents, which create the legal framework for subsidizing annual leave in the national budget.

A professional soldier with their families is entitled once a year to a ten-day holiday in one of the recreation facilities of MoD RB. This right is supported by grants from the budget of the Republic of Bulgaria in the amount of 70%, so the price per one day of capacity utilization by military staff family of four is only 12 euros.

For example, the price of full board/day in the hotel "Omorika" for military staff family of four is about 4.5 times higher and is equivalent to 53 euros.

Conclusion

During 39 years of its existence the MI "Tara" has made over 6,500,000 board days, and in September 2007 it welcomed the millionth visitor. Good organization and high-quality catering and tourist services participate about 30% on average in total revenues of the institution's consumption. The highest hotel spending at the level of the institution was achieved in 2007 and it amounted to 38% (in the segment of the hotel "Omorika" it was 44%), which represents the level of the high standard. Hotel capacities were used by a large number of guests in the previous period from the world of politics, science, public and cultural life. However, the relative share of the category of primary users was at an extremely low level⁷ in the total number of half-board.

⁷ Interest for the tourist resorts of military service among the primary beneficiaries is related mainly to cyclical periods (January, July and August).

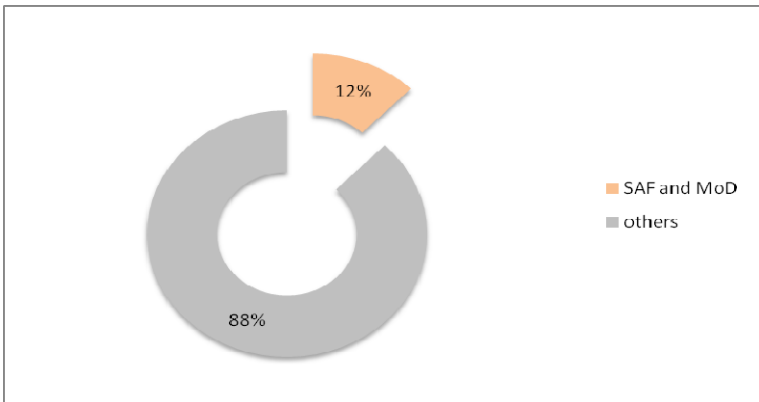


Figure 6 – Average relative share of the SAF and MoD in the period 2000-2014

This negative trend was caused by the economic situation and consequently purchasing power, reduction of wages in the public sector and the competitive offer in the private sector.

The decision of the Minister of Defence that professional members after returning from peacekeeping missions have to recover using capacities of the MI "TARA" had positive financial effects.⁸

Attempts of the management of the MI "Tara" to stimulate the terms of payment for services (deferred payment in monthly installments) and thus increase the demand of primary users in 2015 had no effect. It is necessary to find a sustainable systematic solution, which will make the MoD and SAF members become the primary guests in military resorts .



Figure 7 – Hotel "Omorika"

⁸ After returning from peacekeeping missions the service was used by 154 persons (1.075 boarding houses, which were financed from the budget).

In terms of raising the standard of the MoD and SAF, relevant institutions are currently working on defining the proposal for appropriate standards of belonging to the price that will allow members of the MoD and SAF to become the primary users of service in military resorts. It is estimated that if the Ministry of Defense has committed to refunding the price of board days with 40%, the daily board for a family of four would be equivalent to 32 euros and the number of the nightly board primary users would reach the level of 65%. At this level, the aim of military hotel capacities was again to improve the quality of life of members of the defense system who dedicated in the past some of their assets (vacation bonus) withdrawn for the construction of these facilities.

Financial effects produced in this way would enable the introduction of new facilities, expansion of the existing supplies and increase of the quality of all types of services for current and future generations of primary users based on the new program in order to ensure productive sustainable development with a wide range of services:

a) Provision of rest, recreation and other catering services, shopping and tourist excursions to professional military personnel and civilians serving in the Armed Forces and MoD and members of their families;

b) Provision of services in organizing and carrying out all aspects of training of the special forces – composition pursuant to the requirements;

c) Provision of rest, recreation and rehabilitation after participation in peacekeeping missions and inter-army exchanges;

d) Preparation of the Serbian Armed Forces and the Ministry of Defense sports teams for participation in the military, state, inter-state competitions and sports meetings;

e) Provision of the aforementioned services to other citizens of the Republic of Serbia and foreign nationals if there are free capacities;

f) Provision of all kinds of services in the organization and conduct of congresses, seminars and other scientific meetings in order to meet the needs of the Serbian Armed Forces, the Ministry of Defense and other structures;

g) Provision of all kinds of services in the organization and conduct of sports games, camps and preparation of all types of athletes and sports teams of all ages and ranks of the competition;

h) Provision of services in all aspects of the organization and conduct, schools in nature, recreational classes and school and other excursions;

i) Organization and conduct of one-day excursions for all hotel guests at Mount Tara in the national park and the canyon of the Drina river, "Šarganska osmica" ride with a visit to Mokra Gora "Mećavnik", Rača Monastery and other religious sites, lookout and organization of hunting, fishing and other excursions and picnics in nature pursuant to the requirements of guests;

j) Organization and implementation of the ski school in winter for guests of all ages and organization of transport to the ski slopes on Zlatibor (Tornik) and Mokra Gora, which are 32 to 40 km away from the hotel complex and

k) Development of health tourism and above all the treatment of bronchial asthma, chronic bronchitis and other lung diseases, asthenia, anemia and others.

Effects of implementation of new production programs will improve the quality of life of members of the defense system, the quality of professional performance of the set tasks and will contribute to raise the overall performance of the defense system.

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AN INNOVATIVE RESPONSE TO COMMERCIAL UAV MENACE – ANTI-UAV FALCONRY

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As law enforcement agencies and military are on the lookout for new efficient ways in tackling proliferation of menacing commercial UAVs, the innovative practice of anti-UAV falconry referred as Low-Tech solution to a High-Tech problem appears as the effective adaptation or alternative to the set of existing anti-UAV solutions. The comparative analysis of the trained birds of prey physiology against technical specifications of common commercial present UAVs indicates supremacy of the avian hunters versus potentially hostile UAVs as per efficiency of their neutralization and safe processing. While anti-UAV falconry idea came as the result of advances in commercial UAV technology followed by increasing capacity of their untoward or hostile use its much wider operational use is not likely. However, it attracts due attention of the law enforcement as availing noteworthy advantages within urban environments that cannot be matched with application of currently available anti-UAV solutions – thus representing a valid operational asset in the common response to growing commercial UAV menace.

Key Words: *anti-UAV, commercial, drone, eagles, falconry, hostile, police, safety, security, threat*

Introduction

In the era of evolving security challenges and asymmetric threats, security services, law enforcement agencies and the military are on the lookout for new developments in the field of innovative approaches to counter-intelligence and their forces, inviolable premises and critical infrastructure protection from the unrelenting proliferation¹ and consequent security menace of the unauthorized or potentially hostile commercial UAVs (Unmanned Aerial Vehicle).

* The views expressed in this article are solely those of the author while the presented research has been undertaken using information and material available and originating exclusively from open sources.

¹ Some revenues projections on drone sales estimate that it would top USD 12 billion in 2021, up from just over USD billion in 2015; <http://www.businessinsider.com/uk-funds-drone-trials-around-the-world-2016-12>

Beyond a broader approach in tackling potential UAV security threats via embedding no-fly-zone codes in their avionics, legislation and registration, owner's civic education or yet stern practices of electromagnetic spectrum jamming, laser use, use of the bazooka-like net guns or specially equipped UAVs against unwanted aerial rovers, this research article aims to provide insight into the subject of intuitive application of the low-tech approach to ease rising disquiet originating from the expansion of the commercial UAVs – the anti-UAV falconry.

The use of animals to assist in performing security-related tasks is not new, but dates back several thousand years in history. The first defensible records of humans using birds of prey for hunting comes from an Assyrian bas-relief, which dated at the early part of the seventh century B.C. or that of the same practice in China as early as 680 B.C.². While United Kingdom's national counter-intelligence and security agency (MI5) had been known to use trained peregrine falcons during WWII to intercept Nazi homing courier pigeons³, post WWII period had not witnessed palpable practice of bird use in conducting any of the specific tasks previously known to be associated with them – until most recently, in the Netherlands, where Dutch National Police has joined forces with private enterprises to train one of the biggest existing avian raptors, hunter eagles⁴, to intercept, attack and take unwanted drones from the skies.

Aiming to closely describe this innovative and interesting practice in fighting proliferation and growing insecurity originating from the use of tactical commercial drones, the author will first examine *bona fide* use of the commercial UAVs and security related threats that aerial vehicles are estimated to represent today. After insight into history and current instances of animals' use in security services, the author will emerge into origins and examination of anti-UAV falconry initiated by the Netherlands police including the comparative analysis of two modern adversaries of the skies, i.e. birds' physiology and UAV's technical characteristics. After a look at current spread of the anti-UAV falconry practice, the second chapter until the end will pay due attention to safety concerns related to the use of birds of prey in the fight against commercial UAVs.

This research is not aimed at praising the anti-UAV falconry, but at providing space to better understand where it comes from, what it encompasses and what the comparative advantages of this innovative approach are in tackling the ever increasing risks of the commercial UAV menace today and in the conceivable near future. Such development is expected to increasingly feature momentous threats to our common safety and security with further technological advancement and proliferation of cheaper and more capable commercial UAVs and their growing potential hostile use.

² Ancient & Medieval Falconry: Origins & Functions in Medieval England by Shawn E. Carroll, <http://www.r3.org/richard-iii/15th-century-life/15th-century-life-articles/ancient-medieval-falconry-origins-functions-in-medieval-england/>

³ Airborne threat of Nazi pigeons, http://news.bbc.co.uk/2/hi/special_report/1999/01/99/wartime_spies/263333.stm, The Nazi pigeon and British peregrine Falcon War (1940-1942), <http://strangevehicles.greyfalcon.us/Nazi%20Pigeon.htm>, MI5 Report on Carrier Pigeons in WWII, <http://www.arcre.com/archive/pigeons/pigeonsmi5>

⁴ Eagle is the common name for many large birds of prey of the family Accipitridae. It belongs to several groups of genera that are not necessarily closely related to each other. Most of 60 species of eagles are from Eurasia and Africa. Outside this area just 14 species can be found – two in North America, nine in Central and South America and three in Australia; <https://en.wikipedia.org/wiki/Eagle>

The bona fide use of the tactical commercial UAVs

The understanding that new technologies ranging from a variety of devices, machines, robots, or, increasingly software packages, allow people better and faster exercise of various tasks or solving problems and, in general, enhance human efficiency – the UAV industry has become nowadays more and more diverse, innovative and international, carrying the enormous potential for growth with the associated possibility to create jobs and grow economy.

Despite already versatile use, their proven overall benefit had not still been fully explored, only proving to have the capacity that can significantly improve our lives and eliminate risks we are being exposed to via hi-end technology use.

UAVs or drones have already become almost vital in conducting tasks of search and rescue, visual inspections, surveillance and reconnaissance, science and research activities, safety and security related tasks, education, sensory identification, aerial video and photography, GIS surveying and mapping, unmanned cargo transport, news reporting, monitoring business activities, marketing, gaming, sporting, entertaining, and tasks that involve detection of land mines, healthcare, delivery of medications, blood or items required for urgent medical assistance, disaster response, meteorology, combatting wild fires or deforestation, farming and agriculture, ranching,⁵ not to forget their law enforcement (police) and military use.

Today researches and inventors add lights, sound, cameras, microphones, sensors, robotic arms, wave cancellation or wave enhancement technologies to drones. We fly them or they are being flown by 'themselves' lowly or highly, silently or noisily, super-visibly or totally invisibly. They are our best friends, and increasingly our worst enemies.⁶

Safety and Security Threats of Tactical Commercial Drones

Commercial UAVs are being increasingly observed as a new threat to national and wider aspects of safety and security. The popularity of the recreational and unsafe, ill-guided or even illegal use of a variety of available and increasingly cheaper commercial UAVs expands rapidly, introducing a host of the new security concerns that alarm security experts worldwide.

Aviation Safety and Security Concerns

The International Air Transport Association (IATA) has warned that civilian drones are becoming a real and growing threat to the safety of commercial aviation.⁷ The IATA has called for implementation of regulations before any serious accident occurs, stating that there is a significant number of pilot reports of drones where they were not expected

⁵ See interesting compilation, but not an exhaustive list at: <http://www.futuristspeaker.com/business-trends/192-future-uses-for-flying-drones/>

⁶ Ibid.

⁷ Civilian drones threaten safety of commercial aviation: IATA, <http://www.businessinsurance.com/article/00010101/STORY/160219877/Civilian-drones-threaten-safety-of-commercial-aviation-IATA>

to be, particularly at low altitudes around airports.⁸ During the period August 2015 to January 2016, the U.S. Federal Aviation Administration (FAA) reported 583 separate drone incidents of sorts despite the fact that the majority of the incidents were minor, where pilots or bystanders reported drones flying in restricted airspace without necessarily endangering anyone.⁹ Since consequences of a too close encounter¹⁰ or potential airborne collision between a commercial UAV and an airplane would have a catastrophic outcome, controlling drones more efficiently and reducing the threat originating from them over airspace is an ongoing battle for civil aviation authorities.

On a positive note, during 2015 the FAA made great steps towards integrating drones into the nation's airspace. The first big step took place at the end of 2014, when a new web-based drone registration system went online, enabling registration of more than 616,000 owners and individual drones. As a result, those registered drone operators now have the basic aviation knowledge to keep themselves and their friends and neighbors safe when they fly their assets.¹¹ Similarly to the U.S., in the European Union (EU) in August 2016 the European Commission published the first draft on subject regulations – the Prototype Commission Regulation on Unmanned Aircraft Operations and its Explanatory Note¹² – in order to provide a clearer idea of what the EU regulation and safety rules for civil drone use could be. The introduction of civilian drone regulations is expected to palpably contribute to the increased control over commercial UAVs use.

The Contemporary Safety and Security Concerns

If used without gaining the basic knowledge of these specific aerial systems, and not in accordance with the established safety guidelines and operating rules, or even further, being used with clearly untoward intentions or ultimate goals, drones today bear a significant safety and security challenge. There are multiple representative examples of potentially hostile UAVs being found in inviolable areas of urban, peaceful and civic environments.

One commercial UAV crashed into the grounds of the U.S. presidential home in January 2015¹³, triggering an immediate lockdown of the White House. In the other case, a Japanese man flew the commercial drone carrying radioactive sand onto the roof of the Japanese Prime Minister office in April 2015, protesting over the Japanese government nuclear energy policy (the landing drone triggered a security alert and raised fears of extremists using drones to carry out attacks).¹⁴ According to the media reports, some

⁸ Ibid.

⁹ FAA Releases Updated UAS Sighting Reports, <https://www.faa.gov/news/updates/?newsId=85229>

¹⁰ Close encounters and sightings of drones, <https://www.bloomberg.com/news/articles/2016-04-04/drones-are-the-new-threat-to-airline-safety>

¹¹ Drone Registration Marks First Anniversary, <https://www.faa.gov/news/updates/?newsId=87049>

¹² European Aviation Safety Agency, 'Prototype' Commission Regulation on Unmanned Aircraft Operations, <https://www.easa.europa.eu/system/files/dfu/UAS%20Prototype%20Regulation%20final.pdf>

¹³ Small drone crash (White House), <http://www.reuters.com/article/us-usa-whitehouse-device-idUSKBN0KZ0UD20150126>

¹⁴ Japan radioactive drone: Tokyo police arrest man, <http://www.bbc.com/news/world-asia-32465624>

15 commercial UAV flights have been reported over or in close proximity to French nuclear power plants so far, leaving authorities both in unease and disquiet,¹⁵ further increasing concerns about unidentified commercial UAVs flying above Paris, its attractions, the U.S. Embassy, French military installations and even the official residence of the President of France (*Palais de l'Élysée*).¹⁶

It is not rare in the U.S. for people to use their personal firearms against UAVs in line with understanding that they represent a well-defined form of the invasion of individual privacy [analogous to physical trespassing]¹⁷ whereas data that UAVs could collect or eventually avail are increasingly susceptible to hacking and extraction. Hence, the more sensitive data they can 'collect', the more serious potential problem and risk with their unsolicited use is.

However, the most disturbing fact on potential untoward UAV use nowadays is that their bodies (fuselage) could be easily fitted with a firearm,¹⁸ a location (GPS) emitter or a miniature laser-designation device,¹⁹ an explosive charge,²⁰ or could even deliver a piece of explosive ordnance from the heights.²¹ As drones could be used and/or controlled by hostile elements, such possibilities rise reasonable and snowball disquiet along with the already proven potential of the commercial UAVs to be intensively used by either criminals²² or terrorists.²³ Tactical commercial drones had already become the tool that authorities find quite difficult to detect and stop²⁴ using perceptibly limited capacities of observation practices or related detection and sensory technological solutions.

Extending the potential threat of unsolicited or ill-managed UAV use by an additional [huge] step further, the particular research and experiment²⁵ was initiated in 2010 at Massachusetts Institute of Technology (MIT) in the U.S. that provides an additional level of concern on potential hostile UAV utilization. It refers to the operations of swarming autonomous commercial drones – those able to fly in formation, navigate without being

¹⁵ Drones survolant des centrales nucléaires, http://www.lexpress.fr/actualite/societe/drones-survolant-des-centrales-nucleaires_1619292.html, La centrale nucléaire de Golfech, en France, survolée par un drone, http://www.lexpress.fr/actualite/societe/la-centrale-nucleaire-de-golfech-en-france-survolee-par-un-drone_1776417.html

¹⁶ Interceptor un drone? "Moins évident que d'arrêter une voiture", http://lexpansion.lexpress.fr/high-tech/intercepter-un-drone-moins-evident-que-d-arreter-une-voiture_1655127.html

¹⁷ Kentucky man shoots down drone hovering over his back garden, <http://arstechnica.co.uk/tech-policy/2015/07/kentucky-man-shoots-down-drone-hovering-over-his-backyard/>

¹⁸ Gun Strapped To A Flying Drone, https://youtu.be/e_EHQM7YgkQ

¹⁹ Potentially acting as, or becoming a beacon or homing device (for aerial attack).

²⁰ Pentagon Confronts a New Threat From ISIS: Exploding Drones, <http://www.nytimes.com/2016/10/12/world/middleeast/iraq-drones-isis.html>

²¹ See Hezbollah Drone Drops Bombs On Syrian Rebel Positions, https://www.youtube.com/watch?v=F9CqOfE_mHM

²² Criminals using drone to smuggle record quantity of drugs to prisoners crash it inside jail after losing control, <http://www.mirror.co.uk/news/uk-news/criminals-using-drone-smuggle-record-8810596>

²³ WATCH: Syrian Terrorist Builds Armed Drone, <http://heavy.com/news/2016/09/jund-al-aqsa-al-qaeda-armed-drone-building-twitter-video/>

²⁴ Criminals, Terrorists Find Uses for Drones, Raising Concerns, <http://www.wsj.com/articles/criminals-terrorists-find-uses-for-drones-raising-concerns-1422494268>

²⁵ Project Perdix, <https://beaverworks.ll.mit.edu/CMS/bw/projectperdixcapstone>

remotely controlled, and even able to sense each other.²⁶ It did not take long for this technology to attract the attention of the U.S. Department of Defense (DoD) with these drones being capable to analyze their operational environment, react to changes in their surroundings and act almost intelligibly with regards to their programmed tasking. As expected, the DoD has militarized the project and successfully demonstrated use of autonomous swarming drone(s) in May 2016 (Navy's LOCUST) and October 2016²⁷ (PERDIX). China followed through with their own swarming drones demonstration in December 2016,²⁸ and Russia speeded up their [first immediate] response to such potentially grave security menace – introducing military grade UAV repellent system – Репеллент.²⁹

Concerns are more than reasonable with hi-tech achievements extremely susceptible to untoward proliferation when speaking about possible hostile use of this, or similar, new generation of UAVs. Such an example involving a swarm of commercial drones could envisage their use to conduct multi - angle observation of sensitive targets, drones being used for multi-target laser designation, or acting as false radar reflections that could confuse military air defense mechanisms (trigger radar jamming, i.e. interference). There is the growing potential for developments as described above to offer to both legitimate soldiers and belligerents of the digital era a totally new line of – very difficult to confront – attack vector(s) opportunities.

Clearly, all the points referred to above indicate that there is a growing concern associated with the proliferated use of the unregulated or uncontrolled commercial drones, in particular with regard to the fast-moving industry and unavoidably rising potential threat to people's safety, security and lives – in particular having in mind their upsetting harmful use potential.

Animals in Safety and Security Services

The pioneering ways in which animals were used during WWI and WWII including their law enforcement related use could hardly receive endorsement as per [animal] ethics since they were either turned into remotely controlled explosive assets,³⁰ or used as vehicles for spreading contagious and deadly biological agents.³¹ Besides this particular combat use, driven by circumstances of the time, animals from mammals to birds have been used throughout the last world war(s) by law enforcement officers as time-honored tradition or means of logistics support, medical evacuation, movement or explosive devices sensors, communication enabling tool, for exercise of reconnaissance or (counter) intelligence tasks and being such for boosting the troop's morale.

²⁶ Featuring pre-programmed behavior, pattern fly program, or target action.

²⁷ Department of Defense Announces Successful Micro-Drone Demonstration, <https://www.defense.gov/News/News-Releases/News-Release-View/Article/1044811/departement-of-defense-announces-successful-micro-drone-demonstration>

²⁸ Fixed-wing UAV Swarm Prototype of Skywalker X6, <http://diydrones.com/profiles/blogs/fixed-wing-uav-swarm-prototype-of-skywalker-x6> ; If Drone Swarms Are the Future, China May Be Winning, <http://www.popularmechanics.com/military/research/a24494/chinese-drones-swarms/>

²⁹ Вражеские беспилотники убьют «Репеллентом», <http://izvestia.ru/news/653954>

³⁰ Anti-tank dog, https://en.wikipedia.org/wiki/Anti-tank_dog , Противотанковая собака (подвижные мины) , <http://army.armor.kiev.ua/engeneer/sobaka-mina.shtml>

³¹ Biological weapon, Biological weapons in the World Wars, <https://www.britannica.com/technology/biological-weapon>

Nowadays animals continue to be used both in battlefield and law enforcement, as well as increasingly in specific civic environs, where their most regular use today refers specifically to trained dogs,³² mules and horses,³³ camels,³⁴ dolphins³⁵ and sea lions.³⁶ While birds have not been recently used like other animals, the practice of using predator birds such as eagles, hawks and falcons has been observed since 2000 in providing an additional degree of air safety at both commercial and military-NATO airports in North America. The company in Canada, Falcon Environmental Services,³⁷ has a commercial contract with several airport authorities both in the U.S. and Canada to help³⁸ police airspace by using predator birds during periods between take-off and landing of airplanes, practicing falconry to scare bird flocks (their natural prey) before potentially colliding with propellers and jet engines³⁹ and initiating a tragedy.

Using birds of prey to protect planes in flight appeared to be a successful business model that can enhance safety and security of the airspace. As a result, a quite innovative approach appeared in an attempt to counter the menace of commercial UAVs proliferation and their largely unpoliced use. It happened on the other side of the Atlantic with a similar avian predators' training company that found its potential clientele within the Dutch National Police Force.⁴⁰

The Examination of Anti-uav Falconry

The Origins – Guard From Above (GFA)

The innovative and interesting connection between falconry and the much needed response to increasing drones' safety and security menace took place in 2015 when the Dutch National Police initiated the collaboration with the Guard From Above (GFA),⁴¹ the

³² Working as sentries, detecting land mines and bombs, and performing search, rescue, and recovery tasks; <http://www.libraryindex.com/pages/2203/Service-Animals-MILITARY-SERVICE.html>

³³ Today traditionally used by law enforcement mounted units. However, they are also used by the US Army Special Forces soldiers in Afghanistan since the very beginning of the US involvement there, since they navigate the mountainous terrain there much easier in places that are not otherwise accessible except on foot. <http://www.scp.org/news/2014/03/02/42534/role-of-police-on-horseback-has-changed-over-time/>, <http://www.usatoday.com/story/news/nation/2014/06/22/horses-marines-afghanistan/10744395/>

³⁴ Camel cavalry, http://www.wikiwand.com/en/Camel_cavalry

³⁵ Trained to alert to suspicious objects underwater, protecting ships and harbors, a dolphin can sniff out a mine, give heads up to its crew, then leave the device like an acoustic transponder to lead divers to the weapon's location; <http://www.takepart.com/photos/animals-serve-war/dolphins>

³⁶ They have been used for bomb detection. Their speed underwater makes them especially good at defending against terrorist swimmers. Reaching speed up to 25 mph, sea lions can sneak up on suspicious swimmers before they are aware, and using their bite, place a clamp on the swimmer so they can be picked up; <http://www.takepart.com/photos/animals-serve-war/sea-lions>

³⁷ Falcon Environnemental Services, <http://www.falconenvironmental.com/>

³⁸ Aside other measures applied, see for insight: Bird Control Group at <http://birdcontrolgroup.com/aviation/>, Strategies for Prevention of Bird-Strike Events at

http://www.boeing.com/commercial/aeromagazine/articles/2011_q3/4/or_Bird_control_at_airports_at http://www2.vliegghinder.nl/naslagdocs/CDrom/REGELS_SCHIPHOL/2.3_TNL/4.3.4.1_Bird_control_at_airports.pdf

³⁹ How Falcons Protect Planes From Gulls and Geese, https://www.wired.com/2011/11/st_birdbouncers/

⁴⁰ CNN, Dutch cops train eagles to hunt drones, <http://edition.cnn.com/2016/02/02/europe/dutch-drones-eagles/>

⁴¹ GFA press release, <http://guardfromabove.com/wp-content/uploads/2016/01/NL-ENG-Guard-From-Above-Press-Release-FAQ.pdf>

birds of prey [Dutch: *roofvogel*/s] training security firm, to keep dangerous drones from causing havoc by grabbing them out of the sky.⁴²

The anti-UAV falconry project, which the GFA's chief executive officer describes as "a low-tech solution for a high-tech problem", the first known of its kind in the world, examined drone related incidents and viable contra drone (C-UAV) solutions since 2014, with a particular mission of using birds of prey to intercept hostile drones.⁴³ Joining efforts with its potential clientele⁴⁴ and the common goal to make airspace drone-safe, this company focused its work on assessing how possible drone threats could impact their clients' assets, while providing training to personnel that would handle the GFA trained birds.⁴⁵ The company conducted its field test work at the former Valkenburg Naval Air Base military airfield in the Netherlands.⁴⁶

Acknowledging that their anti-UAV falconry attention is focused on 5% of drone users, the percentage assessed by the company to be a group with plausibly untoward intentions, the GFA's use of birds of prey to intercept hostile drones always starts with a threat analysis involving one of the locations prone to the threat of drones, and then (if positive) select the best combination of contra drone solutions.⁴⁷ The Dutch National Police, being one of the important clients of the GFA, uses their service for on-site solutions to counter drones. Such venue could be a major public event, a VIP visit, or places as sensitive as airports – where the GFA trained bird of prey can take down potentially hostile drone trespassing security environs that have to be 'sterile', or 'inviolable' ones.

The representative real-life examples of such threat scenario could be the ones where pilots reported drones flying in the dangerous proximity of airplanes,⁴⁸ or that of the appearance of a commercial drone which flew above the packed football stadium.⁴⁹ In each case, public safety and security were potentially at stake, triggering last years' Dutch National Police decision to undertake a less technological approach to counter unsolicited drone use.

The Comparative Analysis – Falcons vs. UAVs

The comparative analysis of technical specifications of the most common or wide-spread tactical commercial drone of today⁵⁰ against the physiology of the GFA-trained birds of prey (a bald eagle) reveals the supremacy of the live hunter versus its mechanical prey. The sheer speed and power of these animals when put next to one of commercial drones is unmatched.

⁴² Eagle-eyed: Dutch police to train birds to take down unauthorized drones, <https://www.theguardian.com/world/2016/feb/01/dutch-netherlands-police-birds-unauthorized-drones>

⁴³ Guard From Above, <http://guardfromabove.com/about-us/>

⁴⁴ GFA mostly works for international governmental security agencies, police and defense forces.

⁴⁵ Source *ibid* to footnote 37.

⁴⁶ Dutch Firm Trains Eagles to Take Down High-Tech Prey: Drones, http://www.nytimes.com/2016/05/29/world/europe/drones-eagles.html?_r=1

⁴⁷ How we use birds of prey to intercept hostile drones, <http://guardfromabove.com/how-we-intercept-drones/>

⁴⁸ Most recently at New York's JFK airport in August 2016 or London's Heathrow in November 2016.

⁴⁹ As above 30,000 person capacity stadium during the Union of European Football Associations (UEFA) Euro 2016 football qualifying match in Belgrade, Serbia in October 2014.

⁵⁰ Being the DJI's Phantom 4 Pro type quadcopter; DJI Phantom 4 Pro, <http://www.dji.com/phantom-4-pro/info#specs>

Eagles' maximum flight speed of some 120 to 160 km/h, possible flight altitude from 3 to 4.5 km, wing span of 1.8 to 2.3 m, vision four to eight times better than humans' and ability to detect movement up to 3.2 km distance, claws big enough to fit into a tennis ball, talons 5 cm long and powerful enough to penetrate flesh or crush bones, and lift power confirmed by snatching animals as big as young lambs (estimate up to 15 kg of weight) degrade every single technical specification of the adversary drone.⁵¹ Having a low flying commercial UAV able to develop maximum flight speed of 72 km/h, its 30 cm width / length and 20 cm of height, weight of some 2 kg and maximum flight time on single battery less than 30 min cannot represent a comparable opponent to the instinct-driven [and in addition, purposely and specifically trained] avian predator observing and understanding buzzing drone as just one of its every day unprotected prey.

Indeed, [trained] eagles see and react to drones as they would to their normal prey, grabbing them mid-air and taking them immediately to a safe place on the ground,⁵² where there are no other animals or people. Further, the GFA eagle trainers attest that eagles appear to be normally suspicious about drones, as they tend to demonstrate aggressive avian behavior seeing them as potentially other birds of prey (i.e. a competition) – thus triggering the eagles' hostile interaction against the drone, further enforced by avian logic of defending their territory from another bird of prey.⁵³

Comparing anti-UAV falconry against other currently known anti-UAV measures, either kinetic actions, energy propagation measures or ['cannibalistic'] tackling of potentially hostile UAVs by other UAVs, anti-UAV falconry demonstrates several particular superior qualities in the domain of efficiency of drone neutralization and their safe processing.

Firstly, eagles are proven to have 'onboard equipment' unparalleled to that of drones, as shown in previous paragraphs. Secondly, trained predators' action always brings [lands] any attacked drone safely to the ground rather than causing them to crash down either vertically or through ballistic curve movement, which can pose a significant safety risk. Without exemption, none of the other anti-UAV methods that exist today is capable of preventing the drone ending up haphazardly in the crowd of bystanders or VIPs. However, application of other anti-UAV measures could easily get the job done safely in inhabited or rural environments. Thirdly, if deployed strategically on standby at high-risk locations or areas aimed to be protected from possible intrusion of the unauthorized drones, trained falcons are able to spot, intercept and bring down a standard tactical commercial drone within moments of its take-off. Fourthly, the biological skills of birds of prey, as extensively documented in the GFA demonstrations conducted so far, make sure that there is a very low percentage of 'failed' attacks or targets missed by these UAV predators.

While mimicking a predatory act over drones eagles always hit their targets in the middle of their 'back', i.e. their upper side, exactly between the rotors. Furthermore, it appears that birds' vision is such that it allows them to actually see the rotors of the drone, whereas human vision is such that provides us only with a blur image, or hollow

⁵¹ Eagle anatomy details taken from 'Bald Eagles, Dudley, Karen (1997)

⁵² Multiple GFA-produced demonstration videos show that eagles are taking drones to a location designated by trainers.

⁵³ According to Geoff LeBaron of (US) National Audubon Society, interviewed in early 2016 by the Guardian. See 'Eagle-eyed: Dutch police to train birds to take down unauthorized drones', <https://www.theguardian.com/world/2016/feb/01/dutch-netherlands-police-birds-unauthorized-drones>

space. Observers of the falcon's anti-UAV training state that birds are constantly hitting drones in such a way that they do not get injured by the rotors and have no trouble avoiding them.⁵⁴

Finally, as drone flying is an activity which vastly depends on winds speed and direction, which makes their maneuvering difficult both for a hostile drone operator and the operator of anti-UAV,⁵⁵ this factor is for birds of prey only a facilitating one, being a multiplier of their flying skills. Huge predator birds are known to be able to use the existing wind conditions to extremes to enhance their natural flight sharpness and the might of the attack.

The Limitations of Anti-UAV Falconry

However, the Dutch and other above-mentioned National Police entities would probably not focus their anti-UAV enforcement efforts in the manner that would bypass parallel and possibly wider use of the already existing and available directed-energy or kinetic type of solutions. The use of trained birds of prey in fight against proliferation of potentially hostile commercial UAVs would be expected to develop further in limited practice due to a number of actually significant restricting factors. Those include, but are not restricted to: significant costs incurred in their operation, complexity of the system, its low mobility factor, vulnerability of the birds within hostile environments, expected increase of the threat category accompanied with untoward drones ahead, and unstoppable technological advancements that are to provide anti-UAV systems, which would be more effective, cheaper and, to be expected, with more versatile capabilities in addressing the drones menace.

New systems have already appeared with ability of 'beam' UAVs safe on the ground – somehow similar to that observed with avian raptors exercise – either via disabling or hijacking their control and featuring a net-launching or net-grabbing capability. Moreover, anti-UAV falconry would not be of substantial assistance in confrontation scenarios involving large numbers of the swarming commercial UAVs used with hostile intention, where more adequate applicable countermeasures would be those involving directed-energy anti-UAV solutions.

The Dutch Exercise

Instead of immediately resorting to a variety of already known effective anti-drone solutions, ranging from either shooting down a potentially hostile drone (a 'kinetic' solution), taking them down using radio jamming guns or high-end anti-drone laser 'death rays',⁵⁶ devices (applying directed-energy UAV countermeasures), or grabbing them from the

⁵⁴ According to National Audubon Society's Geoff LeBaron. See article <https://www.theguardian.com/world/2016/feb/01/dutch-netherlands-police-birds-unauthorized-drones>

⁵⁵ Suppose the use of this methodology to neutralize a potentially hostile UAV.

⁵⁶ Anti-drone 'death ray' can blast vehicles out of the sky from a mile away, <https://www.theguardian.com/technology/2015/oct/07/drone-death-ray-device-liteye-auds>; Battelle Drone-Defender, Directed-energy Unmanned Aircraft System Countermeasure, <http://www.battelle.org/our-work/national-security/tactical-systems/battelle-dronedefender>, Drone-hunting lasers developed for US Navy, <http://www.telegraph.co.uk/technology/10935201/Drone-hunting-lasers-developed-for-US-Navy.html>

skies with nets fired from specialized launchers or even from the net equipped UAVs⁵⁷ (referred to as 'robotic UAV falconry'), the Dutch National Police approach to 'natural' solution to drone menace showed an effective adaptation and alternative to use of those, only conditionally called, 'harder' options.

Having concerns about drones being used for criminal purposes and following a reported increase in the number of drone incidents, the Dutch National Police looked into avian raptors as possible solution for situations where drones should not be allowed to fly. Those range from incidental situations of air ambulances being prevented by drones from conducting their urgent tasks, drones flying in restricted airspace and too close to airports, or their use over crowds of people, such as activities where VIP or dignitaries' visits could be jeopardized by incoming hostile drone. The scenario equal to latter was demonstrated to public in Dutch National Police practical exercise conducted in September 2016, ending with a successful commercial UAV killed by their trained eagle.⁵⁸

Having conducted a successful one-year research and trial project with the GFA trained avian raptors with a success rate of bringing down 80% of drones, the Dutch National Police consequently purchased a number of trained drone hunter eagles and put them in operational use in several locations across the country – becoming the first police force in the world using such enforcement practice for unwanted drones. Necessarily, an adequate number of police agents with an affinity to work with these police birds were drafted to undertake a specialized falconry training within the GFA services package; a bird handler training program for international governmental police and security agencies, which will work with birds of prey on a daily basis.⁵⁹ Eventually, the Dutch National Police intends to engage up to 100 police officers for these tasks.⁶⁰ Being committed to using eagle UAV hunters, the Dutch police even began raising their own sea eagle chicks. It expects to have their own flying 'squad' trained in hunting drones by summer 2017.⁶¹

Anti-UAV Falconry Spreading Further

After the world premiere of anti-drone falconry in safety and security service, the promising results from the Dutch exercise attracted the attention of the British Scotland Yard, which was also potentially interested in making use of this innovative UAV policing tactics.⁶² Apparently, the Scotland Yard and the head of the London's Metropolitan Police, Sir Bernard Hogan-Howe, observed this exercise and took great interest in the

⁵⁷ Watch Japan's Police Drone Catch a Quadcopter, <http://www.popsoci.com/watch-japans-police-drone-catch-quadcopter>

⁵⁸ Politie traint roofvogels om drones te onderscheppen, <https://www.politie.nl/nieuws/2016/september/13/politie-traint-roofvogels-om-drones-te-onderscheppen.html>

⁵⁹ GFA Certified Birdhandler Training Program, <http://guardfromabove.com/services/>

⁶⁰ Dutch police use eagles to hunt illegal drones, <http://www.pbs.org/newshour/bb/dutch-police-use-eagles-hunt-illegal-drones/>

⁶¹ Ibidem.

⁶² Police In London Are Considering Using Eagles To Take Down Drones, https://www.buzzfeed.com/patricksmith/the-long-beak-of-the-law?utm_term=.ul6jalGDNv#.yf2xIw2P1j

achievements of the Dutch National Police, not excluding the fact that Britain may soon start training and employing eagles in battle against unwanted drones and making London safer.⁶³

The UK had already experienced cases of unwanted drone use and sees them as a potential threat to safety and security. It sees drones as a potential threat to safety and security, not only with regards to threats to aviation operations, but also to criminal and terrorist activities. The drone carrying mobile phones, SIM cards and drugs was already found on the grounds of Strangeways Prison in Manchester in November 2015⁶⁴, while a person has been convicted in the UK for drone misuse in September 2015, flying a drone over Premier League football match venues.⁶⁵

While the British have only indicated their mere interest in this innovative anti-UAV practice, the French Air Force follows the Dutch ways of thinking and followed in their footsteps. In November 2016 they demonstrated their very own UAV eagle hunter, allegorically named D'Artagnan⁶⁶ in their Base 118 in Mont-de-Marsan. The French Air Force avails four trained UAV eagle hunters so far, which they acquired in mid-2016; they are reportedly still in the experimental phase of the project⁶⁷. If successful, it could be expected that the French would introduce anti-UAV falconry into operational use – similar to that of the Dutch. On the related note, the French Ministry of Defense has already launched an appeal for offers of new concepts in interception and neutralization of potentially hostile drones. Additionally, the French National Research Agency (*l'Agence nationale de la recherche*) has even allocated a one million EUR budget to advance research on this subject.⁶⁸

Avian Safety Concerns

The GFA and Dutch National Police are both engaged in evaluating this anti-UAV avian force, being cautious of the fact that drones' blades, especially 3D printed ones or those made of carbon fiber, could seriously injure or even kill trained hunter birds. Despite their biological supremacy and natural hunting instincts, as elaborated here, this particular bird safety concern of animal protection and welfare groups goes further to

⁶³ Saviour birds: Danish bird-training company inspires London to train eagles that take down drones, <http://www.ibtimes.com.au/saviour-birds-danish-bird-training-company-inspires-london-train-eagles-take-down-drones-video>

⁶⁴ Drone carrying drugs found in prison grounds at HMP Manchester, <http://www.bbc.com/news/uk-england-manchester-34764417>

⁶⁵ This Guy Just Got Convicted Of Illegally Flying Drones Over Landmarks And Stadiums, https://www.buzzfeed.com/patricksmith/drone-crime?utm_term=.feGNzgQr4w#.lhlBoG15JK; A case somehow similar to one of Serbia's UEFA football match of October 2014 mentioned earlier, though not anything similar to severity of the former.

⁶⁶ French Air Force eagle demonstrates drone-hunting skill to Holland, <https://www.rt.com/viral/372945-french-eagle-drone-hunt/>

⁶⁷ Ibidem.

⁶⁸ Interceptor un drone? "Moins évident que d'arrêter une voiture", http://lexpansion.lexpress.fr/high-tech/intercepter-un-drone-moins-evident-que-d-arreter-une-voiture_1655127.html

their disapproval of bald eagles' preying on any flying objects. Apparently, their staple diet would be fish and carrion, hence assertion has been made that birds are being trained for doing something not natural for them at all – or even not having any cognitive awareness of what drones are.⁶⁹ Finally, criticism⁷⁰ had been directed at human interference with animal species that only a decade ago they were taken off the Endangered Species List.⁷¹

While bald eagle legs are naturally encrusted, which protects them against potential bites or injuries from their prey, and their claws are sharp and have a grip strong enough to crush a bone, the GFA trainers and handlers are now considering creation of specific protection for their animal hunters, an armor-like 'leg or claw protector glove' that would prevent them from being harmed by the rotating blades of the UAVs. This practice would be particularly welcomed in likely scenarios when their trained eagles could be engaged against the larger commercial drones. However, experiences gathered so far in the domain of anti-UAV falconry do not indicate any reports of birds being hurt in the process. The Dutch National Police itself confirmed that none of the eagles were hurt in the process; but, as for the drones, none of them survived.⁷²

Conclusion

Since timely detection and effective neutralization of the untoward commercial drones becomes a more daring task today, whereas finding the drone operator(s) is virtually impossible, this article explored unique characteristics [or a tradecraft signature] of the anti-UAV falconry applied by the Dutch National Police, pending potentially further operational application by the British and French law enforcement. It depicts most recent police and military experiences in exercising anti-UAV falconry that avails operational advantage in scenarios where it is too dangerous to use more conventional countermeasures, which would commonly cause disabled drones to fall on the ground and injure people or induce damage.

While anti-UAV falconry is likely not to develop more significantly in operational use due to its specific restrictive factors, experiences and lessons learned show it avails a noteworthy application benefits within the urban environment that currently cannot be matched with application of other available countermeasures. Moreover, in times when untoward and potentially significantly hostile groups and individuals are increasingly experimenting with and harnessing new UAV technologies, and unsolicited or hostile commercial UAVs use increasingly threatens both general safety and security, and that of inviolable and sensitive environs.

⁶⁹ Kent Knowles, president of the Raptor Conservancy of Virginia. See: Let's Not Force Eagles to Fight Rogue Drones, <http://news.nationalgeographic.com/2016/02/160206-eagle-drone-video-rogue-dutch-police-danger-hunting-robot0/>

⁷⁰ Ibidem.

⁷¹ Bald Eagles Soar off Endangered Species List, But Will Act Be Weakened? <http://news.nationalgeographic.com/news/2007/06/070628-bald-eagles.html>

⁷² Eagles away! Dutch police unveil latest recruits against drones, <https://www.yahoo.com/tech/eagles-away-dutch-police-unveil-latest-recruits-against-144952235.html>

Accordingly, it could be concluded that crowdsourcing of the best available practices in providing most efficient, practical and adaptable response(s) to threat of commercial UAVs would be the most adequate approach that is a common solution to increasing risks of the UAV menace, UAV-born hazards and associated criminal behavior, including violent, destructive or terrorism-related acts. In that sense, anti-UAV falconry [Low-Tech] approach to an existing commercial UAV [High-Tech] problem unarguably keeps its proved response capability within the family of currently available anti-UAV solutions' arsenal.

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THE CHALLENGES OF GLOBALIZATION

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Globalization is a planetary process because the steamroller of the computer revolution, the expansion of the world market, free circulation of goods and capital make society more and more an interdependent network. Contemporary society is in a deeper division of destiny with rising risks, as well as threats. On the one hand there is such increase of cooperation and connection between countries and nations, and on the other hand many new regional conflicts of wider scale threaten to happen.

The existence of different nations, religions, traditions, interests, monopolies, values and morals is the destiny of all inhabitants of the planet. Globalization is the unavoidable historical course. It is the driving force of the world and all societies are confronted with a challenge of adaptation to the new world order. However, the path of modern society is open and uncertain; it can lead to either unification or fragmentation of the world, cooperation of civilization or conflicts of people.

If the world wants to survive, it must cooperate regardless of many antagonisms, mistrust and military competition of the great powers. The modern world requires much wisdom and good will, concession and understanding in order to build brighter, shared future for all.

Key Words: *globalization, planetary process, cooperation, conflict, threats*

Globalization – the Conflict and Hope

The ones who wisely conclude are deeply right: "So much has happened so quickly that we need new theories to explain the recent past, let alone to shape the opportunities, challenges, and threats of the era that lies ahead."² The famous historian Toynbee noticed that there are some events, which are the symbols of one epoch; globalization is the thing, which determines the spirit of the present time. It reshapes everything that is touched upon, fully changing the nature of the nation-state and the interna-

¹ Professor Ilija Kajtez, PhD, Col. Rtd. and Assoc. Professor Dragan Gostović, PhD, Col. Rtd.

² Cohen, R. Mihalka, M.: *Cooperative security: New Horizons for International Order*, The Marshall Centre Papers, No. 3, Garmisch-Partenkirchen 2001, p. III (Preface)

tional order.³ That change is not only voluntary, but often dramatic and bloody because of conflicts, destruction and wars. Globalization⁴ is subject to misunderstanding and irrationality because it is the imprecise and indefinite concept. It is not a single process, but the composition of multiple processes that are sometimes intertwined, but also in conflict. Some people say that it is the synonym for the 'world without borders'.

Globalization is an extremely complex, dynamic and contradictory social-historical phenomenon, it is "understood as ... establishing of the unique global system...because the cultural, social, economic and political differences are destroyed in the world...However, globalization is often followed by localization, regionalization... religious fundamentalism can be understood as the answer to globalization..."⁵ The initial picture about globalization as the source of peace and progress vanished, giving way to many characteristics of the 'black utopia' which far exceeds Orwell's dark expectations. Richard L. Kugler stresses that globalization is rather understood positively because it was considered that it would bring economic progress and democracy to every corner of the world. However, due to many complex reasons, globalization, unfortunately, creates new divides in the world. Then he claims that democracies become more stable, but in other parts the losers of globalization, who do not know how to react to radical social-historical changes that happen too quickly around them are multiplied. Therefore Kugler concludes: "In this atmosphere of angst and confusion, globalization is nurturing venomous anti-Western ideologies and deeply angry actors – including nihilistic terrorists and menacing countries bent on acquiring WMD systems – that are willing to lash out against Western democracies and others that they blame for their fate. These new threats are merging together in ways that reinforce each other. They also are gaining access to modern information systems and technologies that allow them to inflict violence at very long distances, from one continent to the next."⁶

In the contemporary world there is not only agreement, harmony and peace, but also various competitions, severe conflicts and wars. The future of the world according to some authors, who are more realists than pessimists, does not look bright at all. As already mentioned, Kugler claims that the 21st century, despite globalization or because of it is becoming a dangerous time for living with many challenges and threats like global terrorist networks, wild ethnic wars, destruction of countries, regional violence, the spread of weapons of mass destruction (WMD), and geopolitical rivalry. Some people speak about the 21st century as a "new hundred-year war" – an ugly time of chaos and aggression in many parts of the planet.

Globalization encompasses all: "... international events and networks of the thing".⁷ Integration is a planetary process because the steamroller of the computer revolution,

³ "The Westphalian concept of the absolute right of states to act as they see fit within their own territories is no longer accepted by liberal democratic states... The concept of state sovereignty cannot be a screen behind which mass violations of human security can take place..." *ibid.*, p. 7

⁴ Globalization is the occurrence of the complex network of the common connection, which means that our lives are influenced by the decisions and events around us.

⁵ Heywood, A.: *Politics*, Second Edition, originally published by Palgrave Macmillan Ltd. Hampshire, New York, 2002, p. 138

⁶ Ham, P.V. Kugler, R.: *Western Unity and the Transatlantic Security Challenge*, The Marshall Centre Papers, No. 4, Garmisch-Partenkirchen, 2002, p. 42

⁷ Held, D. McGrew, A. Goldblatt, D. Perraton, J.: *Global Transformation, Politics, Economics and Culture*, Policy Press, Cambridge 1999, p. 16

the expansion of the world market, free circulation of goods and capital make society more and more an interdependent network. Contemporary society is in a deeper division of destiny with rising risks, as well as threats. On the one hand there is such increase of cooperation and connection between countries and nations, and on the other hand many new regional conflicts of wider scale threaten to happen. "No single trend, over the past decade, deserves more careful analysis than the remarkable growth of cooperation among the countries of Eurasia and North America."⁸ A global order looks to us as the force which moves invisible threads of our everyday life, influences and reshapes the lives of billions of people. Globalization is both the conflict and hope at the same time: "Dramatic social conflicts about globalization - its democratic or repressive, more human and asocial, multipolar and unipolar look - become a new key of understanding of social events ... the ones see globalization as...the objective and spontaneous process, for the others it is exclusively the project of west domination ... the recipients of globalization find exclusively civilization progress ... for the losers it is just destructive force and new curse..."⁹ Complex as the world is, turbulent, whirling and contradictory, with many lights and abysses of darkness. Everything is involved in the game, the destinies of billions of people, the fortune of people and hopes of single beings.

Trying to better understand the processes of globalization and integrations we can more easily understand modern conflicts, challenges and threats to the world peace and human security. Does globalization really bring social well-being or a social abyss of inequality, destruction of national and cultural identity of people, and wars between civilizations? Does it support planetary democracy or the authoritarian power of the elite, an order of harmony with nature or result in the irreversible destruction of natural resources? There are more serious and difficult questions about effects of globalization on humanity and the world than sure and unquestionable answers. The thing that is new in the conception of the modern world is that people are not only connected territorially; the end of 'society' as exclusively territorial notion is coming.

The World Always Tended to Cooperate

The concept of an interconnected world is not historically new. The development of trade routes, such as the Silk Road, as well as the expansion of great religions, civilizations and empires, are historical forms of uniting different worlds. The ideas of globalization have existed for a long time. However, the necessary conditions for its planetary spread arose after the disappearance of the bipolar world and the fall of the Berlin Wall.

At the beginning of the 1990s many strategists, who were involved in the rise of optimism, called it the "New World Order". In 1992 three leading American strategists - Ashton Carter, William Perry and John Steinbruner - spoke about the cooperation in security as the way for finding new approaches to the world peace: "Organizing principles like deterrence, nuclear stability and containment embodied the aspirations of the

⁸ Cohen, Mihalka, *op.cit.*, p. III (Preface)

⁹ See: Held, D. McGrew, A. (eds): *The Great Globalization debate: An Introduction, The Global Transformations Reader*, Policy Press, Cambridge 2000

Cold War... Cooperative Security is the corresponding principle for international security in the post-Cold War era."¹⁰ Cooperation in many areas of life became a new thing in international relations among recent political and military enemies, and this demonstrated a new period of peace. Everything looked like "... an escape from narrow Cold War "zero-sum" strategies into the broad sunlit vistas of international peace and harmony. However, as is often the case in life, events have demonstrated that this early burst of optimism was, at best, premature."¹¹

People often fall into uncritical optimism because of their great desire that something would be as they would like it to be, especially after a long period of suffering and weak state of society and when that social misery ends in a radical way. After that great change people become engulfed in the wave of excessive hope and then everything looks simply like utopia even to the most careful and rational analysts: "... Francis Fukuyama went so far that he proclaimed these events 'the end of history'. Under this he included that the ideological discussion was practically over by the world triumph of the west liberal democracy..."¹² In the moment of the great euphoria – triumph of the west forces and the fall of the USSR, it seemed to many people that it was finally the end of war and all dramatic conflicts belong to history. The moment of euphoria quickly passed - "war was back" in some parts of the world including parts of the former USSR and Yugoslavia. Some people think that in the insecure world the West sees its safety in its weapons, and in keeping "the world South under the Damocles' sword of military interventionism".¹³ Finally, global terrorism provoked a new kind of total world war by monstrous and spectacular acts in the USA, Madrid, London, Paris and Brussels. Instead of permanent and stable peace, the end of the Cold War brought growing militarism and the world divided into the explosions of internal conflicts and planetary military interventionism. The global war is depicted by the destruction of all material grounds of life, growing technological barbarism and readiness for the total destruction of society. It also has an extreme collective-psychological function: the creation of planetary fear. The world is still the place of deep-rooted inequalities and conflicts of interests, values and traditions.

The Planetary Process of Networking

Scholars of globalization can be divided into "hyper-globalists", "skeptics" and "transformationalists". For the first ones, globalization is the objective rule and an iron historical necessity: "... the event which is not the matter of will or the choice".¹⁴ The market and democracy became universally accepted, the unipolar world was made, dramatic fights, wars and conflicts are in the past, and a harmonious order in which the crucial human problems are solved prevails.¹⁵ However, this optimism conflicts with reality. In contrast

¹⁰ Carter, A. Perry, W. Steinbruner, J.: *A New Concept of Cooperative Security*, The Brookings Institution Press, Washington 1993

¹¹ Cohen, Mihalka, *op.cit.*, p. 3

¹² Heywood, *op.cit.*, p. 30

¹³ Holm, H.H. Sorensen, G.: *Whose World Order, Uneven Globalization and the End of Cold War*, Oxford 1995

¹⁴ Friedman, T.: *The Lexus and the Olive Tree, Understanding Globalization*, Farrar Straus Giroux, New York 1999

¹⁵ Fukuyama, F.: *The End of the History and the Last Man*, Hamish Hamilton, London 1992

to this 'pink utopia' of life, all problems of the world¹⁶ are speaking for themselves and can be solved in the future by war or peace, cooperation or competition.

The existence of different nations, religions, traditions, interests, monopolies, values and morals is the destiny of all inhabitants of the planet. Globalization is the unavoidable historical course. It is the driving force of the world and all societies are confronted with a challenge of adaptation to the new world order. However, the path of modern society is open and uncertain; it can lead to either unification or fragmentation of the world, cooperation of civilization or conflicts of people. The advocates of globalization think that the last barrier to integration is localism, which should be destroyed through violence: "The crucial issue of the 21st century in all the spaces will be the conflict... between the forces of the modern global economy and the forces of the atavistic tribalism..."¹⁷ Economy is the powerful driving force of globalization, but it is not its sole force. Globalization is an objective and planetary process¹⁸ of the wider net of correlation and interdependence...¹⁹ However, the future of the world is unpredictable. All the issues of mankind remain open and uncertain. The future days offer both fear and hope to the world. Historical developments can lead us to ecological and nuclear cataclysm, regional division of the world, a democratic world, and Orwell's "world society".

Richard Cohen thinks that this world is "dangerous and unstable" and that it can be a less risky place. "We need to build a system based upon mechanisms and institutions already in place, i.e., institutions that have proven themselves effective in providing relative peace, stability, and prosperity to nations and groups of nations in the last half of the 20th century."²⁰ He thinks that the whole northern hemisphere can become the place of security and cooperation, and he carefully adds that: "the range... of the cooperation in security is probably limited" by the lack of "crucial values and...common geostrategic interests". Considering that after these optimistic words Russia and China performed common military manoeuvres, this project of Cohen becomes dubious. Let's think that this project of cooperation of the Southern hemisphere with all suspicions becomes reality, the justifiable question remains: will the world, which is separated into the North and South be a more secure place for all its inhabitants or will it remain economically, culturally, politically and religiously divided? This planetary problem of the future is clearly seen by some of the authors, who loudly pose the question: in the 21st century can the democratic society of the West control growing chaos along the southern strategic arc, which spreads from the Middle East to the southern and eastern coasts of Asia?

¹⁶ The most important problems of the world should be stressed: demographic explosions and the hunger of people, the concentration of the people in small areas, all the forms of contamination, dirty technologies, and uncontrolled destruction of the natural resources of the Earth; global warming and ozone layer, earthquakes, droughts, typhoons, uncontrolled technologies from which there is the danger of the nuclear terrorism and the possibility of many kinds of epidemics. The future world, the world of global problems, has many problems to solve.

¹⁷ Fromkin, D.: World Politics in the Twenty-First Century, *World Policy Journal*, No.10, 1993

¹⁸ The closer connection of the world is caused by: technological-informatics revolution, the creation of global market, the closer connection between one event in one region to the other part of the planet, the rise of more powerful transnational and overnational economic powers and political institutions, the spreading of the same forms of life on the whole social space of the world.

¹⁹ See: Keohane, R. Nye, J.: Globalization: What's New? What's Not? So What? *Foreign Policy*, Spring, 2000, pp. 104-119

²⁰ Cohen, Mihalka, *op.cit.*, p. 4

There are some famous authors who blame globalization because it is bringing risks and uncertainty, which Ulrich Beck (1992) called 'the society of risk' marked by individualism and weakening of tradition, where uncertainty goes out of the familiar economic and social changes: "On overpopulated social...space... the explosion of violent cultural conflicts, the rise of tall fences, retreating into the towers of ethnic, nationalistic and religious local fundamentalism is possible..."²¹ Besides the optimists, who regard globalization as the increase of the welfare of the people, there are those who warn that: "'americanization' ...of the world...and the extreme course of retrograde islamic fundamentalism... open the chapter of the dramatic conflicts, the wars of civilizations".²² There are signs that globalization is taking on a social, authoritarian character and that society is turning into 'the world risk society'.²³ Risk is a permanent feature of human existence through history, but it has never assumed such proportions until now." The 'Four Horsemen of the Apocalypse'- the danger of ecological cataclysm, the catastrophe made by nuclear, biological and chemical weapons; malign increase of poverty and the conflict of civilizations, global terrorism - are invading the planet".²⁴ Much wisdom, capabilities and tolerance will be necessary for the statesmen of the biggest world nations to avoid all the traps and catastrophies, which the future time of challenges, risks and danger brings.

War is Ahead of the Forces and Processes of Globalization

There is a question of the relation between war and progress in human history. War was crucial for establishing all the great world empires: "... It is known that Napoleon's wars strongly promoted ... spreading European ideas, which caused scientific, technical and economical progress in the 19th century and materially united mankind..."²⁵ Solovjov explains the relation between war and the spreading of peace in history and says: "In the whole peace issue the war was a necessary tool, and armed forces support. The key of the West success in creating global empires was in the "military revolution" which was the product of the industry, like the development of heavily armed ships for long sails and it announced the new place of Europe in the world."²⁶ Well: "...Taken together, superior economic power, political unity and military sovereignty serve as the clearing of the unstoppable spreading of the West way of life in the recent two centuries"²⁷ In a classical study: "The Rise and Fall of World Orders"... T. Knutsen²⁸ shows "four waves of war" of the modern time: "...Iberian world order", under the hegemony of Spain in the 16th century, and the order of the 17th century, with the

²¹ Commission on Global Governance, *Our Global Neighbourhood: The Report of the Commission on Global Governance*, Oxford University Press, Oxford 1995

²² Huntington, S.: *The Clash of Civilizations and the Remaking of World Order*, Simon and Schuster, New York 1996

²³ Beck, U.: *World Risk Society*, Policy Press, Cambridge 1999

²⁴ Pečujlić, M.: *Globalization*, Belgrade 2002, pp. 21-22

²⁵ Kennedy, P.: *The Rise and Fall of the Great Powers, Economic Change and Military Conflict from 1500 to 2000*, Fontana Press, London 1989

²⁶ Solovjov, V.: *The Selected Works, part 1*, CID, Podgorica 1994, Chapter 18, *The Idea of War*, p. 438

²⁷ Giddens, A.: *Sociology*, Belgrade 2001, p. 55

²⁸ Knutsen, T.: *The Rise and Fall of World Orders*, Manchester University Press, 1999

Netherlands on the top, the order "Pax Britanica" in the 18th and 19th century, and in the 20th century "Pax Americana" and... "the new world order" born on the ashes of the Cold War... Each of these orders... encompasses wider space of the world arena. The foundations of hegemony are manifold... technological, economic and military supremacy of the most powerful force of its time, but the legitimacy as the representative of universal values of its time...". A powerful army is always the significant guarantee to the most powerful forces to maintain world order, and that's why even today the global elite of power creates a planetary military force that will maintain the desired order. The militant wing of globalization asserts: "...It is not far when we will have to throw away every kind of sentimentality, to act from the position of the direct, physical force".²⁹ To that supremacy of military force the other side is confronted by global terrorism, and that conflict was put to a much bigger level of risk and threats day in day out. Many times we wonder if that was the irreversible historical process which might lead to cataclysm and biological destruction of the human species. Our time is the time of power. Power and supremacy are magical words which move the world. Whatever we think about globalization, we must agree that planetary processes are leading the world to quick, deep, revolutionary and irreversible: economic, cultural, political, technical-technological and military changes in modern times.

Terrorism is a social phenomenon that can radically change and endanger the lives of people and many social communities. The possible use of nuclear weapons for total war and mass destruction terrorism have become fateful issues for mankind. There is the danger now that some terrorists could get nuclear, chemical and biological weapons. If the world wants to survive, it must cooperate despite many antagonisms, mistrust and military competition of the great powers. Today and tomorrow terrorism endangers the biological survival of the world, putting all the values of civilization at risk. The risk of life is put to its ultimate and irretrievable point. Many deep and complex causes of terrorism should be addressed, not only its fatal and obvious consequences. Analysts stress that in the future terrorist actions will include increasingly sophisticated forms of destruction and become more total because they will attack the most important national structures and vital commercial systems.

Modern wars affect the lives of all people. Due to the fact that the world has become interdependent, complex and thickly intertwined, a new way of thinking about war and peace is necessary. At the end of the Cold War international communication improved and economic exchange and travel between countries increased significantly. Unfortunately, terrorists also adapted to the new environment and effectively exploited its openness for their violent aims.

The global activities of terrorists are coordinated using human couriers, mobile and cable television, e-mails, internet and video tapes. International terrorist networks are equipped with modern technology which they use to exchange information, exercise, and plan and execute common activities. Terrorism is the big challenge to world peace "because terrorism became a global threat," but it cannot be rooted out using only military weapons. The war of terrorists is global and permanent because it is not the question whether the terrorists would attack, but: "When and where will that happen?" Terrorists declared war against the world, but the causes of terrorism are deep and far-reaching. They require the complete reshaping of the modern world into a place of cooperation, tolerance and better life for people. Terrorism relies on constant armed conflict. The

²⁹ Robinson, W.: *Promoting Poliarchy, Globalization, US Intervention, and Hegemony*, Cambridge University Press 1996

historical means and character of human conflict are changing, but the presence of violence and competition among people, communities and countries persists. Planetary terrorism reflects Hobbes's thinking about human nature and war in his famous work "Leviathan" (1651). For Hobbes, the term "war" applies not only to times of "constant fight", but also "the whole period where the readiness to war is visible". The modern world requires much wisdom and good will, concession and understanding in order to build brighter, shared future for all.

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A NEW AGE OF GLOBAL SECURITY: THE “UKRAINIAN QUESTION” AND “KOSOVO PRECEDENT”

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The research topic of this article is the “Ukrainian Question” in perspective of “Kosovo precedent” within the framework of international law, current stream of international relations, contemporary world politics and global security. The aim of the article is to investigate the possible solutions for the current Ukrainian political crisis through the prism of “Kosovo precedent” and global security perspectives. The article consists of nine sections dealing with the Ukrainian identity, historical background of the Ukrainian statehood, the 2014 Euromaidan *coup d'état* and the beginning of the Ukrainian crisis, “Kosovo precedent” and the “Ukrainian Question”, the possible political solution of the current Ukrainian crisis founded on the example of “Kosovo precedent”, a global geopolitical context of the “Ukrainian Question” and “Kosovo precedent”, the geopolitical convergence between the US and Russia as a geostrategic background of the “Ukrainian Question”, Russian geopolitical and national interest in Ukraine, and finally conclusions of the investigation. The fundamental conclusion of the research is that “Kosovo precedent” has already served and will further serve in the near future as the foundation for territorial decomposition of Ukraine by neighbouring Russia, opening the doors for a new age of global security and international relations.

Key Words: *Ukraine, Kosovo, separatism, international law, humanitarian intervention, international relations, global politics, global security*

A Ukrainian identity?

Ukraine is an East European territory, which originally formed the western part of the Russian Empire from the mid-17th century.¹ That is the present-day independent state and separate ethnolinguistic nation as a typical example of Benedict Anderson's theory-model of

¹ This article is a critical contribution to the following edition of the books: Roger E. Kanet (ed.), *Russian Foreign Policy in the 21st Century*, New York: Palgrave Macmillan, 2011; Elizabeth A. Wood et al, *Roots of Russia's War in Ukraine*, New York–Chichester, West Sussex, Columbia University Press–Woodrow Wilson Center Press, 2016.

the "imagined community" – a self-constructed idea of the artificial ethnic and linguistic-cultural identity. According to Anderson, the nation is abstract and mainly subjective social construction that defies simple, objective definition, yet it has been for the last two centuries the crucial basis of conflict in world politics and international relations through assertion of their expressed nationalism.² However, nationalism is quite broad ideology, which can be easily transformed into political movement that became the case, for instance, exactly with the Ukrainian self-imagined ethnonational identity. Political actions, in principle by all means on behalf of its own nation, usually encompass a very large scale of political ideas and practice also including ethnic cleansing and/or genocide of particular other national groups that happened, for example, in the WWII when the Poles, Russians, Jews and Gypsies (Roma) experienced the genocide committed by the Ukrainian Nazi-Fascist nationalists (the *Banderists*).

Before 2014 Ukraine was the home of some 45 million inhabitants among whom, according to the official data, there was around 77 percent of those who declared themselves as the Ukrainians. Nevertheless, many Russians do not consider the Ukrainians or the Belarus as "foreign", but rather as the regional branches of the Russian nationality. In difference to the Russian case, the national identity of the Belarus or the Ukrainians was never firmly fixed, as a matter of fact, as it has always been in the constant process of changing and evolving.³ The process of self-constructing the identity of the Ukrainians after 1991 has basically been oriented vis-à-vis Ukraine's two most powerful neighbours: Poland and Russia. In other words, self-construction of the Ukrainian identity (like the Montenegrin or the Belarus) could have been done so far just to claim that the Ukrainians are not either the Poles or the Russians, but what they really are is of a great and endless debate. Therefore, an existence of an independent state of Ukraine, nominally as a national state of the *Ukrainians*, is open to doubt indeed from both historical and ethnolinguistic perspectives.

The Slavonic term *Ukraine*, for instance, in the Serbo-Croat case *Krajina*, means a *Borderland* in English – a provincial territory situated on the border between at least two political entities: in this particular historical case, between the Kingdom of Poland and the Grand Duchy of Lithuania as the Republic of Both Nations (1569–1795) and the Russian Empire.⁴ The term has mostly been used from the time of the Treaty (Truce) of Andrusovo in 1667 between these two states. In other words, *Ukraine* and the *Ukrainians* as a natural objective-historical-cultural identity have never existed as it was considered only as a geographic-political territory between two other naturalhistorical entities (Poland and Russia). All (quasi)historiographical mentioning of this land and the people as *Ukraine/Ukrainians* referring to the period before the mid-17th century are quite scientifically incorrect. However, in many (pro)Western academic writing cases it is politically inspired and coloured with the purpose to present them as something crucially different from the historical process of ethnic genesis of the Russians.⁵

² Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, Revised edition, London: Verso, 2016.

³ On the Ukrainian self-identity construction, see [Karina V. Korostelina, *Constructing the Narratives of Identity and Power: Self-Imagination in a Young Ukrainian Nation*, Lanham, Maryland: Lexington Books, 2014].

⁴ A German historical term for Ukraine would be a *mark* – a term for the state borderland, which existed from the time of the Frankish Kingdom/Empire of Carl the Great.

⁵ For instance, Alfredas Bumblauskas, Genutė Kirkienė, Feliksas Šabuldo (sudarytojai), *Ukraina: Lietuvos epocha, 1320–1569*, Vilnius: Mokslo ir enciklopedijų leidybos centras, 2010.

Historically speaking, it was a Roman Catholic Vatican that was in fact beyond the process of creation of the “imagined community” of the *Ukrainian* national identity for the very confessional-political purpose to separate the people from this borderland territory from the Orthodox Russian Empire. Absolutely the same thing, as a matter of comparison, was done by Vatican’s clientstate Austria-Hungary in regard to the national identity of Bosnian-Herzegovinian population when this province was administered by Vienna-Budapest from 1878 to 1918 as it was the Austria-Hungarian government, which created a totally artificial and new ethnolinguistic identity – the *Bosnians*, just not to be the (Christian Orthodox) Serbs, who were at that time a strong majority of the provincial population.⁶ Therefore, to be a Bosnian meant not to be a Serb with a final consequence to become a Roman Catholic, which means a Croat. Similarly, in the case of Ukraine, to be a *Ukrainian* means primarily not to be a Christian Orthodox Russian.

The creation of the ethnolinguistically artificial *Ukrainian* national identity and later on a separate nationality was a part of a wider confessional-political project by Vatican in the Roman Catholic historical struggle against the Eastern Orthodox Christianity (the Eastern “schism”) and its churches within the framework of Pope’s traditional proselytizing policy of reconversion of the “infidels”. One of the most successful instruments of a soft-way reconversion used by Vatican was to compel a part of the Orthodox population to sign the Union Act with the Roman Catholic Church and recognize in such way the supreme power of the Pope and dogmatic *filioque* (“and from the Son” – the Holy Spirit proceeds from the Father and the Son). Therefore, the ex-Orthodox believers, who became the Uniate Brothers or the Greek Orthodox believers became in a great number later on pure Roman Catholics, who changed their original (from the Christian Orthodox time) ethnolinguistic identity, as well. This is, for instance, very clear in the case of the Christian Orthodox Serbs in Zumberak area of Croatia, who passed the way from the Christian Orthodox Serbs to the Greek Christian Orthodox believers, but later became the Roman Catholics and today they are finally the Croats. Something similar occurred in the case of Ukraine. The Union of Brest with a part of the Orthodox population within the borders of the Roman Catholic Lithuanian-Polish Commonwealth (today Ukraine) was announced by Vatican on October 9th, 1596..⁷ The crucial issue in this matter is that today Ukraine’s Uniates and the Roman Catholics are mostly anti-Russian oriented having at the same time strong *Ukrainian* national feelings. Basically, both the *Ukrainian* and the *Belarus* present-day ethnolinguistic and national identities are historically founded on the anti-Christian Orthodox policy of Vatican within the territory of ex-Polish-Lithuanian Commonwealth that was in essence an anti-Russian policy.

The Lithuanian historiography on the Church Union of Brest in 1596 clearly confirms that: “...the Catholic Church more and more strongly penetrated the zone of the Orthodox Church, giving a new impetus to the idea, which had been cherished since the time of Jogaila and Vytautas and formulated in the principles of the Union of Florence in 1439, but never put into effect – the subordination of the GDL Orthodox Church to the Pope’s rule”.⁸

⁶ Лазо М. Костић, *Наука утврђује народност Б-Х муслимана*, Србиње–Нови Сад: Добрица књига, 2000.

⁷ Arūnas Gumuliauskas, *Lietuvos istorija: Įvykiai ir datos*, Šiauliai: Šiaures Lietuva, 2009, 44; *Didysis istorijos atlasas mokyklai: Nuo pasaulio ir Lietuvos praeities iki naujausiųjų laikų*, Vilnius: Leidykla Briedis, (without year of publishing), 108.

⁸ Zigmantas Kiaupa et al, *The History of Lithuania Before 1795*, Vilnius: Lithuanian Institute of History, 2000, 288.

In other words, the rulers of the Roman Catholic Grand Duchy of Lithuania (the GDL) from the very time of Lithuania's baptizing in the period 1387–1413 by Vatican had a plan to catholicize all Orthodox believers from the GDL, among whom the overwhelming majority were the Slavs. As a consequence, the relations with Moscow became very hostile as Russia accepted a role of the protector of the Christian Orthodox believers and faith and therefore the Church Union of Brest was seen as a criminal act by Rome and its clientstate the Republic of Two Nations (Poland-Lithuania).

Today, it is absolutely clear that the most pro-Western and anti-Russian part of Ukraine is exactly the West Ukraine – the lands that were historically under the rule of the Roman Catholic ex-Polish-Lithuanian Commonwealth and later on the former Habsburg Monarchy (Austria-Hungary). This is obvious, for example, by the presidential election voting results in 2010 as the pro-Western regions voted for Y. Tymoshenko while the pro-Russian regions of the East Ukraine did it for V. Yanukovych. It is a reflection of the post-Soviet Ukrainian identity dilemma between *Europe* and *Eurasia* – a dilemma that is common for all Central and East European nations, which historically played the role of a buffer zone between the German *Mittel Europa* project and the Russian project of the pan-Slavonic unity and reciprocity.

The fact is that the western territories of the present-day Ukraine are mainly populated by the Roman Catholics, the East Orthodox and the Uniates. This part of Ukraine is mostly nationalistic and politically pro-Western oriented. The East Ukraine is in essence a Russophone territory and subsequently "tends to look to closer relations with Russia".⁹ The necessary preconditions for de-Russification and Ukrainization of the local inhabitants were founded by Vatican policy of signing the union with the Christian Orthodox believers in the present-day West Ukraine since 1596. In the course of time, as a consequence of such policy by the Roman Catholic Church, Ukraine became sharply divided by confession, national feelings, economic development, linguistic identity and geopolitical orientation to such extent that today Ukraine is an example of the "failed state".¹⁰

According to scholarly definition, "a failed state is a state that is unable to perform its key role of ensuring domestic order by monopolizing the use of force within its territory".¹¹ It is basically a synonym for the "quasi-state", which is internationally recognized as a sovereign community, but it is not able to protect the basic needs of its own citizens. Ukraine and Kosovo, among many other states, clearly belong to the category of the "failed-states", "which are unable to govern their societies without significant external support".¹² However, in some cases, the external intervention in the inner affairs of the state is justified as the state is (allegedly) "failed" and therefore unable to solve some fundamental internal problem(s) as it became the official explanation of the NATO for its own military intervention in 1999 against Serbia and Montenegro. Before the intervention in Kosovo, the NATO succeeded to obtain substantial public backing by controlling main

⁹ John S. Dryzek, Leslie Templeman Holmes, *Post-Communist Democratization: Political Discourses Across Thirteen Countries*, Cambridge–New York: Cambridge University Press, 2002, 114.

¹⁰ Зоран Милошевић, „Друштвени процеси у самосталној Украјини“, *Радови*, Филозофски факултет, Источно Сарајево, 2005, 289.

¹¹ Andrew Heywood, *Global Politics*, New York: Palgrave Macmillan, 2001, 121.

¹² John Baylis, Steve Smith, Patricia Owens (eds.), *The Globalization of World Politics: An Introduction To International Relations*, Fourth edition, New York: Oxford University Press, 2008, 549.

mass-media sources, which had the task to wash brains of the audience. Nevertheless, Kremlin can practice the same NATO policy from 1999 of solving the inner problems of the “failed state” in the future in the case of (the East) Ukraine or any other state around Russia (for instance, Moldova, Azerbaijan, the Baltic States, etc.).

According to the 2001 census, 17.3 percent out of Ukraine's 45 million inhabitants were the Russians, but 30 percent spoke the Russian language. Subsequently, a great part of those who identified themselves as the *Ukrainians* recognized that their native language is, in fact, the Russian. In addition, there were 83 percent of Ukraine's inhabitants in 2008 who chose the Russian as a *lingua franca*. There is also a mixture of the Russian and Ukrainian language with predominant Russian vocabulary spoken in the countryside – the *Surzhik*.¹³

The Ukrainian authorities have not properly solved the problem of the official language in the country until now as it is officially defined that the *Ukrainian* is spoken in the western regions of the country while the Russian is spoken in the eastern provinces of Ukraine and even used as a *lingua franca* by majority of the population. Therefore, an official bilingualism would be a matter of a real solution of many current ethnopolitical problems in Ukraine. If Belgium can be an officially bilingual state, there is no any obstacle for Ukraine to be the same.

Historical background of the Ukrainian statehood

The German occupation forces were the first to create and recognise short-lived state independence of Ukraine in January 1918 during the time of their own inspired and supported anti-Russian Bolshevik Revolution of 1917–1921. As re-occupied by the Bolshevik Red Army, the eastern and southern parts of the present-day territory of (the Greater) Ukraine joined the USSR in 1922 as a separate Soviet Socialist Republic (without Crimea),¹⁴ while the western territories of the present-day Ukraine were occupied by Poland in the spring of 1920 and annexed. There was not any kind of territory within Poland with the name of Ukraine differently to the Soviet Union's case from the same period of time (1922–1939).¹⁵ The population of the West Ukraine did not even resist the Polish invasion and occupation of their land and did not show great enthusiasm for the idea of the Ukrainian nationalist leader Symon Petliura to establish the *Ukraine People's Republic*. His nationalistic army soon passed to the Polish side, but became remembered after anti-Semitic pogrom, which was repeated on a much larger scale two decades later by Stepan Bandera – a Nazi Ukrainian leader who became the idol of many Euromaidan patriots in 2014. Nevertheless, for J. Pilsudski's Poland, Ukraine was the main springboard for the military assault on the USSR and its destruction as it was an idea by the Polish military headquarters in 1932–1933 when the Soviet Ukraine suffered a great famine caused by the anti-agricultural policy of J. V. Stalin's administration.

¹³ Срђан Перишић, *Нова геополитика Русије*, Београд: Медија центар „Одбрана“, 2015, 273–275.

¹⁴ According to the 1926 Soviet census of Crimea, the majority of its population were the Russians (382.645). The second largest ethnic group were the Tartars (179.094).

¹⁵ According to Lonnie R. Johnson, in 1931 there were 10.1 percent of the speakers of the Ukrainian language as their native tongue out of a total number of Poland's population [Lonnie R. Johnson, *Central Europe: Enemies, Neighbors, Friends*, New York–Oxford, 1996, 36].

Therefore, (a Jew) V. I. Lenin¹⁶ has to be considered as the real historical father of the Ukrainian statehood and the contemporary nationhood. Ukraine was the most fertile agricultural Soviet republic. However, it was catastrophically affected by (a Georgian) J. V. Stalin's economic policy in the 1930s in particular, which neglected agricultural production in favour of speedy industrialisation of the country. The result was a great famine (*holodomor*) in the period 1932–1933 with around seven million people dead, and the majority were the ethnic Russians. A territory of the present-day Ukraine was devastated during the WWII by the Nazi German occupation forces from 1941 to 1944, who installed a puppet and criminal Nazi-Fascist regime of S. Bandera (1900–1959) in Ukraine that committed genocide against Poles, Jews and Russians.¹⁷ For instance, the Ukrainian militia (12.000) directly participated in the 1942 holocaust of some 200.000 Volhynian Jews together with 140.000 German policemen. The Ukrainian mass killers mastered their job from the Germans and applied their knowledge on the Poles, as well.¹⁸ However, after the war, the former members of the Ukrainian Nazi-Fascist forces were channelled by the CIA out of the territory controlled by the USSR in Europe like the Nazi-Fascist collaborators from the Baltic States (Estonia, Latvia and Lithuania), Slovakia and Croatia. The most important channel to evacuate those notorious criminals was Vatican with its very close historical ties to the far-right movements and chauvinistic extremists in the Central, Eastern and South-East Europe. A central figure in this project and process was a Croat Monsignor Prof. Dr. Krunoslav S. Draganović, who ran escape routes for the Croat Ustashi fugitives and served as the main representative of the Nazi-Fascist Independent State of Croatia in Vatican.¹⁹ His colleague, the Ukrainian Archbishop Ivan Buchko, helped free a Ukrainian Waffen SS legion by intervening directly with the Pope Pius XII.

After the war, J. V. Stalin, supported by the Ukrainian party-cadre N. Khrushchev, deported about 300.000 Ukrainians from their homeland as they were accused for the collaboration with the Nazi-Fascist regime during the war and the participation in genocide done by S. Bandera's government. However, after the war the Ukrainians were directly rewarded by Moscow for the collaboration with the Germans and participation in S. Bandera's organized genocide as the lands of Transcarpathia, littoral Moldova (Bessarabia), Polish Galicia and part of Romania's Bukovina became annexed by the Soviet Socialist Republic of Ukraine in 1945 followed by Crimea in 1954. These territories, which have never been a part of any kind of Ukraine and are not overwhelmingly populated by the ethnolinguistic Ukrainians, were included into the Soviet Ukraine primarily due to the political activity of the strongest Ukrainian cadre in the USSR – N. Khrushchev, the person who inherited Stalin's throne in Moscow in 1953. At this place, a parallel with Croatia is an absolute: for the Croat committed genocide against the Serbs, Jews and Roma by A. Pavelić regime (a Croat version of S. Bandera) during the WWII in the territory of the Independent State of Croatia a post-war (Socialist Republic of) Croatia was awarded by a Croat-Slovenian dictator of Yugoslavia J. B. Tito with the lands of Istria, Adriatic islands and Dubrovnik – all of them have never been in any kind of the state of Croatia before the WWII.

¹⁶ V. I. Lenin was a Jew, but not ethnic Russian. His ethnic origin can explain his comprehensive anti-Russian politics.

¹⁷ On Stepan Bandera, see [Grzegorz Rossoliński-Liebe, *Stepan Bandera: The Life and Afterlife of a Ukrainian Nationalist. Fascism, Genocide, and Cult*, Stuttgart, ibidem, 2014].

¹⁸ Timothy Snyder, *Tautų rekonstrukcija: Lietuva, Lenkija, Ukraina, Baltarusija 1569–1999*, Vilnius: Mintis, 2009, 183.

¹⁹ Драгољуб Р. Живојиновић, *Ватикан, католичка црква и југословенска власт 1941–1958*, Београд: Просвета–Терсит, 1994, 232–276.

M. Gorbachev's policy of deliberate dissolution of the USSR from the time of Reykjavik bilateral meeting with the US President Ronald Reagan in 1988 caused a revival of the ethnic nationalism of the Ukrainians, who proclaimed independence on August 24th, 1991 (confirmed in referendum on December 1st, 1991 only by those who did not boycott it)²⁰ in the wake of anti-Gorbachev's military putsch in Moscow (mis)using the political situation of paralyzed central government in the country. The state independence of Ukraine was proclaimed and later internationally recognized within the borders of the Greater Stalin-Khrushchev's Ukraine with at least 20% of ethnic Russian population living in a compact area in the eastern part of the country, making a qualified (2/3) majority of Crimea's population. The following years saw the rift with neighbouring Russia over the main political task by Kiev to commit the Ukrainization (assimilation) of ethnic Russians (similar to the policy of the Croatization of ethnic Serbs in Croatia orchestrated by the neo-Nazi-Fascist (Ustashi) Government in Zagreb led by Dr. Franjo Tuđman). At the same time, the Russian majority in Crimea constantly required the peninsula's reunification with mother Russia, but got only an autonomous status within Ukraine – a country which they never considered as their natural historical homeland. The Russians of Ukraine were becoming more and more unsatisfied with conditions in which they lived from the time when in 1998–2001 the Ukrainian taxation system collapsed, which meant that the central government in Kiev could not pay the salaries and pensions to its own citizens. A very weak Ukrainian state became in fact unable to function normally (as a "failed state") and as a consequence it did not have the power to prevent a series of politically motivated assassinations followed by popular protests, which had also been very much inspired by economic decline of the country.²¹

As a matter of fact, it has to be stressed that the Ukrainian historiography on their own history of the land and the people is extremely nationalistic and in most cases not objective like many other national historiographies. It is basically politically coloured with the main task to present the Ukrainians as a natural ethnolinguistic nation, who have been historically fighting to create a united independent national state, but unjustifiably claimed certain territories to be of ethno-historical "Ukrainian" nature. As a typical example of such tendency to rewrite history of the East Europe according to the nationalistic and politically correct framework is, for instance, the book by Serhy Jekelčyk on the birth of a modern Ukrainian nation in which, among other quasi-historical facts based on the self-interpreted events, it is written that the USSR in the period 1939–1940 annexed the "West Ukrainian land" from Poland and Romania.²² However, this "West Ukrainian land" was never a part of any kind of Ukraine before the WWII since Ukraine as a state or administrative province never existed before V. I. Lenin created a Soviet Socialist Republic of Ukraine within the

²⁰ When the citizens of the Soviet Ukraine voted on independence from the USSR in a referendum in 1991, most of Ukraine's Russians voted in favour due to economic benefits rather than national self-determination. Nevertheless, "in the early years of Ukrainian independence there was hyperinflation and collapsing output at the same time; hence the pejorative term 'Ukrainianization'" [Robert Bideleux, Ian Jeffries, *A History of Eastern Europe: Crisis and Change*, London–New York: Routledge, 1999, 615].

²¹ On the history of Ukraine and the Ukrainians, see more and compare with [Andrew Wilson, *The Ukrainians: Unexpected Nation*, New Heaven: Yale University Press, 2009; Serhii Plokhy, *The Gates of Europe: A History of Ukraine*, New York: Basic Books, 2015; Anna Reid, *Borderland: A Journey Through the History of Ukraine*, New York: Basic Books, 2015].

²² Serhy Jekelčyk, *Ukraina: Modernios nacijos gimimas*, Vilnius: Baltos lankos, 2009, 17.

USSR in 1923, but at that time without the "West Ukrainian land" as it was not a part of the USSR. Moreover, the Ukrainians as a formed nation did not live in many parts of the "West Ukrainian land". They were just minority in this part of the Central Europe meaning that Ukraine did not even have ethnic rights over the biggest part of the "West Ukraine".²³ A real ethnolinguistic Ukrainization of the "West Ukrainian land" started after the WWII.

We can find another example of nationalistic misleading of the Ukrainian historiographical writings in the academic brochure on Bukovinian Metropolitan's Residence published in 2007 by the National University of Chernivtsi. In the brochure it is written that this university is "...one of the oldest classical universities of Ukraine",²⁴ which is true only from the present-day rough political perspective, and not from moral-historic point of view. Namely, the university is located in the North Bukovina, which the Habsburg Monarchy obtained in 1775. From 1786 the land was administrated within the Chernivtsi district of Galicia and one hundred years after the affiliation of Bukovina to the monarchy, the *Franz-Josephs-Universität* was inaugurated on October 4th, 1875 (the name day of the emperor). In other words, the university's origin as the whole Bukovina has nothing to do with any kind of both historical Ukraine and ethnic Ukrainians as it was outside of administrative territory of Ukraine before 1940, when the whole North Bukovina became annexed on August 13th by the USSR according to the *Hitler-Stalin Pact* (or the *Ribbentrop-Molotov Pact*) signed on August 23rd, 1939.²⁵ Therefore, two notorious bandits (both highlanders; one Nazi from Austria and the other Bolshevik from Georgia) decided to transfer the North Bukovina to the USSR and after the WWII the land became part of the Greater (Stalin's) Ukrainian SSR. Nevertheless, while the Ukrainian nationalists claim that "Russia" (in fact anti-Russian USSR) occupied Ukraine, the annexation of the North Bukovina and other territories from Poland, Czechoslovakia and Romania in 1940 are for them a legitimate act of historical justice. Here we have to notice that according to the same Pact, the territories of the independent states of Lithuania, Latvia and Estonia were annexed by the USSR as well, which is considered by their historians and politicians as "occupation" meaning an (illegal) act of aggression that breaks the international law and legitimate order. Nevertheless, they never accused Ukraine of doing the same in regard to the occupied lands from its three western neighbours in 1940/1944.²⁶

Political assimilation of certain separate Slavonic ethnolinguistic groups in Ukraine was and is one of the standardized instruments for creation and maintenance of the Ukrainian national identity in the 20th century. The most brutal case is of the Ruthenians (Rusyns), who were simply proclaimed historical Ukrainians known under such name until the WWII. Their land, which was in the interwar period a part of Czechoslovakia, which was annexed by the USSR at the end of the WWII and became a part of the Greater Soviet Ukraine, was simply renamed from Ruthenia into the Sub-Carpathian Ukraine. However, the Ruthenians

²³ Even today around half of Ukraine's state territory is not populated by the Ukrainians as a majority of the population. Moreover, in some regions there are no Ukrainians at all. Therefore, the cardinal question arose: Which principles are state borders of Ukraine formed on?

²⁴ *The Architectural Complex of Bukovynian Metropolitan's Residence*, Chernivtsi: Yuriy Fedkovych National University of Chernivtsi, 2007, 31.

²⁵ *Ibid.*

²⁶ See, for instance [Priit Raudkivi, *Estonian History in Pictures*, Tallinn: Eesti Instituut, 2004 (without numeration of the pages); Arūnas Gumuliauskas, *Lietuvos istorija (1795–2009)*, Šiauliai: Lucilijus, 2010, 279–295].

and the Ukrainians are two officially recognized separate Slavonic ethnolinguistic groups, for example, in Serbia's Autonomous Province of Vojvodina, where the Ruthenian (Rusyn) language is even standardized and studied together with the Ruthenian philology and literature at the separate department at the University of Novi Sad. Unfortunately, the Ruthenian position in Ukraine is even worse in comparison with the Kurdish position in Turkey as the process of Ruthenian assimilation is much faster than in the Kurdish case.

From the current perspective of the Ukrainian crisis and in general from the point of solving the "Ukrainian Question" a very historical fact has to be noticed that a part of the present-day East Ukraine became legally incorporated into the Russian Empire in 1654 as a consequence of the decision made by the local hetman of Zaporozhian territory Bohdan Khmelnytsky (c. 1595–1657) based on the popular revolt against the Polish-Lithuanian (the Roman Catholic) occupation of Ukraine, which broke out in 1648.²⁷ It means that the core of the present-day Ukraine voluntarily joined Russia, therefore escaping from the Roman Catholic Polish-Lithuanian oppression. Subsequently, B. Khmelnytsky's ruled territory has to be considered from a historical point of view as the motherland of all present-day Ukraine – the motherland which already chose Russia in 1654.

The 2014 *coup d'état* and the Ukrainian crisis

A current Ukrainian crisis, in fact a civil war, which started at the very end of 2013, is based on the internal interethnic antagonisms lasting for decades primarily in the Ukrainian-Russian relations including, above all, the "Crimean Question" as an apple of discord between Ukraine and Russia from 1954.²⁸ The crisis came from Lithuania's capital Vilnius, where in November 2013 an Association Agreement between the EU and Ukraine had to be signed. At that time (July 1st–December 31st 2013) Lithuania presided the European (Union) Council and formally had full political responsibility for breaking out of the crisis as being the host of the event, which the EU absolutely blamed on only Ukraine's President V. Yanukovich for the failure of the Agreement as he rejected to sign it for the very good reason as Moscow offered to Kiev much better deal than Brussels.²⁹

V. Yanukovich's decision was primarily based on the logic of a state-national interest as he preferred much more favourable economic-financial offer by Moscow (also including *de facto* legalization of stealing the Russian gas to Europe that was transported via Ukraine) for the purpose to try to resolve inner economic, social and political crisis, which threatened stability of the Ukrainian society and state from 1991. The official Kiev recognizes that for Ukraine (up to 2014) Russia was:

²⁷ Alfredas Bumblauskas, *Senosios Lietuvos istorija, 1009–1795*, Vilnius: R. Paknio leidykla, 2007, 306; Jevgenij Anisimov, *Rusijos istorija nuo Riuriko iki Putino: Žmonės. Įvykiai. Datos*, Vilnius: Mokslo ir enciklopedijų leidybos centras, 2014, 185–186.

²⁸ On the "Crimean Question" from the western perspective, see [Gwendolyn Sasse, *The Crimea Question: Identity, Transition, and Conflict*, Cambridge, Mass.: Harvard Ukrainian Research Institute, 2014].

²⁹ Nevertheless, the western pro-Neocon historiography and political science is directly blaming Russia and especially Russian President Vladimir Putin for all political troubles in Ukraine after the Vilnius Summit in 2013. See, for instance [Elizabeth A. Wood et al, *Roots of Russia's War in Ukraine*, New York–Chichester, West Sussex: Columbia University Press–Woodrow Wilson Center Press, 2016].

"...the largest trade partner and a huge market. In addition, many Ukrainians have family and friendly relations with the Russian people. In this connection, it should be noted that Europeans are actually interested in stable partnership between the two countries. Ukraine remains the major transit country for Russian natural gas transported to Europe, and it is very important for Kyiv to make sure that Europeans regard it as a reliable and predictable partner".³⁰

It was obvious that such V. Yanukovych's turn toward the Russian Federation would also mean the closest political ties between Kiev and Moscow in the future – a cardinal reason for the EU and the USA to directly fuel a new color revolution in Ukraine for the purpose to overthrow V. Yanukovych and install instead of him their own puppet regime, which will drive the country to both the EU and the NATO. The Ukrainian 2013/2014 colored revolution was carried out according to the model of the first CIA sponsored East European color revolution that was organized in Serbia (Belgrade) at the beginning of October 2000 (the "2000 October 5th Revolution").³¹ The protest of the "people" in Kiev in 2014 was finally ended by a classic street-style *coup d'état* like in Belgrade 14 years ago³² and installation of a classic (pro-USA/EU/NATO) marionette regime, as well. As it is known from any introductory course on democracy, any kind of *coup d'état* (putsch) is illegal and unconstitutional. As in the 2000 Belgrade Coup case, the 2014 Kiev Coup case was formally justified as a "popular revolt" against the dictator, who was ousted in February 2014.³³ In fact, however, an unlawful removal of a legally and legitimately elected head of the state by the USA/EU sponsored and supported ultranationalistic and even a neo-Nazi-Fascist colored political upheaval of the "Euromaidan" protesters in Kiev³⁴ and some other bigger western Ukrainian cities (like Lvov) directly provoked a new popular colored revolution in the Russian-speaking provinces of the East Ukraine and Crimea with a final consequence of a territorial secession of self-proclaimed Luhansk, Kharkov, and Donetsk People's Republics and Crimea (according to Kosovo pattern from 2008).

In regard to the 2014 Kiev Coup, according to Paul Craig Roberts, Washington used its funded NGOs (\$5 billion according to Assistant Secretary of State Victoria Nuland at the National Press Club in December 2013) to begin street protests when the elected Ukrainian Government turned down the offer to sign an Association Agreement with the EU.³⁵ Similarly to the Ukrainian coup in 2014, the Guatemala coup in 1954, when democratically elected Government of Jacobo Arbenz became overthrown, was also carried out

³⁰ *Ukraine. A Country of Opportunities*, Kyiv: the Ministry of Foreign Affairs of Ukraine, 2010, 6.

³¹ In the official literature and memoirs on this revolution, however, the fact that it was directly financed and sponsored by the CIA and the Western financed NGOs is not mentioned at all. See for instance [Dragan Bujošević, Ivan Radovanović, 5. Oktobar: Dvadeset četiri sata prevrata, Beograd: Medija centar Beograd, 2001]. On the coloured revolutions from the pro-NATO/EU/USA viewpoint see [Evgeny Finkel, Yitzhak M. Brudny (eds.), *Coloured Revolutions and Authoritarian Reactions*, New York: Routledge, 2015].

³² Dragan Bujošević, Ivan Radovanović, 5. Oktobar: Dvadeset četiri sata prevrata, Beograd: Medija centar Beograd, 2001. The English title of this memoir book is: 5. October: Twenty four hours of the coup d'état.

³³ See documentary movie by Paul Moreira, *Ukraine: The Masks of the Revolution*, Premieres Lignes Production–Canal +, France, 2016.

³⁴ Tony Cartalucci, "BBC Now Admits: Armed Nazis Led 'Revolution' in Kiev, Ukraine", *Global Research*, March 7th, 2014: <http://www.globalresearch.ca/bbc-now-admits-armed-nazis-led-revolution-in-kiev-ukraine/5372232>.

³⁵ On this issue, see more by the same author in [Paul Craig Roberts, *The Neoconservative Threat to World Order: Washington's Perilous War for Hegemony*, Atlanta, GA: Clarity Press, Inc., 2015, 7–16].

by the CIA. Nonetheless, following R. Reagan's logic used in the US-led military invasion of Grenada in 1983, the Russian President could send a regular army of the Russian Federation to occupy Ukraine for the security reasons of Russian citizens, who were studying at the universities in Kiev, Odessa or Lvov. Similar R. Reagan's argument (to protect the US students in Grenada) was (mis)used, among others, by Adolf Hitler in April 1941 to invade and occupy the Kingdom of Yugoslavia as, according to the German intelligence service, the German minority in Yugoslavia (the Volksdeutsche) were oppressed and terrorized by the new (pro-British) Government of General Dušan Simović after the coup in Belgrade committed on March 27th, 1941.³⁶ Nonetheless, a new anti-Russian government in Kiev launched a brutal linguistic and cultural policy of Ukrainization directly endangering the rights of ethnolinguistic Russians, who represent a clear majority of the population of the Luhansk and Donetsk regions of the East Ukraine, Crimean Peninsula respectively³⁷ and other non-Ukrainian population, as well, who supported a pro-Russian course of the country.³⁸

“Kosovo precedent” and the Ukrainian suicide

The revolt and colored revolution by the Russian-speaking population in the East Ukraine in 2014 finally resulted in separation of Crimea from Ukraine founded on the *Declaration of Independence of the Crimea* as a legal document followed by the people's referendum on joining Russia based on the formal self-determination rights according to the model and practice of, for instance, the Baltic states in 1990, when they declared independence from the USSR.³⁹ It is clear from the official declaration by the Supreme Council of Crimea on peninsula's independence that this legal and legitimate act is founded on the international law and the people's right to self-determination, and also based on the so-called “Kosovo precedent” – a Western created “precedent” in 2008, which came as a boomerang to Ukraine six years later. Basically, “Kosovo precedent” is a clear representative example of a flagrant violation of the international law and order including, above all, the UN Charter and the UN 1244 Resolution on Kosovo. This “precedent” was firstly created in 1999 by brutal NATO military aggression on the independent and sovereign state of the Federal Republic of Yugoslavia (Serbia and Montenegro) without any mandate of the UNSC that was followed by unilateral proclamation of

³⁶ On this issue, see more in [Коста Николић, *Историја Равногорског покрета 1941–1945*, Књига прва, Београд: Српска реч, 1999, 25–42].

³⁷ In the recent future, if Kiev continues with its anti-Russian and pro-NATO/USA/EU political-military course, it is expected that the *Republic of NovoRussia* is going to be declared as an independent state with a real possibility to join the Russian Federation as Crimea already did in 2014. On Russian foreign policy and national identity, see [Andrei P. Tsygankov, *Russia's Foreign Policy: Change and Continuity in National Identity*, Lanham, Maryland: Rowman & Littlefield, 2016].

³⁸ On the issue of the Ukrainian crisis from the Western perspective, see [Andrew Wilson, *Ukraine Crisis: What It Means for the West*, New Haven–London, Yale University Press, 2014; Richard Sakwa, *Ukraine: Crisis in the Borderlands*, London–New York: I. B. Tauris, 2015; Rajan Menon, Eugen Rumer, *Conflict in Ukraine: The Unwinding of the Post-Cold War Order*, Massachusetts: Massachusetts Institute of Technology, 2015].

³⁹ Lithuania, for instance, declared its independence on March 11th, 1990 [Arūnas Gumuliauskas, *Lietuvos istorija: įvykiai ir datos*, Šiauliai: Šiaurės Lietuva, 2009, 142].

Kosovo independence by Kosovo Parliament in February 2008 (but without people's referendum on independence) and its recognition by a part of the world (satellite states of the Neocon *Pax Americana*).⁴⁰ In such way, the West created "precedence" which by definition has to be a unique case of the time in the international relations and global politics theoretically meaning that it cannot serve as a foundation or example for any similar case all over the world.⁴¹

Kosovo independence in 2008 was in fact founded on the illegal military action by the NATO in 1999 against Serbia and Montenegro as it violated the basic purpose of the foundation (in 1945) and existence of the UN, therefore, transforming the NATO into a global gangster organization. The reason why the US administration, or any other administration of the NATO member state, in 1999 did not ask for permission of the UNSC to launch a campaign against the Federal Republic of Yugoslavia is that such permission would never be given for two reasons: 1. The arguments to launch air strikes against Serbia and Montenegro have been based on the false information and pure political lies as the claim that the Yugoslav authorities are preparing massive action of ethnic cleansing of Kosovo Albanians was a typical "false flag" example in the post-Cold War history of international relations; and 2. By such permission based on the "false flag" information the fundamental purpose of the existence of the UN would be neglected as:

"The [UN] main purpose was to maintain international peace and security, in the sense of dissuading states from attacking each other, and to organize counter-measures if this happened".⁴²

A "Kosovo precedent" was in 2010 internationally and formally legally empowered by the expressed opinion of the UN International Court of Justice that a proclamation of Kosovo independence in 2008 does not violate the international law on self-determination (independence), which is true from the most general point of the UN Charter, but at the same time it violates the same UN Charter, which defends and supports territorial integrity of the states and their domestic law. It has to be clearly noticed that in 1945, when the UN were established, state sovereignty was understood and protected as a central value and principle of the international relations and global security. According to this principle, states are (formally) equal members of the international community (the UN), and also equal in regard to the international law, which clearly says that the state sovereignty and state borders are inviolable – the law harshly violated by the NATO in 1999. A principle of sovereignty directly implies three things: 1. that state does not recognize any higher authority than itself; 2. that there was no superior (international or supranational) jurisdiction; and 3. the Gov-

⁴⁰ On the Neocon concept of *Pax Americana* and the US global hegemony, see [Paul Craig Roberts, *How America Was Lost: From 9/11 to the Police/Warfare State*, Atlanta, GA: Clarity Press, Inc., 2014; Cushman Cunningham, *Conspiracy Facts: Neocons Unmasked*, Fort Myers, FL: Critical Thinking Institute, 2015].

⁴¹ Kosovo separation from Serbia was very much prepared and advocated by the Western academicians, especially historians, who laid out "scientific" foundations for Kosovo independence. It was, for example, the case by prominent British historian from Harvard University Noel Malcolm and his book on Kosovo history [Noel Malcolm, *Kosovo: A Short History*, New York: New York University Press, 1998]. The main (political) purpose of the book was to dispute Serbian claims to Kosovo and to prepare academic framework for Kosovo independence.

⁴² John Baylis, Steve Smith (eds.), *The Globalization of World Politics: An Introduction to International Relations*, Second edition, New York: Oxford University Press, 2001, 332. Nevertheless, the NATO member states, which participated in the criminal action of bombing Serbia and Montenegro for 78 days in 1999 violated this fundamental purpose of creation and existence of the UN.

ernments of states had exclusive jurisdiction within their own borders – a principle confirmed in Article 2(7) of the UN Charter. Subsequently, a military intervention is in direct opposition to the principles of the international law including legal consequences coming out from it, as well, for instance, Kosovo self-proclaimed independence in 2008. It is a clear position by, for instance, the “Restrictionist” international lawyers, who insist on absence of basis for humanitarian intervention in the international law. They argue that the common good is going to be preserved at best by maintaining a ban on any kind of use of force that is not authorized by the UNSC. However, the fact is that the UN Charter does not give the UNSC any authority to use force for humanitarian purposes.⁴³ Finally, it is true that states do not intervene for primarily humanitarian reasons as almost all the time states have a mixture of motives for military intervention. Nevertheless, the court’s opinion is, formally, just of the advisory nature, but in practice it has serious implications and consequences within the framework of global politics. The first coming consequence was the case of Crimean separation from Ukraine in 2014 that was clearly stated by both the local Crimean authorities and Russian Government.

Undoubtedly, “Kosovo precedent” has not only shaken, but even destroyed the very foundations of the international law based primarily on the UN Charter and resolutions. As a direct outcome, it provoked a “boomerang effect” in the case of Crimean secession from Ukraine and annexation by Russia in 2014. Crimea broke relations with Ukraine calling for the same formal reasons used by the Albanians in the case of the 2008 “Kosovo precedent” followed by other legal arguments. Nevertheless, the Western countries recognized Kosovo independence from Serbia, but not Crimean, Donetsk and Luhansk separation from Ukraine despite the fact that all of these cases are formally and officially based on the same legal and moral arguments. Moreover, in difference to “Kosovo precedent”, separation cases in Ukraine are based on the results of the plebiscites.

The Western policy of double standards is very visible from the following written statement on Kosovo independence by the US administration of April 17th, 2009 that was submitted to the UN International Court of Justice:

“Declarations of independence may, and often do, violate domestic legislation. However, this does not make them violations of international law.”⁴⁴

We have not heard similar statements by the same US administration on the independence cases of the Republic of Serbian Krayina, the Republic of Srpska, the Republic of Transnistria, the Republic of Abkhazia, the Republic of South Ossetia or three separatist republics in the East Ukraine and Crimeas far. Obviously, the UN International Court of Justice accepted the US statement on Kosovo independence and two statements issued on July 22nd, 2010 that:

“No general prohibition may be inferred from the practice of the Security Council with regard to declarations of independence”, and

“General international law contains no prohibition on declarations of independence”.

⁴³ Paul R. Viotti, Mark V. Kauppi, *International Relations and World Politics: Security, Economy, Identity*, Fourth edition, Upper Saddle River, New Jersey: Pearson Education International, 2009, 185.

⁴⁴ From this perspective, the southern *Confederation* had absolute legal and moral rights to proclaim independence from the USA in 1861, which means that at that time the US President Abraham Lincoln (who invaded the southern *Confederation* and committed crimes in its territory) was a war criminal.

According to the abovementioned statements, however, it is clear that Moscow was absolutely truthful in the case of Crimean secession, but with an important distinction: Russia did not bomb Ukraine previously as the NATO did with the Federal Republic of Yugoslavia in 1999 before Kosovo secession from Serbia.

The West did not offer a possibility of federalization of Serbia with Kosovo as a federal unit to Belgrade because the independence of Kosovo was advocated as the optimal solution for Kosovo problem. However, Moscow is exactly advocating federalization as the best solution for the Ukrainian crisis with the East Ukrainian Russian-speaking regions as a single federal territory. Crimea, following the logic of both historical and ethnic rights, has to be a part of Russia as the peninsula has nothing to do with Ukraine, but has much to do with Russia. Even Turkey or Greece has more rights on Crimea in comparison to Ukraine.

The scenario of federalized Ukraine would surely positively influence the process of stopping already ongoing the new Cold War between the West (the NATO and the EU) and the bloc of the countries around Russia, China and Iran.⁴⁵ However, if the Western mentors of the Euromaidan Government in Kiev reject such Russian proposal it is most probable that Ukraine will be left to commit a suicide as the Western policy of double standards promoted by the US and the EU in the 2008 Kosovo case will continue to have a boomerang effect in the rest of the East Ukraine following the Odessa region, as well.

Humanitarian intervention and final solution of the "Ukrainian Question"

Current Ukrainian crisis in this case can be solved according to the 1667 Andrusovo Treaty signed on February 9th between Poland-Lithuania and Russia. According to the Treaty, the present-day territory of Ukraine was simply divided between two states: the Polish-Lithuanian Commonwealth (the Republic of Both Nations) and the Russian Empire with the Dnieper river as a demarcation line. In other words, Russia received from Poland-Lithuania territories eastward from Dnieper with Kiev and the whole Zaporizhia region (from both sides of the river).⁴⁶ Therefore, Dnieper became a (natural-political) border between "Europe" and Russia with the present-day Ukraine divided into two *borderlands*. As it is said at the beginning of this article, the Slavonic word *Ukraine* means in English a *borderland*. Therefore, it is clear even from the name of the country what is going to be its ultimate destiny. Sooner or later, it does not matter. The case of the Republic of Serbian Krayina (Ukraine) proved it clearly in the 1990s – the *Borderland* can be only a periphery of some more natural state. It does not matter on which side of the border.⁴⁷

⁴⁵ On this issue, see [Marvin Kalb, *Imperial Gamble: Putin, Ukraine, and the New Cold War*, Washington: The Brookings Institution, 2015].

⁴⁶ Ignas Kapleris, Antanas Meištas, *Istorijos egzamino gidas. Nauja programa nuo A iki Ž*, Vilnius: Leidykla "Briedas", 2013, 125–126.

⁴⁷ The independent state of Serbian Krayina was declared on December 19th, 1991 by the Constitutional Assembly (Parliament) of the Serbian Autonomous Region of Krayina in Knin. The Republic was occupied and cancelled by Croatian military and police forces on August 4th–9th, 1995 within the operation "Storm" [Вељко Ђурић Мишина (уредник), *Република Српска Крајина: Десет година послје*, Београд: Добра воља, 2005, 26, 48].

At this point we cannot forget a humanitarian intervention aspect of the final solution of the "Ukrainian Question", as well. In general, "intervention" is considered as forcible action taken by some state(s) against another one(s), but without consent of the attacked side. Therefore, "humanitarian intervention" is a military intervention carried out by some state(s) for the sake of protecting human rights (usually as group minority rights). Speaking from the very moral point of view, a humanitarian intervention is based, or at least (mis)used as a formal pretext, on the notion of being "humanitarian", which means to be concerned with the interest of and benefits to mankind, particularly if the suffering of someone has to be reduced.⁴⁸ The concept of humanitarian intervention was (mis)used especially after the Cold War in the cases of Iraq (in 1991 to create "safe havens" for the Kurds by establishing a no-fly zone policed by three NATO Pact countries: the USA, UK and France), Somalia (in 1992 to create a protected environment), Haiti (in 1994 to restore order by the civil authority), Rwanda (in 1994 to create "safe zone" for the Hutu refugees), Kosovo (in 1999 to protect the Albanians from Serbian military and police forces), East Timor (in 1999 to prevent possible ethnic cleansing by Indonesian security forces) and Sierra Leone (in 2000 to protect the UK citizens at the time of the local civil war).⁴⁹

Very controversial wars of humanitarian intervention in abovementioned cases, in which only the Western powers participated, were formally justified on humanitarian grounds. However, in majority of these cases the intervention had in essence very political and geopolitical real background clearly shown by the cases of Kosovo and Sierra Leone. The case of Yugoslav civil wars in the 1990s was a good example of a new form of war in post-Cold War era, which occurred as a consequence of "fracture of statehood" that is now implied in Ukraine, too. Such wars and conflicts (in ex-Yugoslavia, Rwanda, Somalia, Yemen) bring new forms of regional "insecurity caused by nationalistic, ethnic, and religious rivalries within states and across state boundaries".⁵⁰

In the south Serbian province of Kosovo the violent conflict started on February 28th, 1998 since Serbian security forces fought with the local Muslim Albanian separatist and terrorist detachments of the so-called Kosovo Liberation Army – a type of Balkan Hezbollah. After series of diplomatic efforts to solve the Kosovo crisis under the US auspices failed, the US administration planned the NATO airstrikes against Serbia and Montenegro, although Russia opposed it. Nevertheless, knowing that Russia will surely use its veto right in the UNSC in order to prevent the UN to sanction military action against Serbia and Montenegro, the NATO launched military aggression on March 28th, 1999 against the Federal Republic of Yugoslavia, "effectively supporting the Kosovar Albanian rebels".⁵¹ As a consequence, after 78 days of bombardment the Yugoslav army and Serbian police forces withdrew from Kosovo, which became occupied by the NATO peacekeeping force – the Kosovo Force (KFOR).

⁴⁸ On human rights and humanitarian intervention from academic point of view, see more in [Andrew Heywood, *Global Politics*, New York: Palgrave Macmillan, 2001, 303–330].

⁴⁹ On the concept and ideas of humanitarian intervention, see [Brendan Simms, D. J. B. Trim (eds.), *Humanitarian Intervention: A History*, Cambridge–New York, Cambridge University Press, 2011; Aidan Hehir, *Humanitarian Intervention: An Introduction*, New York: Palgrave Macmillan, 2013; Thomas G. Weiss, *Humanitarian Intervention: Ideas in Action*, Cambridge–Maiden, MA: Polity Press, 2016].

⁵⁰ John Baylis, Steve Smith, Patricia Owens (eds.), *The Globalization of World Politics: An Introduction To International Relations*, Fourth edition, New York: Oxford University Press, 2008, 237.

⁵¹ Steven L. Spiegel, Jennifer Morrison Taw, Fred L. Wehling, Kristen P. Williams, *World Politics In A New Era*, Belmont, CA: Wadsworth/Thomson Learning, 2004, 319.

The NATO military intervention in 1999 was a typical way to exercise a new type of war for the upcoming 21st century – the *Virtual War*, which is a war with few casualties. The Western liberal (quasi)democracies in the last several decades (after the Vietnam War) have shown great reluctance to accept heavy military casualties because such casualties can easily undermine public support for the war effort. The NATO intervention in 1999 against Yugoslavia was such a war in which the NATO countries employed their technological superiority in order to reduce a high risk of their own casualties to the absolute minimum if possible. However, for all victims of the NATO bombing in 1999 the war was surely not of virtual nature, but rather the real one since a war cannot be of a virtual character. A war is intensely physical and thus it has a tendency to violence and destruction. The very nature of a war is to use the violence and therefore the real casualties are unavoidable, which means that an idea of some kind of a Virtual War is pure utopia. The intervention was done just in a context of fears about the possibility of ethnic cleansing, but not on the real ground. However it finally forced Serbia to withdraw its complete security forces from the province. Subsequently, Kosovo became the NATO colony on whose territory a huge US military base was created. The province was finally separated from Serbia by proclamation and recognition of its self-proclaimed independence in 2008, which was in fact a real and ultimate geopolitical goal of the formal humanitarian intervention in 1999.

In Sierra Leone, after a prolonged civil war, the UK Government decided to send the British military forces to the country to formally protect the UK citizens, but in fact ultimately to support the elected Government against the rebel forces that have been accused of carrying out atrocities against the civilians.

Here, we have come to the crux of the matter of current Ukrainian crisis and most probably of the "Ukrainian Question" in general. It is well known that Russian president V. Putin is extremely frustrated with the NATO 1999 Kosovo humanitarian intervention since it is seen by Moscow as a great humiliation of Russia and the Russian national pride and the regional state interest. It is also well known that the Euromaidan regime in Kiev committed and has been still committing terrible war crimes in the Donbass region, which can be classified as ethnic cleansing and even a form of the genocide as thousands of the Donbass region inhabitants were brutally killed (among them around 200 children) and approximately one million of them became refugees in Russia.⁵² For Moscow, it is very easy, at least formally, to "prove" the acts of war crimes of Kiev Euromaidan junta in the Donbass region as it was, similarly, very easy for Washington to formally "prove" Serbian war crimes in Kosovo before the NATO intervention in 1999. As a result, Moscow can all the time launch Russian military humanitarian intervention in the East Ukraine with a consequence of its final separation from Kiev. A "Kosovo precedent" is still on agenda, especially after the results of the 2016 US Presidential elections.

⁵² On shocking UN High Commissioner for Human Rights' 13th Report on the war crime atrocities committed by the Ukrainian Government in the East Ukraine in the period from November 16th, 2015 to February 15th, 2016, when the Minsk Agreements were in force, see [Arina Tsukanova, „Shocking UN Report Lists Crimes by the Ukrainian Authorities“, *Strategic Culture Foundation*, June 11th, 2016: <http://www.strategic-culture.org/news/2016/06/11/shocking-un-report-lists-crimes-ukrainian-authorities.html>].

The West and The Rest: A global geopolitical context of the „Ukrainian Question“ and „Kosovo Precedent“

Both the „Ukrainian Question“ and „Kosovo precedent“ have to be understood and investigated from a global perspective, primarily from the context of a geopolitical conflict between the USA and Russia after the Cold War. Peaceful dissolution of the USSR according to the agreement between Mikhail Gorbachev and Ronald Reagan in 1988 in Reykjavik brought a new dimension to global geopolitics in which Russia, as a legal successor state of the USSR, was up to 2008 playing an inferior role in global politics, when an American Neocon concept of *Pax Americana* became the fundamental framework in international relations. Therefore, for instance, Boris Yeltsin's Russia capitulated in 1995 to the American design regarding a final outcome of the USA/EU policy of destruction of ex-Yugoslavia in November 1995 (the *Dayton Agreement*) followed by even worse political capitulation in the case of Washington's Kosovo policy that became ultimately implemented in June 1999 (the *Kumanovo Agreement*). Russia became in the 1990s totally geopolitically humiliated by the USA and its West European clients to such extent that we can call the period of B. Yeltsin's servile policy toward the West as a *Dark Time* of the history of Russian international relations, when the Serbs became the main losers, who were and still are extremely demonized by the Western mass-media and academic institutions.⁵³

An ideological-political background of B. Yeltsin's foreign Russian policy was the *Atlanticism* – an orientation in foreign policy that stresses the fundamental need to cooperate (at any price) with the West, especially in the area of politics and economy. In other words, the integration with the West and its economic-political standards became for B. Yeltsin's Russia, governed by the Russian Liberals, the order of the day. This trend in the Russian foreign policy in the 1990s had the roots in the 19th century geopolitical and cultural orientation of the Russian society by the so-called Russian „Westerners“, who became the opponents to the Russian „Slavenophiles“ and thought that the ultimate aim of the Russian foreign policy was to create the Pan-Slavonic Commonwealth with the leadership of Russia.

The actual outcome of the Russian Liberals „in the years following Yeltsin's election was catastrophic as, for instance, Russian industrial production dropped by nearly 40%, over 80% of Russians experienced a reduction in their living standards, health care disintegrated, life expectancy fell along with the birth rate, and overall morale collapsed“.⁵⁴ However, the political influence of the Russian Liberals became drastically weakened by Vladimir Putin's overtaking power in Russia from 2000 onwards and especially from 2004. A new global course of the Russian foreign policy after 2004 became directed to

⁵³ As a very example of such moral, cultural and civilizational demonization of the Serbs by the Western academic writings is [John Hagan, *Justice in the Balkans: Prosecuting War Crimes in The Hague Tribunal*, Chicago–London: The University of Chicago Press, 2003].

⁵⁴ John Baylis, Steve Smith (eds.), *The Globalization of World Politics: An Introduction to International Relations*, Second edition, New York: Oxford University Press, 2001, 124.

the creation of multipolar world, but not unipolar *Pax Americana* one as the American Neocons wanted. Therefore, the Caucasus, Ukraine and Syria became directly exposed to the Russian-American geopolitical struggle while Kosovo has been still left to the exclusive US sphere of interest. Nevertheless, it can be expected in the near future that post-Yeltsin's Russia will take decisive geopolitical steps with regard to Kosovo because from 2000 the Russian foreign policy has become more and more imbued with the neo-Slavophile geopolitical orientation advocated by Aleksandar Solzhenitsyn (1918–2008) as a part of a more global Euroasian geopolitical course of the post-Yeltsin's Russian Federation supported by many Russian Slavophile intellectuals like the philosopher Aleksandr Dugin.

I. L. Solonevich probably gave one of the best explanations of Russian geopolitical situation and peculiarity in comparison to those of the USA and the UK focusing his research on the comparative analysis of geography, climate and levels of individual freedoms between these countries:

„The American liberties, as well as American wealth are determined by American geography. Our [Russia's] freedom and our wealth are determined by Russian geography. Thus, we'll never have the same freedoms as the British and Americans have, because their security is guaranteed by the seas and oceans, but ours could only be guaranteed by military conscription“.⁵⁵

Samuel P. Huntington was quite clear and correct in his opinion that the foundation of every civilization is based on religion.⁵⁶ Huntington's warnings about the future development of global politics that can take a form of direct clash of different cultures (in fact, separate and antagonistic civilizations) is unfortunately already on the agenda of international relations. Here we came to the crux of the matter in regard to the Western relations with Russia from both historical and contemporary perspectives: the Western civilization being based on the Western type of Christianity (the Roman Catholicism and all Protestant denominations) has traditional animosity and hostility towards all nations and states of the East Christian (Orthodox) confession. As Russia used to be and is the biggest and most powerful Christian Orthodox country, the Euroasian geopolitical conflicts between the West and Russia started from the time when the Roman Catholic common state of the Kingdom of Poland and the Grand Duchy of Lithuania launched its confessional-civilizational imperialistic wars against the Grand Duchy of Moscow at the very end of the 14th century; i.e., when (in 1385) Poland and Lithuania became united as the personal union of two sovereign states. The present-day territories of Ukraine (which at that time did not exist under this name) and Byelorussia (White Russia) became the first victims of Vatican policy to proselytize the Eastern Slavs. Therefore, the biggest part of the present-day Ukraine became occupied and annexed by Lithuania until 1569⁵⁷ and by Poland after the Lublin Union in 1569. In the period from 1522 to 1569 there were 63% of

⁵⁵ Irina Isakova, *Russian Governance in the Twenty-First Century: Geo-strategy, Geopolitics and Governance*, London–New York: Frank Cass, 2005, 12.

⁵⁶ Samuel P. Huntington, *The Clash of Civilization and the Remaking of World Order*, London: The Free Press, 2002.

⁵⁷ On the Lithuanian occupation period of the present-day Ukraine, see: [Alfredas Bumblauskas, Genutė Kirkienė, Feliksas Šabuldo (sudarytojai), *Ukraina: Lietuvos epocha, 1320–1569*, Vilnius: Mokslo ir enciklopedijų leidybos centras, 2010].

the East Slavs in the territory of the Grand Duchy of Lithuania out of its total population.⁵⁸ From the Russian perspective, an aggressive Vatican policy of reconversion of the Christian Orthodox population and their denationalization could be prevented only by military counter-attacks to liberate the occupied territories. However, when it happened from the mid-17th century until the end of the 18th century a huge number of the former Christian Orthodox inhabitants had already become the Roman Catholics and the Uniates with their original national identity lost.

The conversion to the Roman Catholicism and creation of the Union with Vatican in the territories occupied by the Polish-Lithuanian common state until the end of the 18th century divided the Russian national body into two parts: the Christian Orthodox, who remained to be the Russians and the pro-Western oriented converts, who basically lost their initial ethnonational identity. This is especially true in Ukraine – a country with the greatest number of the Uniates in the world due to the Brest Union in 1596 with Vatican. The Uniate Church in (the West) Ukraine openly collaborated with the Nazi regime during the WWII and thus it was banned after the war until 1989. Nevertheless, it was exactly the Uniate Church in Ukraine to propagate an ideology that the „Ukrainians“ were not (Little) Russians, but a separate nation, who are not in any ethnolinguistic and confessional connection with the Russians. Therefore, a way to successful Ukrainization of the Little Russians, Ruthenians and Carpatho-Russians during the Soviet rule was opened.. After the dissolution of the USSR, the Ukrainians became an instrument of fulfilment of the Western anti-Russian geopolitical interests in the East Europe.⁵⁹

The unscrupulous Jesuits became the fundamental West European anti-Russian and anti-Christian Orthodox hawks to propagate an idea that Christian Orthodox Russia does not belong to a real (Western) Europe. Due to such Vatican's propaganda activity, the West gradually became antagonistic to Russia and its culture was seen as disgusting and inferior, i.e. barbaric as a continuation of the Byzantine Christian Orthodox civilization. Unfortunately, such negative attitude toward Russia and the East Christianity is accepted by the contemporary US-led West, which regard Russophobia as an ideological foundation for its geopolitical projects and ambitions.⁶⁰ Therefore, all real or potential Russian supporters have become geopolitical enemies of the *Pax Americana* like the Serbs, Armenians, Greeks, Byelorussians, etc.

A new moment in the West-Russian geopolitical struggles started when the Protestant Sweden became directly involved in the Western confessional-imperialistic wars against Russia in 1700 (the Great Northern War of 1700–1721), which Sweden lost after the Battle of Poltava in 1709, when Russia finally became a member of the concert of the Great European Powers.⁶¹ A century later the Napoleonic France took the role in the historical process of „Eurocivilizing“ of „schismatic“ Russia in 1812 that also finished by the West

⁵⁸ Ignas Kapleris, Antanas Meištas, *Istorijos egzamino gidas. Nauja programa nuo A iki Ž*, Vilnius: Leidykla „Briedas“, 2013, 123.

⁵⁹ About this issue, see more in [Зоран Милошевић, *Од Малоруса до Украјинаца*, Источно Сарајево: Завод за уџбенике и наставна средства, 2008].

⁶⁰ Срђан Перишић, *Нова геополитика Русије*, Београд: Медија центар „Одбрана“, 2015, 42–46.

⁶¹ David Kirbz, *Šiaurės Europa ankstyvaisiais naujaisiais amžiais: Baltijos šalys 1492–1772 metais*, Vilnius: Atviros Lietuvos knyga, 2000, 333–363; Peter Englund, *The Battle that Shook Europe: Poltava and the Birth of the Russian Empire*, London: I.B.Tauris & Co Ltd, 2003.

European fiasco,⁶² similar to Pan-Germanic warmongers during both world wars. However, after 1945 up to the present, the „civilizational“ role of the Westernization of Russia has been assumed by the NATO and the EU. From this perspective, both Ukraine and Kosovo became directly involved in the geopolitical confrontation between the West and Russia. Immediately after the collapse of the USSR the West had an enormous geopolitical achievement around Russia, especially in the territories of ex-Soviet Union and the Balkans , by imposing its client satellite Boris Yeltsin as the President of Russia..

Nevertheless, the West started to experience a Russian geopolitical blowback from 2001 onwards when the B. Yeltsin's time pro-Western political clients got gradually removed from the decision-making positions in Russian governmental structures. What the new Russian political establishment correctly understood is that the Westernization policy of Russia is nothing else, but just an ideological mask for economic-political transformation of the country into the colony of the Western imperialistic gangsters led by the US Neocon administration⁶³ alongside with the task of the US/EU to externalize their own values and norms permanently. This „externalization policy“ is grounded on the thesis of *The End of History* by Francis Fukuyama⁶⁴ „that the philosophy of economic and political liberalism has triumphed throughout the world, ending the contest between market democracies and centrally planned governance“.⁶⁵ Therefore, after the formal ending of the Cold War in 1989, the fundamental Western global geopolitical project is *The West and The Rest*, according to which the rest of the world is obliged to accept all fundamental Western values and norms according to the *Hegemonic Stability Theory* of a unipolar system of the world security.⁶⁶ Nevertheless, behind such doctrinal unilateralism as a project of the US hegemony in global governance in the new century clearly shows the unipolar hegemonic concept of *Pax Americana* with Russia and China as the crucial opponents to it.

According to the *Hegemonic Stability Theory*, global peace can occur only when one hegemonic centre of power (state) acquires enough power to deter all other expansionist and imperialistic ambitions and intentions. The theory is based on a presumption that the

⁶² On Napoleon's military campaign on Russia in 1812 and its fiasco, see [Paul Britten Austin, *The Great Retreat Told by the Survivors*, London-Mechanicsburg, PA: Greenhill Books, 1996; Adam Zamoyski, *1812: Napoleon's Fatal March on Moscow*, New York: Harper Press, 2005].

⁶³ The US-led NATO bombing of the Federal Republic of Yugoslavia in 1999 is only an example of a gangster policy of violation of the international law and the law on war, when civilian facilities became legitimate military targets. Therefore, the attack on Serbian television station in downtown of Belgrade on April 23rd, 1999 attracted criticism by many human rights activists as it was apparently selected for bombing being „the media responsible for broadcasting propaganda“ [*The Independent*, April 1st, 2003]. The same bombing policy was repeated by the same gansters in 2003 in Iraq, when the main television station in Baghdad was hit by cruise missiles in March 2003 and the next day followed by destruction of the state radio and television station in Basra [A. P. V. Rogers, *Law on the Battlefield*, Second edition, Manchester: Manchester University Press, 2004, 82–83]. According to the international law expert Richard Falk, the 2003 Iraq War was the „crime against Peace of the sort punished at the Nuremberg trials“ [Richard Falk, *Frontline*, India, No. 8, April 12–25th, 2003].

⁶⁴ Francis Fukuyama, *The End of History and the Last Man*, Harmondsworth: Penguin, 1992.

⁶⁵ Charles W. Kegley, Jr., Eugene R. Wittkopf, *World Politics: Trend and Transformation*, Tenth edition, USA: Thomson-Wadsworth, 2006, 588; Andrew F. Cooper, Jorge Heine, Ramesh Thakur (eds.), *The Oxford Handbook of Modern Diplomacy*, New York: Oxford University Press, 2015, 54–55.

⁶⁶ David P. Forsythe, Patrice C. McMahon, Andrew Wedeman (eds.), *American Foreign Policy in a Globalized World*, New York-London: Routledge, Taylor & Francis Group, 2006, 31–50.

concentration of (hyper)power will reduce the chances of a classical world war (but not local confrontations) as it allows a single hyperpower to maintain peace and manage the system of international relations between the states.⁶⁷ Examples of *ex-Pax Romana* and *Pax-Britanica* have clearly offered support to the American hegemon for imperialistic idea that (the US-led) unipolarity would bring global peace and, henceforth, inspired the viewpoint that the world in a post-Cold War era under *Pax Americana* will be stable and prosperous as long as the US global dominance prevails. Therefore, hegemony, according to this viewpoint, is a necessary precondition for economic order and free trade in global dimension suggesting that the existence of a predominant hyperpower state willing and capable of using its economic and military power to promote global stability is both divine and rational orders of the day. As a tool to achieve this goal a hegemon has to use coercive diplomacy based on the ultimatum demand that puts a time limit for a target to comply and a threat of punishment for resistance as it was, for example, the case in January 1999 during the „negotiations“ on Kosovo status between the US diplomacy and Yugoslav Government in Rambouillet (France).

However, in contrast to both the *Hegemonic Stability Theory* and the *Bipolar Stability Theory*, a post-Yeltsin's Russian political establishment advocates that a multipolar system of international relations is the least war prone in comparison with all other proposed systems. This *Multipolar Stability Theory* is based on a concept that polarized global politics does not concentrate power, as it is supported by a unipolar system, and does not divide the globe into two antagonistic superpower blocs, as in a bipolar system, which promote a constant struggle for global dominance (for example, during the Cold War). The multipolarity theory perceives polarized international relations as a stable system because it encompasses a larger number of autonomous and sovereign actors in global politics, as well as raising the number of political alliances. This theory is in essence presenting a peace-through model of pacifying international relations since it is fundamentally based on counter-balancing relations between the states in the global arena. In such a system, an aggression policy is quite hard to happen in reality since it is prevented by multiple power centres.⁶⁸

A new policy of international relations adopted by Moscow after 2000 is based on a principle of the globe without hegemonic leadership – a policy which started to be implemented at the time when the global power of the US as a post Cold War hegemon declines because it makes costly global commitments in excess of ability to fulfill them followed by the immense US trade deficit. The US share of global gross production is in the process of constant fall ever since the end of the WWII. Another serious symptom of the US erosion in international politics is that the US share of global financial reserves drastically declined, especially in comparison to the Russian and Chinese share. Today the US is the largest world debtor and even the biggest debtor that has ever existed in history (\$ 19.5trillion or 108 percent of the GDP) mainly, but not exclusively, due to huge military spendings together with tax cuts that reduced the US federal revenue. The US administration is covering the deficit in current account balance with the rest of the world (in 2004, for instance, it was

⁶⁷ William C. Wohlforth, „The Stability of a Unipolar World“, *International Security*, No. 24, 1999, 5–41.

⁶⁸ Charles W. Kegley, Jr., Eugene R. Wittkopf, *World Politics: Trend and Transformation*, Tenth edition, USA: Thomson–Wadsworth, 2006, 524.

\$650 billion) by borrowing money from private investors (mostly from abroad) and foreign central banks (the most important ones are of China and Japan). Therefore, such US financial dependence on the foreigners to provide the funds necessary to pay the interest on the American public debt leaves the USA extremely vulnerable, especially if China and/or Japan would decide to stop buying the US bonds or sell them. Subsequently, the world's strongest military power is at the same time the greatest global debtor with China and Japan being direct financial collaborators (or better to say – the quislings) of the US hegemonic leadership policy of *Pax Americana* after 1989.

Undoubtedly the US foreign policy after 1989 has been still unrealistically following the French concept of *raison d'état* that indicates the Realist justification for policies pursued by state authority, but in the American eyes, first and foremost of these justifications or criteria is the US global hegemony as the best guarantee for the national security followed by all other interests and associated goals. Therefore, the US foreign policy is based on a *realpolitik* concept that is a German term referring to the state foreign policy ordered or motivated by power politics: the strong do what they want and the weak do what they must. However, the US is becoming weaker and weaker and Russia and China are becoming stronger and stronger.

Geopolitical convergence and confrontation between the US universal state and Russia as a leader of the global resistance to the empire as a geostrategic background of the „Ukrainian Question“

The end of the Cold War era in 1989 brought during the first following years a kind of international optimism that the idea of the „end of history“ really can be realized as it was a belief in no reason for the geopolitical struggles between the most powerful states. The *New World Order* spoken out firstly by M. Gorbachev in his address to the UN on December 7th, 1988 was originally seen as the order of equal partnership in the world politics reflecting „radically different international circumstances after the Cold War“.⁶⁹

Unfortunately, the Cold War era finished without the „end of history“ as the US have continued the same policy from the time of the Cold War against Moscow – now not against the USSR, but against its successor Russia. Therefore, for the Pentagon, the Cold War era in fact never ended as the fundamental political task to eliminate Russia from the world politics has still not been accomplished. Regardless of the fact that in 1989 Communism collapsed in the East Europe, followed by the end of the USSR in 1991, which brought a real possibility for creation of a new international system and global security,⁷⁰ the eastward enlargement of the NATO from March 1999 (the Fourth enlargement) onwards is a clear proof of the continuation of the US Cold War time policy to-

⁶⁹ Jeffrey Haynes, Peter Hough, Shahin Malik, Lloyd Pettiford, *World Politics*, New York: Routledge, Taylor & Francis Group, 2013, 97.

⁷⁰ John Baylis, Steve Smith (eds.), *The Globalization of World Politics: An Introduction to International Relations*, Second edition, New York: Oxford University Press, 2001, 111.

ward Moscow, which actually creates uncertainty about the future of the global security. After the end of the USSR and the Cold War, there were many Western public workers and academicians who questioned firstly why the NATO has to exist at all and secondly why this officially defensive military alliance is enlarging its membership when the more comprehensive Conference on Security and Cooperation in Europe (the CSCE, today the OSCE) could provide the necessary framework for security cooperation in Europe including Russia.⁷¹ However, the NATO was not dissolved, but quite contrary, adopted the same policy of further (eastward) enlargement like the EU. The Kosovo crisis in 1998–1999 became a formal excuse for the enlargement of both US client organizations for the „better security of Europe“. The EU Commission President, Romano Prodi, in his speech before the EU Parliament on October 13th, 1999 was quite clear in this matter.⁷² However, if we know that the Kosovo crisis followed by the NATO military intervention (aggression) against Serbia and Montenegro was fully fuelled exactly by the US administration, it is not far from the truth that the Kosovo crisis was provoked and maintained by Washington, among other purposes, for the sake of giving a formal excuse for further eastward enlargement of both the EU and the NATO.

The dismissal of the USSR by M. Gorbachev in 1989–1991 produced a huge power vacuum in the Central and East Europe that was in the coming years filled by the NATO and the EU. The eastward enlargement of both the NATO and the EU emerged in due time as a prime instrument by Washington to gradually acquire control over the ex-Communist territories around Russia. A standard Western academic cliché when writing on the eastward enlargement of the EU is that those ex-Communist East European states:

„... wanted to join a club of secure, prosperous, democratic, and relatively well-governed countries. They saw themselves as naturally belonging to Europe, but deprived of the opportunity to enjoy democracy and the free market by Soviet hegemony and Western European acquiescence to that state of affairs. With the fall of Communism this historical injustice had to be remedied, and accession to the EU was to make their return to Europe complete“.⁷³

However, it is not clear why seven West European states currently out of the EU cannot see all mentioned advantages of the EU membership. Even one of the member states (the UK) decided in 2016 to leave the club (Brexit) and one of the chief reasons for this decision was exactly the eastward enlargement as the critical idea of all East European states to join the EU is to live on the West EU member states' financial support. Nevertheless, from the geopolitical perspective, the new EU member states coming from the East Europe (from the 2004 enlargement onwards) are the US Trojan Horse in the club, which openly support the American foreign policy of the imperial design, but with their prime duty as the members of both the EU and the NATO to take an active participation in the coming Western military crusade against Russia in the form of the WWII.

⁷¹ Karin M. Fierke, Antje Wiener, „Constructing Institutional Interests: EU and NATO Enlargement“ in Frank Schimmelfennig, Ulrich Sedelmeier (eds.), *The Politics of European Union Enlargement: Theoretical Approaches*, London–New York: Routledge, Taylor & Francis Group, 2005, 99.

⁷² European Commission, „Speech by Mr Romano Prodi, President of the European Commission, on Enlargement“, European Parliament Brussels, October 13th, 1999, SPEECH/99/130.

⁷³ Jan Zielonka, *Europe as Empire: The Nature of the Enlarged European Union*, New York: Oxford University Press, 2006, 49.

However, these East European nations are going to be the first to experience direct consequences of the war as being a critical part of the Western front line combat zone against Russia.

Surely, one of the most fundamental anti-Russian actions in Europe at the post-Soviet era was the US decision to expand the NATO eastward by offering full membership to three ex-Warsaw Pact members: Poland, the Czech Republic and Hungary. Therefore, Reagan-Gorbachev agreement from Reykjavik in 1988 was unilaterally and brazenly violated by Washington under the formal excuse of a combination of events—V. Zhirinovskiy showing in the 1993 elections in Russia, domestic pressure on B. Clinton from his Republican opponents at the Congress, and what the US administration saw as the abject failure of the EU to provide an answer to a European problem of the Yugoslav civil war (1991–1999). Washington quickly accused the Europeans of being incapable of dealing with the Yugoslav crisis that was a major test which the EU failed to pass, but honestly speaking, all the EU peace-making efforts dealing with the Yugoslav crisis really failed for the very reason that they were directly sabotaged by the US diplomacy. Nevertheless, the first new action by the enlarged NATO, only two weeks after its Fourth enlargement, was savage bombing of Serbia for the sake to put its Kosovo province under the NATO occupation. This action finally forced V. Putin to compel the „Western clown“ B. Yeltsin to resign on December 31st, 1999.

It has to be recognized that the Cold War bipolarity after 1989 was, at least up to 2008, superseded by the US-led unipolarity – hegemonic configuration of the US accumulated hyperpower in global politics that presented quite new challenges to the international relations. However, after the event of 9/11, the US administration started to act by the accelerating achievement after the Cold War of supreme political and military power in the globe for the sake of completing the mission of a global hegemon. The US administration, however, purposely presented the 9/11 attack as the work of (only) a network of Al Qaeda, an Islamic terrorist organization led by Osama bin Laden, who was a Saudi millionaire's son, but „who learned his terrorist trade, with U.S. assistance, fighting Soviet forces in Afghanistan in the 1980s“, as well.⁷⁴ The US administration of the President George W. Bush responded very quickly and by the end of 2001 the Taliban regime in Afghanistan, which was a radical Islamic regime providing the base of operations for Al Qaeda, became demolished and the biggest part of the country occupied or controlled in the coalition with the US satellite states. That was the beginning of the announced „War on Terrorism“ that actually had to serve as a good excuse to further strengthen the US position as the global policeman followed by the invasion of Iraq in 2003. Therefore, a policy of global unipolarity – a condition of a global politics in which a system of international relations is dictated by a single dominant power-hegemon that is quite capable of dominating all other states, became the order of the day for both the Pentagon and the White House.

With the US military invasion of Afghanistan in 2001 and Iraq in 2003 the US stood alone (with the military support by the UK as the fundamental American client state after 1989) at the summit of the hierarchy of the international relations and global politics up to

⁷⁴ Steven L. Spiegel, Jennifer Morrison Taw, Fred L. Wehling, Kristen P. Williams, *World Politics In A New Era*, Belmont, CA: Wadsworth/Thomson Learning, 2004, 329.

2008, when Russia finally decided to protect its own geopolitical and historical interests in some part of the world – in this particular case at the Caucasus. In other words, in the years 1989–2008 the US, became the sole state in the world with the military and political capability to be a decisive factor in the global politics at any corner of the world. In the abovementioned years, the US military expenditure exceeded all other states together – a clear sign of a hegemonic global policy of Washington. It seemed that the US had an extraordinary historical ability to dictate the future of the world according to its wishes and design as America became a single world hyperpower and the universal empire stronger than Roman or British empires.

By definition, the empire is an universal state having preponderant power and a real ability to act independently without any restraint.⁷⁵ Therefore, the empire works alone rather than in concert with other states, or at least with those which we can call the Great Powers⁷⁶ – a fundamental mistake and sin, which finally provokes an apocalyptic animosity and clash with the rest of the world. This animosity, from historical perspective, after certain time provokes a blowback by the others that, in the case of the US empire, came from Russia in 2008. The Central Caucasus, the East Ukraine and the West Middle East today became the regions of direct clash of geopolitical interests on the global chessboard between declining US empire and the rising economic, political, financial and military power of Russia. Even from 1990 (the First Gulf War) the US crossed the moral boundaries in abusing its hyperpower through defiant and brutal unilateralism, becoming, as all other universal states (empires), hated and feared rogue civilization („rogue gangster state“ according to Stephen Lendman). The universal state acts as an international outlaw by its own rules, values, norms and requirements like the US and its NATO satellites in the case of barbaric bombing of the Federal Republic of Yugoslavia for 78 days in 1999.

According to Noam Chomsky, in the fall of 2002 the most powerful state that has ever existed in history declared the basic principle of its imperial grand strategy as a self-intention to keep its global hegemony by the threat to use or by use of its own superpowerfully equipped military arsenal that is the most critical US dimension of power in which Washington reigns supreme in the world.⁷⁷ It was clearly confirmed by the White House on September 17th, 2002 as a part of the US national security strategy that it was going to be no longer bound by the UN Charter rules governing the use of force:

„Our forces will be strong enough to dissuade potential adversaries from pursuing a military build-up in hopes of surpassing, or equaling, the power of the United States“.⁷⁸

⁷⁵ On this issue, see more in [Robert Kaplan, *Warrior Politics: Why Leadership Demands a Pagan Ethos*, New York: Random House, 2002]. On the political ideology of a universal state, see [Elen Arveler, *Politička ideologija Vizantijskog carstva*, Beograd: Filip Višnjić, 1988].

⁷⁶ A Great Power is such state which is ranked among the most powerful states in the world according to hierarchical state-system. There are four fundamental criteria to identify a Great Power state: 1. It is in the first rank of military competence, having full capacity to protect its own national security and to influence other countries; 2. It is economically powerful state; 3. It has global spheres of interest; and 4. It uses a “forward” foreign policy having actual, and not only potential, impact on international relations and world politics [Andrew Heywood, *Global Politics*, New York: Palgrave Macmillan, 2001, 7].

⁷⁷ Noam Chomsky, *Hegemony or Survival: America's Quest for Global Dominance*, London: Penguin Books, 2004, 11.

⁷⁸ White House, *The National Security Strategy of the United States of America*, Washington, September 17th, 2012.

After 1989 the hawks of the US hegemonic world order openly emphasise the necessity of America's self-serving pre-eminent role in the world politics, as Hillary Clinton, for instance, put it at her confirmation hearing as the US Secretary of State in 2009:

„So let me say it clearly: the United States can, must, and will lead in this new century... The world looks to us because America has the reach and resolve to mobilize the shared effort needed to solve problems on a global scale – in defense of our own interests, but also as a force for progress. In this we have no rival“.⁷⁹

However, those H. Clinton's words were ungrounded as the US empire had already been in the process of declination. The gradual decline and probably ultimate demise of the US empire, as any other empire in history, cannot be understood without previous knowledge on the nature and driving forces of the imperial system. After 1991 the USA remained to function as a „military society“ like, for instance, the Roman Empire or the Ottoman Sultanate. That is to say more precisely the driving force behind the US empire left to be an „external objective“ – the perceived needs to reconstruct the world according to its own values and norms. However, such a very ambitious project requires a very systematic policy of overall mobilization of the whole society, economy and politics. Since such mobilization implies all the time sacrifice of a particular sector of domestic economy for the sake of fulfilling the expansionist aims, the system's functioning is basically reinforced by the need to replenish resources used up at the previous stage⁸⁰ – the need which the US simply could not accomplish successfully.

The US, as a matter of fact, had already found their own military dominance in the world very costly to maintain. The American soldiers are deployed in almost 80 countries from the Balkans to the Caucasus and from the Gulf of Aden to the Korean Peninsula and Haiti. Today the US administration is constantly trapped by the *Imperial Overstretch Effect* – the gap between the resources and ambitions, especially in the foreign (imperialistic) policy, which is formally wrapped into the phrase of „domestic security“ needs or international „humanitarian mission“. Undoubtedly, the US costly imperial pursuits and particularly military spending have weakened the American economy in relation to its main rivals – China and Russia.

There are a number of scholars (N. Chomsky, M. Chossudovsky, etc.) and public workers (like P. K. Roberts) who predict that after the *Pax Americana* a multipolar system of international relations will emerge. The fact is that *multipolarity*, as a global system with more than two dominant power centers, is clearly advocated by V. Putin's administration in Kremlin instead of both *bipolarity* or *unipolarity*. This concept of multipolarity in international relations has to include besides the US the BRICS countries, Japan and the EU, as well. Since a multipolar system includes several comparatively equal Great Powers, it is a complex system by nature and hopefully more prosperous for maintaining the global security. In fact, from 2008 the world has been in the process of power transition that is surely the dangerous period as hyperpower of the USA is directly challenged by the rise of its rivals – Russia and China. Subsequently, the current Ukrainian and Syrian crisis are the consequences (a global „collateral damage“) of such period of po-

⁷⁹ Amitav Acharya, *The End of American World Order*, Cambridge, UK: Polity Press, 2014, 51.

⁸⁰ Andrew C. Janos, *East Central Europe in the Modern World: The Politics of the Borderlands from pre- to post Communism*, Stanford: Stanford University Press, 2000, 330–331.

wer transition, which has already marked the beginning of a new Cold War that can be soon transformed into the Hot Peace era. Nevertheless, the US administration is not anymore in position to run with the *Bush Doctrine*⁸¹ that is the unilateral grand strategy of the George W. Bush administration in order to preserve the unipolar world under the US hegemony by keeping America's military capacity beyond any challenge by any other state in the world as, certainly, the US hegemony has already been challenged by both Russia and China. Those two countries are currently in the process of making their own alliance bloc advocating *multilateralism* as a cooperative approach to manage shared global problems and keep collective security by collective and coordinated actions (group thinking) by the Great Powers.

The fundamental task of the US foreign policy after 1989 is to protect its own concept and practice of the unipolar geopolitical order in the world, while Russia is trying to create a multi-lateral global geopolitical order with the other BRICS countries. The BRICS group of countries (Brasil, Russia, India, China and South Africa) clearly express the global phenomenon of the „Rise of the Rest“ against the US unipolar hegemony. The rise of the BRICS marks a decisive shift in the global counter-balance of power toward the final end of America's hegemony. The significance of these four fast-growing economies and their global geopolitical power is already visible and recognized with the predictions that up to 2021 the BRICS countries can exceed the combined strength of the G-7 countries.⁸² Therefore, we here deal with two diametrically opposite geopolitical concepts of the world order in the 21st century.⁸³ The current Ukrainian and Syrian crises are just practical expression of it. From the very general point of view, the US administration does not oppose the Russian geopolitical projects because of the fear of the reconstruction of the USSR, but rather for the sake of fulfilling its own global geopolitical projects according to which Russia has to be a political and economic colony of the West like all the former Yugoslav republics are today, but just formally exist as the „independent“ states. The most immediate US task in dealing with Russia after 2000 is to prevent Moscow to create an Eurasian geopolitical and economic bloc by (mis)using the EU and NATO policy of the eastward enlargement in the East Europe and the Balkans. Ukraine plays in this matter one of the fundamental roles as, according to notorious US Russophobe of the Polish origin Z. Brzezinski, Ukraine is the new and important space on the Eurasian chessboard as a geopolitical pivot for the reason that its very existence as an independent country helps to halt Russia to become an Eurasian empire, which means the center of world power. Therefore, the US policy in the East Europe has to concentrate on turning all regional countries against Russia, but primarily Ukraine, which has to play the crucial role of stabbing the knife to Russian backbone.⁸⁴

⁸¹ The *Bush Doctrine* dealing with the „War on Terrorism“ is formulated in two messages delivered to joint sessions of the US Congress on September 20th, 2001 and January 29th, 2002 [Paul R. Viotti (ed.), *American Foreign Policy and National Security: A Documentary Record*, Upper Saddle River, New Jersey: Pearson Prentice Hall, 2005, 244–248]. The *Bush Doctrine* is directly supported by the *USA Patriot Act* of October 24th, 2001. The idea of *Bush Doctrine* is in fact very similar to the idea of the *Reagan Doctrine* of 1985 formulated to fight the Sandinista regime in Nicaragua.

⁸² Andrew Heywood, *Global Politics*, New York: Palgrave Macmillan, 2001, 447.

⁸³ Срђан Перишић, *Нова геополитика Русије*, Београд: Медија центар „Одбрана“, 2015, 221.

⁸⁴ On this issue, see more in [Zbigniew Brzezinski, *The Grand Chessboard: American Primacy and Its Geo-strategic Imperatives*, New York: Basic Books, 1997].

The Huntington's thesis about the unavoidable clash of the antagonistic cultures in the post-Soviet time basically served as academic verification of the continuation of America's hegemonic global policy after 1989. The author himself „was part leading academic and part policy adviser to several US administrations—and had occupied this influential space since the late 1950s“,⁸⁵ which means that Huntington directly participated in directing the US foreign policy during the Cold War. However, as the USSR together with its Communist satellites finally lost the war, and the US policy of the *Pax Americana* had to be continued after the Cold War, as well, by his article and later the book on the clash of antagonistic civilizations, as their value systems are profoundly different, Huntington actually paved the academic ground to the Pentagon to invent new and useful enemies that would give the US a new role and provide a new justification for America's continued hegemony in a post-Soviet world. One of these enemies became a post-Yeltsin's Russia as a country which decided to resist a global hegemony by anyone.

A new Russian foreign policy in the 21st century is specially oriented and directed toward refutation of predicting that the new century of the new millennium is going to be more „American“ than the previous one. It means that the US-Russian relations after 2000 are going from the US-led „New World Order“ to the multipolar „Resetting Relations“. ⁸⁶ The last military success of the *Pax Americana*'s geopolitical project was the Second Gulf War (the Iraq War) in 2003 launched by the US Neocon President George W. Bush not only to kick out the „Vietnam Syndrome“, but more importantly to give an answer to all those experts, who had previously been predicting the erosion of the US influence in the global politics. The architects of a post-Yeltsin's Russian geopolitics, followed by all critics of the *Pax Americana* emphasize the dangerous effect of the American soft power in the shape of popular culture, dressing style, fast food, music, etc., as the products of the primitive sub-culture and quasi-civilization. Therefore, the global duty of the civilizations at the time of the clash of civilizations is to fight against the quasi-civilization, which degenerates the human face around the world. That is one of the critical tasks of Russia in the world policy after 2000 as one of the escalating Great Powers. The rising power of the post-Yeltsin's Russia as one of the leading countries which are challenging the US unipolar hegemony can be seen from the facts that only up to 2008 Russia has succeeded in doubling its GDP, tripling wages in real terms and reducing the unemployment and poverty.⁸⁷

Russian geopolitical and national interest in Ukraine

There are two fundamental reasons why a loss of Ukraine, or at least its eastern half if Ukraine joins the NATO and the EU, is unacceptable for Russia and even catastrophic: geopolitical-strategic and historical-patriotic ones. To have the NATO troops in Ukraine for Russia is the same as to have the German Nazi Wehrmacht army in front of Moscow, Saint

⁸⁵ John Baylis, Steve Smith (eds.), *The Globalization of World Politics: An Introduction to International Relations*, Second edition, New York: Oxford University Press, 2001, 115.

⁸⁶ Roger E. Kanet, "From the 'New World Order' to 'Resetting Relations': Two Decades of US–Russian Relations" in Roger E. Kanet (ed.), *Russian Foreign Policy in the 21st Century*, London: Palgrave Macmillan, 2011, 204–227.

⁸⁷ Richard W. Mansbach, Kirsten L. Taylor, *Introduction to Global Politics*, Second edition, London–New York: Routledge, Taylor & Francis Group, 2012, 165.

Petersburg or Volgograd as it had already been the case during the WWII. Ukraine, known as the *Little Russia*, for the Russians is a symbol of the first Russian national state – Kievan Rus (882–1240) that was the land of the Russian ethnonational origin. Therefore, as the present-day territory of Ukraine was the birthplace of the Russian statehood, the current Ukrainian crisis also has a very strong historical dimension for Russia. From the very historical-patriotic viewpoint, Kiev as the city has to be the first choice for the capital of all Russia or united Russian lands, and not either Moscow or Saint Petersburg.⁸⁸ To lose Ukraine out of sphere of its own geostrategic and national interest for Russia means to return the wheel of history 300 years back and lose a buffer security zone against constantly aggressive military anti-Russian policy of the US-led NATO.

When Ukraine proclaimed the independence in 1991, that was recognized by Moscow, Russia lost its dominant position in the Black Sea region. If Ukraine joins the NATO, as a precondition to join the EU, this will result in apocalyptic consequences for Russian independence and national security. We cannot forget that from the end of the 18th century Crimea and Odessa were for Russia the centres of the naval power and even the culture. The loss of a strong geostrategic position in the Black Sea by the Ukrainian independence after 1991 was painful for Russia, but transferring Ukraine to the NATO domination will be simply catastrophic. However, having the control over Ukraine, or at least over Ukraine's eastern regions, is for Russia the matter of both geopolitical and national survival in the time of the *NATO World Order* (the NWO).

The other issue in regard to Russian geopolitical and national interest in Ukraine is the question of the Christian Orthodox religion and its believers. Traditionally, Russia assumed the role of the protectorate of all Christian Orthodox believers. This role is especially of the sensitive nature after 1991 in the territories of Russia's nearest neighbourhood – the republics of ex-USSR. In these territories to protect the Christian Orthodox believers for Russia means firstly to prevent their national de-Russification, and secondly, to keep their geopolitical orientation toward Moscow. The fact is that Ukraine's independence after the dissolution of the USSR brought a deepen schism within the bloc of the Christian Orthodox believers as they became divided into three Christian Orthodox Churches with only one legally recognized – Ukraine's Orthodox Church of Moscow Patriarchate, which is the strongest in the East and South Ukraine. After 1991 with great support by Kiev authorities the still unrecognized Ukraine's Orthodox Church of Kiev Pa-

⁸⁸ For the sake of comparison, Russia has more historical, ethnic and moral rights to Kiev as its capital than Lithuania to the German Memel (Klaipėda in Lithuanian) to be only a part of its state territory. The Lithuanians basically occupied the seaport of Memel by force in January 1923 under the excuse of creating the united (Greater) Lithuania [Arūnas Gumuliauskas, *Lietuvos istorija (1795–2009)*, Šiauliai: Lucilijus, 2010; 175–176]. Before 1923 Memel with its hinterland had never been a part of any kind of the Lithuanian state and the ethnic Lithuanians were a minority in the city that was populated by a clear majority of the Germans and the German speakers (Jews). More precisely, Memel together with its hinterland known as Memelgebiet was an ethnically mixed territory populated by some 142.000 inhabitants: 47% the Germans, 28% the Lithuanians and 25% the German-speaking Memellanders [Paul Robert Magocsi, *Historical Atlas of Central Europe*, Revised and Expanded Edition, Seattle: University of Washington Press, 2002, 133]. However, the landlocked post-WWI Republic of Lithuania desperately needed a port at the Baltic Sea that became the main reason for the Lithuanian „uprising“ in the city, which finally brought Memel and Memelgebiet into Lithuania as a part of the region, which is called *Little Lithuania* (Mažoji Lietuva) by the Lithuanian historiography. Therefore, if Lithuania had the right to annex the (eastern) part of the *Little Lithuania* from Germany in 1923 there is no any obstacle for Russia to annex today at least the eastern parts of the *Little Russia*, which are populated by the clear Russian majority.

triarchate was established, which became eminently anti-Russian. The biggest number of supporters of this church is in Kiev and the Central Ukraine. The second unrecognized Orthodox church is Ukraine's Autocephalous Orthodox Church, also anti-Russian, which is strong only in the West Ukraine, and supported by the Ukrainian diaspora in the USA and Canada. Both of these unrecognized Orthodox churches have direct political and financial support by Ukraine's politicians, who are against cooperation with Russia. To support the only recognized Christian Orthodox church in Ukraine for Moscow means at the same time to beat anti-Russian ideological influence of the West and its warmongering policy against Russia and the Russians.

A political milieu in Ukraine totally corresponds to its confessional, linguistic and ethnonational structure and division. The West and Central Ukraine vote for pro-Western orientation of the country while the East and South Ukraine for better relations with Russia. Subsequently, the whole Ukraine cannot go to the EU/NATO bloc and it cannot be included in Russian sphere of geopolitical domination or be annexed by Russia. Naturally speaking, the best geopolitical option for Ukraine is to be divided into two parts (West & East) between the West and Russia (probably according to the 1667 Andrusovo Treaty). That is a fundamental, but unofficial, proposal by Kremlin taking into account historical, national, security and democracy reasons. We should not forget that among all Great Powers or their blocs Russia is mostly interested in the „Ukrainian Question“ from historical and ethnonational point of view, but not the EU, the NATO or specially the USA, which has nothing to do with Ukraine from any perspective except to push Kiev into the war against Russia.

One of the most critical interests of Russia in the „Ukrainian Question“ is to prevent further Ukrainization of the Russian-speaking population that was common practice in the USSR and the independent Ukraine after 1991. This process was accomplished under the ideological standpoint that all inhabitants of Ukraine are, or have to be, the Ukrainians. Therefore, there was no room for the Russians in Ukraine according to such ideological concept as the West Ukrainian identity was artificially created by the bureaucratic means imposed to the East and South Ukraine. Basically, the process of Ukrainization of Ukraine was accomplished according to the French nation state building model and subsequently there are many „Ukrainians“ today whose mother tongue is in fact the Russian. The Soviet Communists created the new political nations by separating their identities from the Russian ethnolinguistic corpus. The „Ukrainians“ and the „Byelorussians“ are today the best examples of such anti-Russian national policy by the Soviet (Jewish, Georgian, Ukrainian) political leadership. The political-ideological centre of the process of Ukraine's Ukrainization is Galicia with Lvov as its administrative centre. This historical province of Ukraine is at the same time the most nationalistic, Russophobic, Nazi and pro-NATO/EU oriented. For the Galicians, Russia and the Russians are not Europe and the Europeans, but rather Asia and the Asians.

The anti-Russian political orientation of the US foreign policy after 1991 found extremely fertile soil exactly in the West Ukraine. Both the US administration and the Ukrainian nationalists tend to absolutely separate whole Ukraine from Russia and to alter the national identity of Ukraine's Russian-speaking population thus transforming Ukraine into a part of the US-created geopolitical *Cordon Sanitaire* against Russia. The greatest American success in execution of such project was in 2004, when the US administration

brought the pro-American and anti-Russian President Viktor Yushchenko to power in Kiev after the Orange Revolution that was in fact *coup d'état*.

Nevertheless, Russia did not give up the idea to protect its own national and geopolitical interest in Ukraine. Differently to the US, Russia has the legitimate historical and ethnocultural right to make different types of alliances and cooperation treaties with Ukraine and even to discuss Ukraine's internal affairs with Kiev administration. However, the answer from Moscow to illegitimate colour revolution in Ukraine in 2004 was inadequate at that time, but ten years later Russia finally decided to protect its geopolitical and national interest in Ukraine in order not to repeat the cardinal mistake by J. V. Stalin in 1941 before the Barbarossa Operation started. In general, B. Yeltsin's administration did not care at all about the Russians outside Russia, who were left to cope by themselves with Russophobic policies by the local governments in Russia's nearest neighbourhood, especially in Ukraine and the Baltics. From 2008 Moscow did start more actively to defend its own interest in the "Regions of Privileged Interests"⁸⁹ which are around Russia and populated by the Russian-speaking population, either of ethnic Russian origin or not.

The fundamental mistake done by Kremlin in dealing with Ukraine after 2004 for the sake of protecting the Russian geostrategic and national interest was the choice of the wrong man – Viktor Yanukovich, who was the leader of the Party of the Regions in Ukraine. The party made a self-image as the party struggling for as close relations with Russia as possible, but in fact it was the very corrupted political organization⁹⁰ that collaborated with the political establishment and oligarchs from the West Ukraine and other Russophobic political environment in Ukraine for the sake of keeping the power. V. Yanukovich himself, as well as his party, practically did nothing either to prevent further Ukrainization of the Russian speakers or to fight against extreme Ukrainian nationalism. The only advantage of V. Yanukovich for Moscow was that Ukraine signed with Russia in 2010 a new agreement on the status of the Russian navy in Sevastopol and other seaports in Crimea. The old agreement was prolonged until 2042. However, Ukraine did not accept Kremlin's offer to join the Custom Union with Russia and/or the Common Economic Space as a foundation for the future Eurasian Union regardless of the fact that Moscow offered very prosperous economic projects and benefits to Ukraine.

V. Yanukovich's administration, nevertheless, started to negotiate with the EU for the sake of using its economic projects and financial benefits, which in comparison to Russian offer have been of less use for Ukraine. Therefore, during the US/EU sponsored *coup d'état* in winter 2013/2014 V. Putin did not crucially support V. Yanukovich to stay in power, but instead only gave him refugee shelter in Russia when the Ukraine's President had already become ousted by the mob. At that time, many of V. Yanukovich's party officials collaborated with the new absolutely pro-Western oriented revolutionary Government in Kiev followed by all Ukraine's oligarchs. It practically meant that Ukraine's southern and eastern regions were going to be politically shushed even by the military intervention of the West Ukraine. That is the real reason for the current civil war in Ukraine beyond which the US geopolitical fingers lie.

⁸⁹ John Berryman, "Russia, NATO Enlargement, and 'Regions of Privileged Interests'" in Roger E. Kanet (ed.), *Russian Foreign Policy in the 21st Century*, London: Palgrave Macmillan, 2011, 228–245.

⁹⁰ Anders Åslund, *Ukraine: What Went Wrong and How to Fix It*, Washington: Peterson Institute for International Economics, 2015, 91–93.

Russia's moral, national, patriotic and human duty was to protect the population from the South and East Ukraine in order to prevent a humanitarian catastrophe and even ethnic cleansing as it happened with the Serbs in Kosovo after the NATO occupation of this province of Serbia in June 1999. V. Putin simply decided not to repeat the cardinal mistakes done by B. Yeltsin's administration in dealing with the Yugoslav crisis in the 1990s. Kremlin figured out quite well that the final time for beating the Western crusade on Russia had already come: now or never. Subsequently, the first decision of Moscow was to return Crimea in March 2014 to its motherland Russia, sending in this way a quite clear sign to the Western crusaders to stop with their warmongering policy against Russia or to face the consequences. Crimea, with at least 2/3 of the Russian population, became re-included in Russia after the referendum when this option was supported by 97 percent of the Crimean electorate. The second step in Russia's policy dealing with a new political situation in Ukraine is to support existence of the regional historical-cultural self-identity of the Donbass region in the East Ukraine as the part of *Novorossiya*. This project is the optimal solution to protect the Russian national identity of the East Ukraine, and also the project which can encourage predominantly Russian-speaking Republic of Transnistria to survive between Moldova and Ukraine. Consequently, the US/EU geopolitical *Drang nach Osten* against Russia will be thwarted in the most effective way and, what is the most important thing, without direct military confrontation that can escalate into the WWII.

The US-led *New World Order* in international relations and world politics that was established after the dissolution of the USSR and the Warsaw Pact in 1991 has been from 2008 under the direct challenge by Russia and considerable changes and modifications. From the time of the „Ukrainian Question“, which started in March 2014 with re-annexation of the Crimean Peninsula by the Russian Federation and separation of the Russian-speaking eastern provinces of Ukraine from the central administration in Kiev, a new age of global security came to agenda to replace the previous one in the recent future. The crux of the matter in regard to territorial decomposition of Ukraine in 2014 was the Kosovo model founded on „Kosovo precedent“, which was used by the Western Governments in 2008 for the sake of territorial dismemberment of the Republic of Serbia by the recognition of self-proclaimed Kosovo independence.

It is the fact that „Kosovo precedent“ represents a flagrant violation of the international law for two reasons: 1. The NATO military aggression on the sovereign and independent Federal Republic of Yugoslavia for 78 days in 1999 without a mandate of the UNSC; and 2. The international recognition of the unilateral declaration of state independence of the „Republic of Kosovo“ in February 2008 by the USA and the majority of the EU and other Western countries. Nevertheless, „Kosovo precedent“ was in 2010 legally empowered by the decision in the form of an advisory opinion of the International Court of Justice in the Hague (the Netherlands), which stated that Kosovo's unilateral declaration of independence does not violate the international law. We believe that this opinion was in accordance with the political interest of the US and its Western satellite states.

Surely, „Kosovo precedent“ has questioned the very foundations of the international law and above all the UN Charter, opening doors for a boomerang effect all over the world that became firstly applied in the case of Crimea's secession from Ukraine in 2014. This secession is formally based on the same international legal grounds as in the case of Kosovo in 2008, but at the same time with much more legal arguments. The case of

Crimean boomerang effect was followed by the independence referendum in Donbass region of the East Ukraine that further complicated the „Ukrainian Question“ in global politics and international relations with its very possible final solution based on territorial division of Ukraine between Russia and the West.

Finally, the fundamental conclusion of the research is that “Kosovo precedent” has already served and will further serve in the recent future as the foundation for the territorial decomposition of Ukraine by neighbouring Russia and probably some other countries (like Moldova), opening in such way the doors for a new age of global security and international relations in which the US will not any more enjoy the position of a global hegemon.

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ARBITRATION AS MEANS OF RESOLVING DISPUTES IN THE CASE OF BOSNIA AND HERZEGOVINA

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The process of arbitration is a form of gentlemanly agreement between countries and international entities to resolve certain disputes and it has certain advantages over other mechanisms. Implementation of the arbitration decision is a matter of prestige and honor for parties in dispute, not a matter of coercion or utilization of mechanisms for implementation of decision.

This paper describes arbitration as a way of peaceful settlement of international disputes. The emphasis is on the arbitration procedure in Bosnia and Herzegovina, the establishment of an arbitration tribunal, the conduct of the proceedings and the decision of the arbitration tribunal.

Key Words: *arbitration, arbitration proceedings, tribunal, argument, Bosnia and Herzegovina, Republika Srpska*

Introduction

The war in Bosnia and Herzegovina began in 1992 as a result of the break-up of the Socialist Federal Republic of Yugoslavia, and it lasted until 1995 when it ended by the Dayton Peace Agreement. There is no universally accepted categorization of the war, so until today it is treated and described variously by participants, as well as certain international entities. For the Serbs and Republika Srpska it was defensive-patriotic war, the aggression against Bosnia and Herzegovina for the Bosniaks in Bosnia and Herzegovina and patriotic war for Croats in Bosnia and Herzegovina. Although there is no generally accepted judgment about this war, it is undoubtedly the closest one to civil war by its characteristics.

The war has practically ended on November 21st 1995, after three weeks of negotiations, by signing the Dayton Peace Agreement in the US military base Wright-Patterson in the state of Ohio. This act closed the circle from unsuccessful negotiations at the beginning of the war to the successful ones in Dayton. Unfortunately, within this circle there was the bloody war that did not bring solution to the dispute, and it took over hundreds of thousands of lives, created some two million refugees and internally displaced persons

and brought enormous destruction. In contrast to war as means of force, which did not bring solutions, the combination of the various peaceful means has made some solutions and finally stopped the bloodiest conflict on the European soil since World War II.

Arbitration procedure in Bosnia and Herzegovina

Arbitration in Bosnia and Herzegovina was practically created at the Dayton negotiations, by signing the arbitration agreement, and the process went through three stages to reach the final decision. The appointment of arbitrators and the establishment of the arbitration tribunal, which was conducted in 1996, could be marked as the first phase. The establishment of the arbitration tribunal was followed by arbitration hearing and the presentation of arguments of the parties as the second stage in the process, which lasted from 1996 to 1997, when the tribunal moved to the final phase of its work.

Due to the very complex political and security situation in Bosnia and Herzegovina, the final arbitration decision was not brought at first, but successively in three stages. In 1997 the tribunal made an interim decision, which was followed by the amended decision of 1998 to make the final arbitration decision for Bosnia and Herzegovina, which was enacted in 1999, after two and a half years of adjudication and almost four years after the signing of the agreement.

The establishment of the arbitration tribunal

The Federation of Bosnia and Herzegovina and Republika Srpska agreed that each party should appoint one arbitrator. In accordance with this provision, the Federation of Bosnia and Herzegovina has appointed Ćazim Sadiković, PhD and Republika Srpska Vitomir Popović, PhD as arbitrators. Each side chose its arbitrator without objection or rejection of the other. The agreement also stated that the third arbitrator as the president of the arbitration tribunal should be elected 30 days after the agreement between the representatives of the parties, and that if the parties can not agree, the third arbitrator shall be appointed by the President of the International Court of Justice. Since the arbitrators appointed by their parties failed to appoint the third arbitrator within the specified deadline, the President of the International Court of Justice appointed Roberts B. Owen as the third arbitrator and chairman of the tribunal on July 15th 1996.

The agreement provides that any decision of the arbitration tribunal is to be made by the majority of the arbitrators. It was agreed in Dayton and also confirmed in writing that if the majority of the Tribunal did not reach a decision, the decision of the presiding arbitrator should be final and binding on both parties. It could be suggested that the decision of the Chairperson should be crucial in this case because right from the start the positions of the parties were highly controversial, and expressly rejected in any possibility of compromise. Due to the lack of real opportunities for arbitration decision to be made by agreement of both sides, it was agreed that the rule on decision-making had to be changed, and that decisions of the Chairperson should be binding. Until January 8th 1997 the tribunal Presiding Roberts B. Owen failed to hold a tribunal meeting.

The arbitration process practically started with the hearing in Rome on January 8th 1997 in the presence of all three arbitrators. The hearing lasted nine days including the testimony of 19 witnesses (eight called by the Federation, nine by Republika Srpska and two by the tribunal) and administering the final say. In addition, the Tribunal received various written and evidential submission of both parties during the proceedings. (Popović 1999).

Following the Rome hearing, the Tribunal conducted its consultations in Washington. All three arbitrators were present and took active part in the consultations. However, during the last meeting of the day before the deadline for making the decision, the two arbitrators have refused to sign the decision. This refusal was interpreted in the sense that they authorized the tribunal to proceed to a final decision despite the refusal of the arbitrators to sign.

The tribunal also discussed its jurisdiction to conduct this dispute and make a decision. The reasons for this have occurred because Republika Srpska disputed its competence to work, basing their denial of the content of the arbitration agreement signed in Dayton in the context of the general agreement. Republika Srpska argued that the tribunal has the authority only to resolve the final position of the Inter-Entity Boundary Line (IEBL) in the Brčko area as it is stated in the arbitration agreement. In fact, the contract stated that the dispute should be settled by the entity line in accordance with a display on the map. However, there was no map in the appendix of this contract.

Secondly, Republika Srpska argued that it did not understand, during Dayton negotiations, that the possible outcome of the arbitration might be a transfer of Brčko from its territory to the territory of the Federation of Bosnia and Herzegovina. Republika Srpska claimed that it misunderstood the facts with the alleged result that there has been an error that invalidates the arbitration agreement under Article 48 of the Vienna Convention on the Law of Treaties. The arbitration agreement does not mention the "Brčko area", and the area shown on the map and attached later in the appendix shows the territory of the municipality of Brčko including the town of Brčko with a boundary line running through the municipality. Finally, the precise part of the border line through the disputed area is not expressly defined both in the annex and on the map. (Popović 1999).

Imprecise definition of the framework of dispute between two parties, which led to problems of jurisdiction and questions the actual arbitration cases can be explained by the fact that the issue of Brčko "possession" came to the fore only in the final hours and minutes of the Dayton Conference. The lack of any agreement of the parties on this issue in Dayton almost led to the collapse of negotiations. In order to bring this conference successfully to the end and sign the Framework Agreement for Peace, the definition of the exact subject of the dispute was left open to be resolved through the arbitration process. Although it was found that the meaning of IEBL is not the same as the area, the arbitration I tribunal, however, declared itself competent and continued to work and requested accordingly the parties to present their arguments, which they did.

Arguments of the Federation of Bosnia and Herzegovina

The Federation of Bosnia and Herzegovina primarily requested implementation of the agreement according to which Bosnia and Herzegovina and the Federal Republic of Yugoslavia, not Republika Srpska, are parties in dispute, as well as the application of the

principles of the established international law and specifically argued that the international legal doctrine of non-recognition had to be applied in the instant case towards the Federation of Bosnia and Herzegovina. The modern doctrine of non-recognition, when a contract that was supposed to create new territorial rights violates the existing rule of customary or conventional international law, provides that the contract is invalid and can not provide a benefit to the offender in the form of new legal rights or in any other way. In this way, the Federation of Bosnia and Herzegovina primarily wanted to deny international legitimacy of Republika Srpska as mandated by the Dayton Agreement.

Furthermore, the Federation of Bosnia and Herzegovina presented its views on the nature of Republika Srpska's behavior during the war, arguing that the campaign of ethnic cleansing occurred in Brčko relying their claims on comparison of census data from 1991 shown in Table 1 and the situation in Brčko after the war. It stated that Republika Srpska's aggression in Brčko area violated a variety of unconditional norms of the international law and that the United Nations Security Council and other authorities have repeatedly noted that the acquisition of territory by the Bosnian Serbs and Serbs from Yugoslavia through ethnic cleansing violated international law. (Popović 1999).

Table 1 – *National structure of the population in the Municipality of Brčko according to the census from 1991. (Statistical Bulletin No.234).*

Municipality of Brčko	Population	%
Muslims	38,617	44.07
Serbs	18,128	20.69
Croats	22,252	25.39
Yugoslavs	5,731	6.54
Others	2,899	3.31
Total	87,627	100.00

In addition to the doctrine of non-recognition, the Federation of Bosnia and Herzegovina also claims that historical, demographic, cultural and other factors may pose a source of legal claim to a territory even if these ties did not originally refer to people or entities that did not constitute an independent state or hold traditional legal title to territory. In fact, the Federation of Bosnia and Herzegovina argues that people and places in the Federation of Bosnia and Herzegovina have stronger historical and socio-economic ties to Brčko than Republika Srpska does, and that, consequently, this area should be placed under the control of the Federation of Bosnia and Herzegovina. (Popović 1999).

The Federation of Bosnia and Herzegovina argues that special justice in this case clearly favors the decision on Brčko in its favor with the possibility of assistance from the international presence. Considering that Republika Srpska in its efforts in the Brčko area allegedly failed to comply with any acceptable ethical and moral standards, the Federation of Bosnia and Herzegovina argues that, by allowing the Serbs to retain control of the town of Brčko acquired by force and violence, the tribunal would reward the Serbs for their behavior.

On the basis of the foregoing, the Federation of Bosnia and Herzegovina argued that the tribunal should move the IEBL north to the Sava River and include Brčko and much of the territory south of Brčko in the Federation. In the alternative, the Federation of BiH

expresses willingness to accept the interim international presence in this area, recognizing that international oversight may be the only way to convince citizens of the Federation of Bosnia and Herzegovina and Republika Srpska that the multiethnic municipalities can exist in peace and prosperity.

Arguments of Republika Srpska

During the hearing in Rome, Republika Srpska made several written requests to the defense of the Federation of Bosnia and Herzegovina. Considering the legal principle of non-recognition, Republika Srpska assures that it is inapplicable to this case, and in any event, it has been misstated by the Federation. In addition, Republika Srpska states that the principle of non-recognition is not applicable to the present case, in which the alleged illegal activities that further contributed to the seizure of the territories by Republika Srpska, have been ratified by the Dayton Agreement. When it comes to equitable principles, Republika Srpska stated that the Federation of Bosnia and Herzegovina participated in war crimes and acts of aggression. In order to prove this charge, Republika Srpska has obtained various reports of the United Nations and also presented several witnesses during the hearing.

Republika Srpska opposed the proposed international regime on several grounds. The special international district of Brčko would violate the constitution of Bosnia and Herzegovina, which specifically states that the nation should be composed of two entities and: "That all governmental functions and powers not expressly assigned ... to the institutions of Bosnia and Herzegovina will be entity's." Republika Srpska argued that the international regime could be authorized only by a constitutional amendment. (Popović 1999).

According to Republika Srpska, the Dayton Accords not only ratified control of Republika Srpska over the Brčko area and recognized the concept of continuity of territory, but also recognized the right of Republika Srpska's sovereignty over 49% of the territory of Bosnia and Herzegovina. According to Republika Srpska, the Tribunal must leave two halves of the territory of Republika Srpska linked by a corridor area and if there is a need to change the IEBL it could be moved only to the south in order to increase the territory of Republika Srpska. Republika Srpska further argues that the Brčko area is critically necessary for Republika Srpska to move the refugees and displaced persons and for the economic prosperity of Republika Srpska. (Popović 1999).

The Federation of Bosnia and Herzegovina has made several answers to the allegations of Republika Srpska. Regarding the request of Republika Srpska for 49% of the territory of Bosnia and Herzegovina, the Federation of Bosnia and Herzegovina claimed that the agreed principles from September 8th 1995 (where the 51-49% formulation appears) were not formally introduced. The Federation of Bosnia and Herzegovina asserts that the preamble of the Dayton Agreement, whereby parties "affirm their commitment to the agreed basic principles", does not constitute a binding position itself, and that the Dayton Agreement does not pose anything that could be by any means related to the territorial allocation of the Brčko area except Annex 2, which explicitly leaves the status undetermined pending the decision of the arbitration tribunal. The Federation has espoused the territorial division set out in the agreed principles, which explicitly raises the possibility that the proposal is subject to revision by the final agreement of the parties.

In response to the assertion of Republika Srpska that the Dayton Accords recognize the existence of a corridor, linking its eastern and western part, the Federation of Bosnia and Herzegovina submitted that such an interpretation contradicts the unambiguous language of Annex 2, which particularly puts the disputed part of the boundary line in the Brčko area under international arbitration, leaving the question of the existence or non-existence of corridors open for later resolution by this tribunal.

Arbitration decision

The very tense and complex security situation in Bosnia and Herzegovina, distinctly opposed positions of the parties to the dispute, a different interpretation of the arbitration agreement and various political pressures followed the course of the process of arbitration.

The arbitration award for Brčko was a series of three decisions taken in the period from 1997 to 1999. This series of decisions was composed of transitional, additional and final decision. It is highly debatable whether this is a final decision in the true sense of the word, as the supervisor for Brčko, as a product of arbitral awards, was given extremely broad authorization. Using this authorization, after the end of the arbitration process the supervisor further edited the Brčko area, and thus exercised the kind of modification of the arbitration decision. Besides that, the arbitration tribunal retains the right to change the final decision if it is informed by the supervisor that there is a need for that.

The Tribunal had the stand that in circumstances of great tension and irreconcilable attitudes of the opposing sides, it would be inappropriate to make a final choice as to which of the competing political entities should be given control of the city and the whole area. The standpoint of the international community, and therefore the arbitration tribunal, was that the organizational arrangements in the Federation of BiH are incomplete, that Republika Srpska does not fully comply with the obligations under the Dayton Agreement, and that the tension and instability in the region are at a higher level than it was expected and that the joint institutions of Bosnia and Herzegovina have not yet developed the government that works effectively. Therefore, the Tribunal's conclusion was that, in these unique circumstances, it would be neither wise nor fair to make a final choice between competing parties in the first decision.

Transitional decision

At the Rome Conference on February 14th 1997, the Arbitral Tribunal issued an interim decision, and as such, it had a temporary, but mandatory character. Simultaneously, it represented a solid basis for the further work of the tribunal including the adoption of the following decisions of its superstructure. The essence of this decision was to establish transitional international supervision of the implementation of the Dayton Agreement in the Brčko area.

The main reason for the adoption of the transitional decision was the fear of the international community that a conflict might escalate with any other decision, and that even a new war might break out. The decision requested from the Office of the High Representative for Bosnia and Herzegovina to open an office with staff in Brčko under the leadership of the

Deputy High Representative for Brčko called "the Brčko Supervisor" as soon as possible. (the interim decision of the arbitration tribunal for Bosnia and Herzegovina).

Two basic functions have been placed within the jurisdiction of the Supervisor: firstly, control over the implementation of the Dayton Agreement throughout the Brčko area for a period of at least one year and secondly, to strengthen local democratic institutions in the same area. Taking into account the sensitivity of the issue, it was decided that the implementation would start only when the Supervisor for Brčko in consultation with the High Representative for Bosnia and Herzegovina Steering Board of the Peace Implementation Council and SFOR¹ determines that the key elements of an integrated implementation strategy are present. (Popović 1999).

How broad the authorization to the supervisor is provided can be seen from the paragraph of the decision saying that its regulation has the force of law, and all relevant authorities in the Brčko area including courts and police personnel must respect and enforce all regulations and orders of the supervisor.

The decision of Rome, which is of great importance for the whole international experiment in Bosnia and Herzegovina, ordered that the supervisor should receive authority to make binding orders and regulations. This meant that the future supervisor of Brčko would have executive and legislative authorization that were given to the High Representative for Bosnia and Herzegovina only ten months later at a meeting of the Peace Implementation Council, the international body that oversees implementation of the Dayton Peace Agreement. This authorization given to the High Representative for Bosnia and Herzegovina is known as the 'Bonn authorization'.

Thus, Brčko practically became an international protectorate before the rest of BiH. The Steering Board of the Peace Implementation Council convened the Conference of Brčko, which was held in Vienna on March 7th 1997. It approved the appointment of the US diplomat Robert V. Farrand as the first supervisor for Brčko, supported by the delegation of two deputies from European countries and several other officials to set up his office.

Additional decision

The arbitration tribunal once again avoided ruling on the final status of Brčko when it brought its additional decision on March 15th 1998. In fact, the presiding Arbitrator Roberts Owen made the decision again on behalf of the arbitration tribunal, as his colleagues from the Federation of Bosnia and Herzegovina and Republika Srpska refused to support the additional award. The Federation of Bosnia and Herzegovina still required the entire municipality in the preliminary proceedings in Vienna, claiming that Republika Srpska throughout 1997 flagrantly breached the Dayton Peace Agreement and the decision from Rome.

Practically, additional decision did not bring anything new except that the supervisor was confirmed the same authority given by Bonn Declaration to the High Representative for Bosnia and Herzegovina, and it clearly states that there is a possibility that the Brčko area is permanently excluded from the jurisdiction of both entities and exists in the future independently within Bosnia and Herzegovina. (Popović 1999).

¹ The international force for stabilization of peace in Bosnia and Herzegovina.

As far as Republika Srpska is concerned, it withdrew the request for extension of the corridor, and asked for confirmation of the current situation explaining it to be its existential need for territorial continuity. After a series of criticisms towards Republika Srpska, Roberts Owen said that the main reason why decision, which would be partially or entirely favorable to the Federation of Bosnia and Herzegovina, was not brought on that occasion, was the fact that behavior of Republika Srpska improved since President Plavšić broke ties with Pale, as well as Milorad Dodik took office in Banja Luka on January 18th 1998. These considerations lead to the conclusion that arbitration had its political rather than legal dimension. (Popović 1999).

The additional decision gave Republika Srpska the last chance to save Brčko from the hands of the Federation of Bosnia and Herzegovina, by showing that it really changed the direction of its action and decided to continue implementation of the Dayton Agreement and the rehabilitation of the area. On the other hand, the Federation of Bosnia and Herzegovina has been advised to strengthen its position by facilitating the return of the displaced Serbs, especially to Sarajevo.

Final decision

When the arbitration tribunal, personified in the chief arbitrator Roberts B. Owen, issued its final verdict on March 5th 1999, it represented an acceptance of the long-discussed option of creating a unified, demilitarized and neutral field with its own government and under state jurisdiction. This area was also the condominium² of both entities. (Todorović 2009). This way, both entities "got" territory although they "lost" administrative authority in it. Condominium status as a territory and as a term in the international law did not "debut" in Bosnia and Herzegovina. Some hundred years ago, Bosnia and Herzegovina was occupied by the Austro-Hungarian Empire and stayed condominium or joint ownership of the Austrian and Hungarian part of the monarchy.

This decision, besides the fact that it represented the final phase of the arbitration tribunal, constituted also, in some way, the final phase of the peace negotiations in Dayton. Thus, the solution was reached at 1995 Dayton Conference, on which representatives of two sides, the Federation of Bosnia and Herzegovina and Republika Srpska, could not agree. The tribunal had to finally resolve this dispute and three basic options were imposed as a solution, namely three basic variants of the final decision.

One was to give Brčko to the Federation of Bosnia and Herzegovina, which claimed its right on the following key reasons: (a) that historically the Brčko municipality has predominantly consisted of the Bosniaks and Croats, and that it is the vital northern gateway between central Bosnia to Europe; (b) it would be unconscionable for Republika Srpska to retain exclusive control of the city, which the Serbs captured and "ethnically cleansed" during the war, and (c) that the only just result would be assigning Brčko to the Federation of Bosnia and Herzegovina. (Popović 1999).

Another option is to accept the contention of Republika Srpska to claim ownership of the sustainable management of these areas due to the fact that, regardless of its history, the Brčko corridor along the Sava River provides a vital strategic connection between two parts of Re-

² Condominium is a word of Latin origin (*con-dominium*), which means common ownership. In the international law it is a joint government and authorities of two or more states over a particular territory.

publika Srpska. Republika Srpska argued that any change in its exclusive possession would be a violation of the principle of territorial continuity and the Dayton objective, which granted Republika Srpska control over 49% of territory of Bosnia and Herzegovina. (Popović 1999).

The third option, which is shown as an optimal solution is creation of a neutral area. The option of taking the exclusive control from either entity and placing its governance to the independent District government under the exclusive sovereignty of Bosnia and Herzegovina was the final solution of the arbitration tribunal and in the spirit of the Dayton agreement. (Popović 1999).

The arbitration tribunal ordered in the last two decisions of 1997 and 1998 that Republika Srpska should clearly demonstrate the full implementation of the Dayton Agreement including specific proof of significant results in terms of the return of former Brčko residents and strong support for the multi-ethnic governmental institutions at that time, being developed under international supervision. The Tribunal expressly stated that it would expect the evidence of this from Republika Srpska during hearings in 1999, and that if this does not happen, it would be forced to change the position of Republika Srpska in the Brčko area.

Therefore, the basic issue before the Tribunal was whether Republika Srpska sufficiently met its burden of proof. Republika Srpska, therefore, found itself in a very difficult situation for two main reasons. Firstly, the implementation of the Dayton Agreement and ensuring the return did not depend only on Republika Srpska, but also on the Federation of Bosnia and Herzegovina, as well as the wishes of the displaced persons to return. Secondly, the fulfillment of these demands could not be precisely measured and presented to the tribunal. The key here was the arbitrator's belief and his authorization to make a decision.

The arbitration tribunal ruled in the final decision in this way. During the discussions in Vienna in 1999, according to the Tribunal, Republika Srpska failed to fulfill the requirements, which were required by the additional decision from March 15th 1998. The Tribunal thought that the Serb political leadership, which had the direct local control in Brčko, especially individuals aligned with the anti-Dayton parties such as the Serb Democratic Party (SDP) and the Serbian Radical Party (SRP), were both locally and entity levels tolerated, and it apparently encouraged a significant degree of obstruction of the objectives of the Dayton Agreement.

The final decision practically formed Brčko District. However, Brčko Supervisor was authorized to formalize the appointment of the establishing district. On the basis of the commitments made by Bosnia and Herzegovina and its two entities on "urgent implementation" of the decision of the tribunal, and by the date designated by the Supervisor it should be deemed that the entities delegated all their power of governance within the pre-war municipality of Brčko to a new institution - a multi-ethnic democratic government known as "the Brčko District of Bosnia and Herzegovina" under the exclusive sovereignty of Bosnia and Herzegovina. The loss of authorization in the Brčko area could be a legal aspect of this decision for both entities, as well as its establishment in a form of a unique administrative unit. (the final decision of the arbitration tribunal for Bosnia and Herzegovina).

The decision defines that the new District government is under the jurisdiction of the joint institutions of Bosnia and Herzegovina since those authorities are quoted in the Constitution of Bosnia and Herzegovina. The management of the municipality of Brčko was placed under the exclusive jurisdiction of the District government, and therefore requires entities to submit all authority over this territory to the new District government. During the transition period entity laws are to be applied within entity borders until the supervisor determines that there is no legal significance to it, and that it can be eliminated and therefore

outlawed. The tribunal concluded that the new District plan would adequately protect the legitimate interests of both entities and the international community.

The Tribunal also ordered that the new governmental institutions must be established within the time limit set by the supervisor through concrete measures taken by the state and both entities, and it expressed the hope that it would happen no later than December 31st 1999. This way stakeholders were given the option to provide their comments and suggestions for modification within sixty days. In contrast, all other solutions exposed in the final decision are marked as final and binding, and no remarks are permitted.

The basic concept of the decision was to create a single, unitary multi-ethnic democratic government with authority previously enjoyed by entities around the pre-war municipality of Brčko. The District government should essentially consist of: (a) the Assembly of the District, a legislative body whose membership would be selected through democratic elections, which were to be scheduled by the Supervisor; (b) the Executive Committee chosen by the Assembly; (c) an independent judiciary consisting of two courts: first instance and second instance, and (d) the unified police under a single command structure with uniform and badge completely independent from the entities' police structure. (the final decision of the arbitration tribunal for Bosnia and Herzegovina).

In order to regulate all matters related to the military presence in the territory of the District, the supervisor has the authority to determine the date from which not a single entity will allow its military or other armed forces or supporting facilities to be based in the District. Considering that it may be desirable to allow a gradual reduction of the current military presence in the municipality of Brčko the Supervisor was authorized and obligated to prepare a schedule of gradual withdrawal of military forces and facilities. The international community is recommended to provide financial assistance to the entities in the implementation of that withdrawal. The Tribunal agreed that Republika Srpska may have a legitimate need to move military forces and equipment through the District (Figure 1).



Figure 1 – Brčko District territory defined after final arbitration decision from March 5th 1999
(Source: Map taken from the official website of Brčko District)

Brčko District was officially declared on March 8th 2000, one year after the final decision was made, and to the entire pre-war territory of the municipality of Brčko, which is shown in Figure 1. The territory of Brčko District included 48% of the territory assigned to Republika Srpska by the Dayton Agreement including the town of Brčko, and 52% of the territory that was awarded the Federation of Bosnia and Herzegovina by the Dayton Agreement.

The Tribunal's decision stated an objective and practical problem related to the return of the displaced persons. In fact, at that time the return of the Bosniaks and Croats to Brčko was very difficult because Serbs expelled from other parts of Bosnia and Herzegovina, mostly Sarajevo and its surroundings had lived in their homes. Therefore, the High Representative for Bosnia and Herzegovina took some liberty to make specific recommendations related to taking measures to help the Federation of Bosnia and Herzegovina: (a) provide Serbian IDPs from Brčko expedited priority assistance in repossessing their property in the Federation of Bosnia and Herzegovina; (b) provide such persons with employment and security upon their return to the Federation of Bosnia and Herzegovina; (c) provide other Serbian returnees living conditions upon return. (Popović 1999).

In order to strengthen the implementation of the decision, which leans on the Dayton Agreement and to some extent represents its integral part, the Tribunal requested that the entities implement this decision as final and binding without delay, and therefore predicted that serious non-compliance would lead to penalties in the form of additional legal solutions. The most important mechanism in the implementation of the decision were the authorities of supervisors, who could determine penalties, according to their discretion, which would come into effect on the basis of their decision. Also, the Tribunal did not conclude its work, but it extended its word indefinitely, in the penal provisions of the final decision until complete fulfillment of all paragraphs of the decision.

To provide the Supervisor with an alternative solution, the tribunal decided to retain jurisdiction over this dispute until the Supervisor, with the approval of the High Representative, has notified the Tribunal: (a) that two entities have fully complied with their obligations to support the establishment of new institutions described in decision and (b) that such institutions are functioning effectively and permanently in the municipality of Brčko. Until receiving information on this, the Tribunal reserves the right to modify this final decision in case of serious non-compliance by one of the entities. Without limiting the generality of the foregoing terms, the modification of the final decision of the Tribunal may include provisions that would completely transfer district territory from an entity, which does not abide by the terms and place it under the exclusive control of the other entity. (the final decision of the arbitration tribunal for Bosnia and Herzegovina).

The authorities of Republika Srpska have never officially accepted the decision of the international arbitration of March 5th 1999, which took its city. This decision made Republika Srpska lose its territorial continuity and it physically cut it into the western and eastern part, almost five years after Dayton, which caused dissatisfaction in this entity. The arbitrator from Republika Srpska, Vitomir Popović, PhD did not agree with this decision, and excluded his opinion from the decision, which he submitted to the chief arbitrator by March 11th 1999. The tribunal did not change its decision. (Popović 1999).

At the session held on March 7th 1999 the National Assembly of Republika Srpska passed a resolution declaring the decision unfair, but Republika Srpska still implemented it. Republika Srpska continues to believe that the establishment of the Brčko District vio-

lated the basic structure of the Dayton Agreement, which regulated Bosnia and Herzegovina as a state with two entities in the territorial aspect ratio 49-51%. The official position of Republika Srpska, formulated by the Serbian arbitrator, is still in force.

Conclusion

Although burdened with many problems and setbacks, the arbitration process in BiH is still implemented. The problems were caused primarily due to incomplete or insufficiently clear arbitration agreement entered into by the parties under some pressure from the international community, which led to a different interpretation of the authorization of the arbitration tribunal and the different views of the subject of arbitration proceedings. In addition, the arbitration process is followed by extremely tense and complex security and political situation of post-conflict period in Bosnia and Herzegovina.

Brčko District was formed by a decision, which was not fully satisfactory to both parties in dispute. Having in mind one of the principles of diplomacy, not to have winners or losers, there are more and more opinions that this arbitration process pursued more diplomatic and political objectives rather than legal ones. Whether this is entirely true is, however, questionable. Nevertheless, arbitration in Bosnia and Herzegovina certainly showed that arbitration is no longer the same procedure from the beginning of the 20th century.

In the Federation, the decision of the arbitration tribunal has resulted in satisfaction due to the extraction of an important part of the territory of Republika Srpska from its exclusive property, and in addition it destabilized the position of Republika Srpska by cutting it in two parts. On the other hand, the expectations of the Federation of Bosnia and Herzegovina to join the Brčko area were not fulfilled, even though it was in favor of going to the census in 1991, and also the efforts to link the territory with the Republic of Croatia across the Sava River have not been carried out. In addition, they did not respect the request of the Federation of Bosnia and Herzegovina to treat FR Yugoslavia as a party in dispute, which confirmed undisputed international legitimacy of Republika Srpska, and therefore guarantee of its status.

The arbitration as means of resolving disputes will certainly be applicable in the future, and constellation of relations in the world that have been created in this way suggests 'small countries' need for great caution in concluding the arbitration agreement. Being the basic legal framework for conduct of arbitration proceedings, arbitration agreement must be very clear, complete and clearly designed to avoid any possible confusion in arbitration proceedings, and what is most important to avoid the possible adverse effects on a particular country caused by the decisions of the arbitration tribunal.

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THE CRIME OF GENOCIDE IN THEORY AND PRACTICE OF CRIMINAL LAW OF REPUBLIC OF SERBIA

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International criminal law, as a system of legal regulations found in acts of the international community and criminal legislation of individual states, establishes criminal liability and punishments for crimes against international law. These acts represent a breach of the laws and customs of war (international humanitarian law) that violate or threaten peace among nations and the security of mankind. Penalties prescribed for these criminal offences stand for the most severe penalties in contemporary criminal legislation. In some cases, international judiciary (supranational) institutions such as the Nurnberg and the Tokyo Tribunal, the Hague Tribunal, the Rome Court, etc. have primary jurisdiction over perpetrators of these criminal offences.

This criminal offence means the killing of a nation or a tribe. Genocide was proclaimed as "a crime under international law, which is in contradiction to the spirit and the aims of the OUN and condemned by the entire civilized world" by UN General Assembly Resolution 96/I from 11th December 1946. Although it emerged as a "sub-species of crime against humanity", genocide rapidly obtained an autonomous status and contents as one of the most serious crimes today. As a crime against international law, genocide is determined by three elements: a) the objective component – *actus reus* b) the subjective component – *mens rea* c) the subject of the act-the group-the victim. The source of this incrimination is found in Convention on the Prevention and Punishment of the Crime of Genocide from 1948, which, in Paragraph 2, defines the term and the elements of this crime against international law. In legislation, theory and practice, this term can be interpreted in the broader sense, as well. In this paper the author has analyzed theoretical and practical aspects of genocide in international criminal law and criminal law of the Republic of Serbia (former FR Yugoslavia).

Key Words: *international law, humanity, crime, genocide, court, responsibility, penalty*

Crimes Against International Law

The notion and characteristics of international crimes

In the legal system of the Republic of Serbia, crimes against international law are enumerated in the Chapter Thirty Four of the Criminal Code¹ from 2005 entitled "Criminal Offences against Humanity and Other Rights Guaranteed by International Law". These criminal offences actually represent acts that constitute violations of international treaties, agreements and conventions and they threaten and entrench peace among nations, the security of mankind and other values protected by international law or they are in breach of the rules of war related to the treatment of war prisoners, the wounded, the sick and civilians by the parties to a conflict.

The origination of these criminal offences is related to the establishment of international rules organizing relations between states in time of war and relations between the parties to a conflict in view of commencement and conduct of an armed conflict. The international law of war has emerged as the consequence of cruel and inhumane comportment throughout the long history of wars and armed conflicts between nations and states with the intention to humanize this most inhumane means of resolving international and inter-state disputes.²

The process of gradual limitation of the rights that belong to the parties to a conflict has started with the expansion of the international law of war, as well as the control not only of the acts committed against non-combatants, but those related to the commencement and conduct of war. States' right of absolute freedom to commence and conduct a war will be gradually reduced by prohibiting certain acts that include unnecessary devastation, killing and torture. A breach of the laws and customs of war constitutes crimes under the laws of war. Having accepted international obligations by signing and ratifying numerous international conventions, certain states included several criminal offences against humanity and other rights guaranteed by international law in their criminal legislation. Such criminal offences are committed by violating rules contained in international conventions. Their source lies in the prohibitions proclaimed in international legal documents (acts).³

Subject of protection under international criminal law consists of humanity and other universally recognized and generally accepted values protected by international law. The protection of humanity pertains to the protection of essential human rights such as: life, physical integrity, honor, reputation and personal dignity and other fundamental human rights and freedoms. Additional rights that belong to natural persons, individual states and the entire international community are also of general, universal significance and therefore protected and guaranteed by international law.

The majority of crimes against the international law can be committed only in a certain period of time determined by the law: during war, armed conflict or occupation. These criminal offences are most commonly committed in an organized manner with the

¹ The Official Gazette of the Republic of Serbia No. 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/2013, 108/2014 and 94/2016. More: D. Jovašević, *Krivični zakonik Republike Srbije sa uvodnim komentarom*, Beograd, 2007.

² D. Jovašević, *Krivično pravo, Posebni deo*, Beograd, 2014. pp. 305-311.

³ S. Zadnik, *Kaznena djela protiv vrijednosti zaštićenih međunarodnim pravom i novine u zakonodavstvu u svezi sa tim djelima*, Hrvatska pravna revija, Zagreb, No.12, 2003. pp. 83-86.

aim to implement certain governing of a group's or party's politics. Being considered as an aspect of organized, planned criminality, these offences are most frequently committed by the order of superior military or political leaders. Due to that, it is required to determine individual criminal responsibility of organizer, order-giver and offender.⁴

These criminal offences can be committed only with premeditation. Some of the criminal offences contained in this group are not subject to limitations on criminal prosecution and limitations on enforcement of penalty: genocide, crime against humanity, war crimes and other criminal offences that pursuant to ratified international treaties cannot be subject to limitations.

The system of international crimes

The theory of international criminal law recognizes several sorts of crimes against international law. They are most commonly divided into two categories: a) crimes against international law in the narrow sense (genuine or pure crimes against international law) and b) crimes against international law in the broader sense, or transnational crimes (counterfeit or mixed). This classification was adopted for the first time at the 14th Congress of the International Criminal Law Association, which took place in Vienna in 1989. The criterion of the division is jurisdiction of international criminal courts, which is established only in the case of crimes against international law in the narrow sense.⁵

Crimes against international law in the narrow sense belong to the first group of these criminal acts. These crimes against international law represent violations of laws and customs of war (meaning the rules of the international law of war and the international humanitarian law). They are incorporated in the Judgments of the Nürnberg and the Tokyo Tribunal, and are also known as criminal offences under general international law (or *crimina iuris gentium*).

The following criminal offences can be placed in this category:⁶

- 1) Crime against peace;
- 2) War crimes;
- 3) Genocide; and
- 4) Crime against humanity.

In legal theory, there are opinions suggesting that these criminal offences should be referred to as international crimes *stricto sensu* that are prohibited by cogent rules of international law such as the Hague or the Geneva Conventions. The following features of crimes against humanity in the broader sense (core crimes) are pointed out in legal theory:⁷

1) These international crimes have double-layered nature. Their commission draws the following consequences:⁸

- a) Individual criminal liability either of a perpetrator or of an accomplice or of a superior (on the grounds of superior liability) on the one hand and
- b) Responsibility of a state under international law on the other hand.

⁴ D. Jovašević, *Leksikon krivičnog prava*, Beograd, 2011. p. 345.

⁵ B. Petrović, D. Jovašević, A. Ferhatović, *Krivično pravo II, Posebni dio*, Sarajevo, 2016. pp. 239-240.

⁶ D. Jovašević, *Međunarodna krivična dela – odgovornost i kažnjivost*, Niš, 2010. pp. 251-255.

⁷ D. Radulović, *Međunarodno krivično pravo*, Podgorica, 1999. p. 103.

⁸ D. Jovašević, *Međunarodno krivično pravo*, Niš, 2011. pp. 251-255.

2) International crimes violate essential (fundamental) human rights and they are, therefore, prohibited as repression against the same crimes committed by the opposite party.

3) International crimes are not subject to limitations on criminal prosecution and limitations on enforcement of penalty and

4) General international law imposes as an *erga omnes* obligation on the states not to breach the basic rules that prohibit these acts.⁹

The Genocide According to the Statute of the Hague Tribunal

The Statute of the International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991 (ICTY) was adopted upon Security Council Resolution S/RES/827 from 25th May 1993. The Statute (known as the Hague Statute) recognizes four types of crimes against international law.¹⁰ These are:¹¹

1) A grave breach of the Geneva Conventions of 1949;

2) Violations of the laws or customs of war;

3) Genocide; and

4) Crimes against humanity.¹²

Imprisonment is the only penalty that can be imposed by the Tribunal, and in determining the terms of imprisonment, the Trial Chambers shall have recourse to the general practice regarding prison sentences in the courts of the former Yugoslavia, taking at the same time into consideration the gravity of an offence (objective circumstances) and the individual characteristics of the convicted person (subjective circumstances).

In addition to imprisonment, the following sanctions may be also imposed:

1) Return of any property to the rightful owners (restitution); and

2) Confiscation of any proceeds acquired by criminal acts.

Genocide,¹³ also known as the gravest criminal offence today or the "crime above all crimes" is described in Paragraph 4 of the Hague Statute. This offence is comprised of intentional destruction, in whole or in part, of a national, ethnic, racial or religious group. The practice of the Hague Tribunal has not accepted the extensive interpretation of genocide, which would include the intention to destroy national, linguistic, religious, cultural or any other identity of a group without its physical extermination.

Completion of this crime against international law requires one of the following alternatively numbered acts to be committed with the abovementioned intention:¹⁴

1) Killing members of a certain group;

2) Causing serious bodily or mental harm to members of the group;

⁹ B. Petrović, D. Jovašević, *Međunarodno krivično pravo*, Sarajevo, 2010. pp. 251-255.

¹⁰ D. Jovašević, *Komentar Krivičnog zakona SR Jugoslavije*, Beograd, 2002. pp. 11-17.

¹¹ D. Jovašević, V. Ikanović, *Međunarodno krivično pravo*, Banja Luka, 2015. pp. 251-255.

¹² V. Đurđić, D. Jovašević, *Međunarodno krivično pravo*, Beograd, 2003. pp. 89-93.

¹³ S. Fabijanić Gagro, M. Škorić, *Zločin genocida u praksi međunarodnih ad hoc tribunala*, Zbornik Pravnog fakulteta u Zagrebu, Zagreb, No.6, 2008. pp. 1387-1419.

¹⁴ I. Zvonarek, *Kršenje međunarodnog ratnog i humanitarnog prava od strane agresora tijekom domovinskog rata*, Pravni vjesnik, Osijek, No. 3-4, 1997. pp. 151-169.

3) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;

4) Imposing measures intended to prevent births within the group; and

5) Forcibly transferring children from one group to another.

Genocidal intent is the most characteristic feature of genocide as a crime. It has to refer to the destruction of a significantly large part of the group. The so-called significant part should be important enough to be able to influence the entire group. This quantitative criterion has been supplemented by the possibility that a perpetrator of this act was given, which resulted in the need to prove genocidal intent even when it was demonstrated only towards a group located within the borders of a certain geographical area. To conclude, genocidal intent takes into consideration qualitative characteristics of the attacked part of the group, allowing the option to single out the part that represents the symbol of the group or is crucial for its continued existence.¹⁵

Apart from direct perpetration (direct perpetrator), the following acts are also considered as genocide:¹⁶

1) Taking part in a conspiracy to commit genocide;

2) Direct and public incitement to commit genocide;

3) Attempt to commit genocide; and

4) Complicity in any form of genocide.

However, the Hague Statute is familiar with another grave criminal offence whose characteristics and attributes make it similar to the crime of genocide. It is crime against humanity.¹⁷ This criminal offence is found in Paragraph 5 of the Hague Statute. The description of this crime against international law clearly states that it can be committed only within an armed conflict (either international or internal in character) and directed only against civilian population, if including:¹⁸

1) Murder;

2) Extermination;

3) Enslavement;

4) Deportation;

5) Imprisonment;

6) Torture;

7) Rape;

8) Persecution on political, racial and religious grounds; and

9) Committing other inhumane acts.

The abovementioned acts ought to be committed under the following circumstances in order to constitute crime against humanity:¹⁹

1) An attack has to be committed. An attack can take place even when armed force has not been used as long as it includes maltreatment of the civilian population or preparations for such acts.

¹⁵ V. Đ. Degan, *Zločin genocida pred međunarodnim krivičnim sudištima*, Zbornik Pravnog fakulteta u Zagrebu, Zagreb, No. 1-2, 2008. pp. 77-95.

¹⁶ D. Jovašević, *Međunarodna krivična dela – odgovornost i kažnjivost*, Niš, 2010. pp. 229-231.

¹⁷ Dž. Džouns, S. Pauls, *Međunarodna sudska praksa*, Beograd, 2005. pp. 143-147.

¹⁸ D. Jovašević, *Praktikum za krivično pravo, Posebni deo*, Niš, 2014. 117-118.

¹⁹ B. Ivanišević, G. Ilić, T. Višnjić, V. Janjić, *Vodič kroz Haški tribunal*, Beograd, 2007. pp. 83-108.

- 2) Criminal offences committed by the accused have to be a part of that attack.
- 3) The attack has to be directed against any category of the civilian population.
- 4) The attack has to be either extensive or systematic. An attack is considered as extensive when being of a wide-spread nature or directed against a large number of persons. An attack is described as systematic if the violent acts are committed in an organized manner or with slight probability of being committed accidentally.
- 5) The perpetrator has to be familiar with (aware of) the fact that his acts are committed within an extensive or systematic attack against civilian population.

The Genocide According to the Criminal Law of the Republic of Serbia

System of international crimes

Chapter 34 of the Criminal Code of the Republic of Serbia contains the following "genuine" crimes against international law:²⁰

- 1) Genocide (Paragraph 373);
- 2) Crime against humanity (Paragraph 371);
- 3) War crime against civilian population (Paragraph 372);
- 4) War crime against the wounded and sick (Paragraph 373);
- 5) War crime against prisoners of war (Paragraph 374); and
- 6) Organization and incitement to genocide and war crimes (Paragraph 375).

The notion and basic characteristics of genocide

The crime of genocide²¹ from Paragraph 370 of the Criminal Code of the Republic of Serbia consists of ordering or committing the following acts: killing or causing serious bodily or mental harm to members of the group, deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part, imposing measures intended to prevent births within the group, forcibly transferring children of the group to another group with intent to destroy, in whole or in part, a national, ethnic, racial or religious group of people.

The word "genocide" is a compound created from the Greek word *genos* meaning nation or tribe and the Latin word *caedes*, which means killing or slaughter (massacre). When translated literally this word stands for the extermination of an entire nation or tribe. Genocide was proclaimed as "a crime against international law, which is in contradiction to the spirit and the aims of the OUN and condemned by the entire civilized world" by OUN General Assembly Resolution 96/1 from 11th December 1946.

In spite of the fact that it initially emerged as a "subspecies of crime against humanity", genocide rapidly obtained autonomous status and contents as one of the most seri-

²⁰ D. Jovašević, *Krivično pravo, Posebni deo*, Beograd, 2014. pp. 322-325.

²¹ D. Jovašević, *Karakteristike krivičnog dela genocida*, *Vojno delo*, Beograd, No. 2-3, 2002. pp. 80-92.

ous crimes today. Nowadays, it is also called "the crime above all crimes". As a crime against international law, genocide is determined by three elements:²²

- 1) The objective component – *actus reus*;
- 2) The subjective component – *mens rea*; and
- 3) The subject of the act – the victim (the group).

The source of this incrimination is found in Convention on the Prevention and Punishment of the Crime of Genocide²³ from 1948, which defines the contents and the elements of this crime against international law.

In legislation, theory and practice this term has a more extensive interpretation. Namely, this expression includes not only killing but also extermination committed in any other way of a particular group that forms a consistent entity based upon national, ethnic, racial or religious foundation. The subject of protection includes humanity and international law.

The subject of attack is a national, ethnic, racial or religious group.²⁴

A national group is comprised of people who have the feeling of sharing the legal bond of the same citizenship accompanied by reciprocal rights and obligations.

An ethnical group consists of the members who are bound by the same language and culture whereas a racial group is a group based upon hereditary physical characteristics, which is often associated to a particular geographical area regardless of linguistic, cultural, national, or religious factors.

A religious group includes members who share the same religious convictions, the same name of the confession or the same means of conducting religious ceremonies.

In fact, the terms such as national, ethnic, racial or religious group are still being studied widely and precise definitions that would be universally and internationally accepted have not been found yet. Thus, each of these terms has to be assessed in the light of an actual political, social and cultural milieu.

Although the act is committed by destructive individuals, it is not intended to eliminate those individuals as separate persons, but as the members of the group. Depending on the actual subject, genocide can appear as national or ethnic genocide or ethnocide if the subject is a national or an ethnic group.

In the case of racial genocide, the criminal act is directed against a particular racial group or against several groups of that kind. Religious genocide is directed against the members of one or more religious groups. The group is not to be determined in accordance with an objective or static criterion. Instead, the way the perpetrator perceives the members of the group is of fundamental importance for the definition of this term, which is also the standpoint of the ad hoc tribunals.²⁵

The lack of definitions of genocide that would include cultural genocide comprised of destroying language or culture of a particular group is often stressed in legal theory.

Therefore, the aim of the act is to destroy a group, in whole or in part, whereas the elimination of an individual simply represents a means of its accomplishment. The size of

²² B. Petrović, D. Jovašević, Krivično (kazнено) pravo II, Posebni dio, Sarajevo, 2005. pp. 39-41.

²³ The Official Gazette of SFR Yugoslavia No.56/1950.

²⁴ B. Lukšić, Genocide and the command responsibility, Zbornik Pravnog fakulteta u Splitu, Split, No. 4, 2001. pp. 283-291.

²⁵ B. Pavišić, V. Grozdanić, P. Veić, Komentar Kaznenog zakona, Zagreb, 2007. p. 419.

the group is of no significance for the completion of the criminal offence. It is essential that the group is present as an entity carrying specific characteristics and that it is intended to be destroyed as such. The objective of the incrimination is to guarantee the right to life, i.e. existence and development for each group carrying specific national, ethnic, racial or religious features, regardless of the spatial cohesion of its members.²⁶

The act consists of several acts that can be classified in a number of groups. These are the following acts:²⁷

- 1) Killing or causing serious bodily or mental harm to members of a specific national ethnic, racial or religious group;
- 2) Inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
- 3) Imposing measures intended to prevent births within the group (the so-called biological genocide); and
- 4) Forcible transfer of children from one group to another intended to cause the loss of their group identity.

All these acts contribute to physical and biological completion of genocide. To complete this act, it is enough to commit any of the acts precisely pointed out in the law with the intent to exterminate (destroy), in whole or in part, a group as a social entity. Genocide represents a typical example of criminal offences that rest upon the „depersonalization of the victim“, which means that the victim does not represent the objective (aim) of the act due to its individual qualities or features, but solemnly for being a member of a certain group.²⁸

The perpetration can be completed in two ways:

- 1) By ordering and
- 2) By directly conducting certain acts.²⁹

Giving orders to commit the abovementioned acts represents a special and autonomous act of genocide. In fact, ordering is a form of incitement. However, in this case ordering is not characterized as complicity, but as a special way to perpetrate this criminal offence. The crime of genocide is usually committed in an organized manner and in accordance with a previously arranged plan giving particular authority to the order of a superior, which causes the autonomous nature of his responsibility. Therefore, the superior will be responsible only for having given the order to commit genocide, even if the subordinate refuses to obey it or in any other way manages to avoid executing such order. The consequence of the act is manifested as threatening the survival of a certain national, ethnic, racial or religious group. It can be accomplished through causing a smaller or a larger number of individual consequences comprising of injuries (of life, physical integrity, a fetus) and threats (by inflicting on the group unbearable living conditions). The number of individual acts committed is of no significance for the completion of this criminal offence. This means that only an act of genocide will be committed when one, as well

²⁶ A. Kaseze, *Međunarodno krivično pravo*, Beograd, 2005. pp. 115-117.

²⁷ D. Jovašević, *Pojam i karakteristike krivičnog dela genocida*, *Sudska praksa*, Beograd, No. 9-10, 2001. pp. 59-65.

²⁸ S. Horović, *Genocid, ratni zločini i zločin protiv čovečnosti*, *Zbornik Pravnog fakulteta u Mostaru*, Mostar, 2004. pp. 99-113.

²⁹ A. Schonke, H. Schroder, *Strafgesetzbuch, Kommentar*, Munchen, 1997. pp. 1597-1601.

as several relevant acts, has been conducted. The fact that a larger number of acts causing various individual consequences were committed has an impact on the determination of sentence. This indicates that planned and systematic extermination of human groups constitutes the essence of the crime of genocide.³⁰

Any person can be the perpetrator of this act, and, when guilt is concerned, direct premeditation (*dolus coloratus*) including genocidal intent is required. Instead of applying the theory of intent, the assessment of such intent is based upon experience. The punishment prescribed for this act is minimum five years' imprisonment or thirty to forty years' imprisonment. The Criminal Code explicitly points out that this criminal act cannot be subject to limitation for criminal prosecution and enforcement of penalty.

The genocide and other related criminal offences

The definition of this term under international, as well as national criminal law, has generated a request to draw distinction in legal theory between the crime of genocide and other similar (related) criminal acts, primarily acts such as:³¹

- 1) Persecution;
- 2) Extermination;
- 3) Ethnic cleansing; and
- 4) Crime against humanity.

The persecution

Resemblance between genocide and persecution is based on the presence of discriminatory intent of the perpetrator in the moment of perpetration. Namely, both of these punishable acts are committed against members of other national, racial, religious or ethnic groups.³²

There are two major differences between these criminal acts. These are:

- 1) Persecution covers persecution based upon political, racial or religious grounds and
- 2) The ultimate victim of genocide is the entire group-national, racial, religious and ethnic one whereas the victims of prosecution are individuals themselves, as members of certain "prosecuted" groups.

The extermination

Similarity between genocide and extermination consists of the fact that in both cases the criminal act is intended to cause massive killing. The differences between these two punishable acts consist of the following:

- 1) The act of genocide is committed with the intent to destroy, in whole or in part, the group itself whereas the same intent (giving the quality of *dolus coloratus* to perpetrator's premeditation) is not present in case of extermination.

³⁰ Lj. Lazarević, B. Vučković, V. Vučković, Komentar Krivičnog zakonika Crne Gore, Cetinje, 2004. pp. 1021-1024.

³¹ D. Jovašević, Međunarodna krivična dela – odgovornost i kažnjivost, Niš, 2010. pp. 260-262.

³² M. Marković, Međunarodna krivična dela, Jugoslovenska revija za međunarodno pravo, Beograd, No.1, 1965. pp. 39-44.

2) In case of genocide, members of the target group share the same national, racial, religious or ethnic characteristics whereas the victims of extermination are identified by political preferences, physical characteristics or by the very fact that they found themselves in a particular geographical area.

3) The act of extermination is committed within an expansive or a systematic attack, which the perpetrator is aware of whereas in case of genocide such attack is not required and

4) Only civilians can appear as victims of extermination, while genocide can be committed against the non-civilian population, as well (such as captured combatants who have the status of the prisoners of war).

The ethnic cleansing

Although the UN General Assembly Resolution on the situation in Bosnia and Herzegovina from 1992 treats genocide and ethnic cleansing as two equal terms, a qualitative distinction can be drawn between these two criminal offences. Namely, forced displacement itself does not represent a genocidal act, but, together with killing a larger number of certain group's members, it can result in ethnic cleansing of the pointed group of people. That is when persecution, in the sense of "cleansing", can be considered as a proof (an indicator) of the presence of the intention to exterminate the entire group.

The crime against humanity

At last, genocide and crime against humanity (that are often treated as equal by legal theory, as well as by certain international legal acts such as the Statute of the International Military Tribunal in Nürnberg) have several similar features including the following.³³

1) In both cases, the acts are aimed to cause massive killing of other persons.

2) Both acts include severe violations that insult humanity.

3) Neither of the acts represents an isolated case, but they are usually a part of a broader conception.

However, one can perceive evident dissimilarities between them including the following:³⁴

1) Genocide contains genocidal intent whereas crime against humanity does not.

2) The target population of genocide is a group that has to possess shared group characteristics, while the victims of crime against humanity are determined by political preferences, physical characteristics or by the very fact that they found themselves in a certain area in a certain period of time.

3) Crime against humanity represents a broader term since it is committed within an extensive and systematic attack that the perpetrator is aware of, which is not requested as an essential and constitutive element of the crime of genocide and

4) Crime against humanity can be committed by conducting a wider range of diverse acts, not all of which are covered by the term genocide.

³³ Z. Pajić, Tumačenje zločina protiv čovečnosti u nirnberškom procesu, Godišnjak Pravnog fakulteta u Sarajevu, 1991, pp. 123-133.

³⁴ M. Simović, M. Blagojević, V. Simović, Međunarodno krivično pravo, Banja Luka, 2013. pp.130-135.

Conclusion

International criminal law, as a system of legal regulations found in acts of the international community and criminal legislation of individual states, establishes criminal liability and punishments for crimes against international law. These acts represent a breach of the laws and customs of war (international humanitarian law) that violate or threaten peace among nations and the security of mankind. Penalties prescribed for these criminal offences stand for the most severe penalties in contemporary criminal legislation. In some cases, international judiciary (supranational) institutions such as the Nurnberg and the Tokyo Tribunal, the Hague Tribunal, the Rome Court, etc. have primary jurisdiction over perpetrators of these criminal offences.

Due to its significance, nature and character, the crime above all crimes stands out among all the crimes against international law. It is the crime of genocide. The act of genocide consists of ordering or committing killing, causing serious bodily or mental harm to members of a human group or deliberately inflicting on the group conditions of life calculated to bring about its extinction in whole or in part or imposing measures intended to prevent births within the group or forcibly transferring children to another group with the intent to destroy, in whole or in part, a national, ethnic, racial or religious group of people.

This criminal offence means the killing of a nation or a tribe. Genocide was proclaimed as "a crime under international law, which is in contradiction to the spirit and the aims of the OUN and condemned by the entire civilized world" by UN General Assembly Resolution 96/I from 11th December 1946. Although it emerged as a "subspecies of crime against humanity", genocide rapidly obtained an autonomous status and contents as one of the most serious crimes today.

As a crime against international law, genocide is determined by three elements: a) the objective component – actus reus b) the subjective component – mens rea c) the subject of the act-the group-the victim. The source of this incrimination is found in Convention on the Prevention and Punishment of the Crime of Genocide from 1948, which, in Paragraph 2, defines the term and the elements of this crime against international law. In legislation, theory and practice, this term can be interpreted in the broader sense, as well. Namely, this term does not include only killing but also destruction committed in any other way of a particular group that forms a consistent entity on national, ethnic, racial or religious grounds.

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CONDITIONAL RELEASE AND THE ROLE OF SERVICE FOR TREATMENT IN CRIMINAL LEGISLATION OF THE REPUBLIC OF SERBIA

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Conditional release represents a motivational criminal justice institute that carries an important role in the treatment of persons sentenced to imprisonment. However, the current legal provisions and by-laws seem very problematic in the context of assessing the achievement of criteria, which professional employees in the Department for Treatment and Courts in Serbia use to estimate the educational correction level achieved during the enforcement of a sentence. In this sense, this paper focuses on the logical and empirical analysis of the starting point on which the work of educators in prisons and correctional facilities is based upon, as well as the positive solutions concerning conditional release contained in the Criminal Code. Finally, proposals for amendments to laws and regulations aligning the educators' work with the strict scientific evaluation criteria will be formulated.

Key Words: *Department for Treatment, parole, individual objectives*

Introduction

Conditional release constitutes a general criminal justice institute of motivational nature that has had a tradition in Serbia for nearly a century and a half.^{1, 2, 3} The development of penology and criminal enforcement law, and the idea of progressive principles in the execution of a sentence have been influenced by the fact that conditional release remains an important tool in the treatment of prisoners.^{4, 5, 6}

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³ Simić, B. (2012). Institute of parole in a legislation of the Republic of Serbia. *Security* 54 (2), 265–276.

⁴ Pavlović, Z. (2009). Conditional release in the criminal legislation of Serbia. *Law: Theory and Practice*, 26 (11–12), 87–100.

⁵ Mitrović, L. (2015). Implementation of conditional release in the Republic of Serbia. *Yearbook of the Faculty of Law APEIRON*, 5 (5), 69–80.

⁶ Radoman, M. (2013). *Penology and criminal executive law. Belgrade: Medical Edition.*

Reviewing papers by local authors dealing with the analysis of the practical application of conditional release in the Republic of Serbia^{7, 8} indicates that there are many elements that are not perceived in a satisfactory manner. Thus, most of the sources in this context include primarily peno-historical, criminal and nomotechnical aspects. However, when it comes to the role of special pedagogues/educators in assessing the justification of assigning the given department, and procedures at the request of a convicted person, the given segment appears to be essentially neglected.⁹ These problems are somewhat emphasized by Jovanić,¹⁰ who indicates in his overarching research the need for standardization of procedural parole and objectification of assessment by experts in penal institutions.

Bearing the previous remarks in mind, the aim of this study is to critically reflect on the legal solution contained in the criminal substantive provisions, and concerning the decision on the justification of granting conditional release. Furthermore, given the recent changes to the Criminal Procedure,¹¹ the study focuses on the role of services for treatment, i.e. the evaluation criteria and formulation of treatment programs and ensuing reports. Finally, a summary of different observations from practice, new proposals for the change of (sub)legislation will be formulated, as well as practical guidelines for the work of educators in penal institutions.

Conditional release as a criminal law institute

The place and role of parole stem from the concept of educational reparability and a vision of the possibility of re-socialization. Thus, starting from the defined purpose of criminal sanctions, and in the segment of special prevention, the basic idea of the treatment of prisoners is organized around the appropriate corrective measures or treatments. It can be expected that the same person will not commit new criminal offenses only by the development of motivation, strengthening the idea of personal responsibility and remorse, and by the development of skills that are essential for convicted pro-social involvement in the community.^{12, 13, 14}

Another source of parole framework refers to the fact that the court, regardless of the fact to what extent it respects the principle of individualization of punishment, at the time of sentencing it does not have to dispose of all the relevant data. This relates primarily to personality traits, which condition fulfillment of the imposed sentence to have a different

⁷ Soković, S. (2014). Conditional release - issues and contemporary normative solutions. *CRIMEN*, 5 (1), 35–49.

⁸ Stojanović, Z. (1984). Conditional release: problems and perspectives. *Proceedings of the Faculty of Law in Zagreb*, 34, 1–2.

⁹ Simović, M. N., Jovašević, D., & Simović, V. M. (2015). Parole in the law of the Republic of Serbia and European standards. The harmonisation of legislation with the *ACQUIS: collection of works* (pp. 69-80). *Sarajevo: Centre for Social Research International Burch University*.

¹⁰ Jovanić, G. (2012). *The standardization process of conditional release as a protection measure of recidivism* (Doctoral dissertation). Belgrade: Faculty for Special Education and Rehabilitation.

¹¹ Criminal Procedure (Official Gazette of RS, No. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013 i 55/2014).

¹² Damjanović, I., Kokić-Puce, Z., & Klarić-Baranović, S. (2004). The conditional release from prison (from 1998. to 2002). *Croatian chronicle of Criminal Law and Practice*, 11 (2), 867–892.

¹³ Kurtović, A. (1995). The organization and legal nature of parole. *Proceedings of the Faculty of Law in Rijeka*, 10 (2), 309–322.

¹⁴ Jašović, Ž. (2000). *Prison Education*. Belgrade: Institute for Sociological and Criminological Research.

effect. In this respect, parole may constitute a form of correction of the court or point of re-evaluation of achievement of the purpose of punishment.¹⁵

Having examined papers of penal and legal orientation, it is often stated that the institute of parole carries an instrumental and even manipulative force in terms of maintaining security in correctional institutions.¹⁶ The idea that good governance affects the shortening of a sentence carries a presumption of possible influence to convicts in the direction of a higher degree of respect for the house rules. The previous hypothesis is corroborated by certain legal solutions and proposals, which anticipate automaticity in the application of parole for those convicted persons, whose part of the punishment prescribed by law has passed, but who have not been assigned a disciplinary sanction.

Although this argument has implicitly entered the norms and national legislation, it seems that the character of parole is unjustifiably emphasized. Obviously, according to ways of simple logic, conditional release, in this notion, is actually a form of commerce, but also a form of defeat for those who run penal institutions. The idea of "if you behave well you will be released home earlier" not only derogates the court decision, but rather speaks of the impotence of professionals in the Office of Security to maintain order without this kind of corruption.

In brief, parole can primarily be understood as a motivational institute. To be exact, it is difficult to assume that upon entering prison for enforcement of a sentence actually prisoners have the idea that prison is a place of psychological or behavioral correction, as it stands out in the scientific understanding. It seems that from the convict perspective prison is primarily experienced in the retributive context without authentic inner motivation to revise his/her own views.

Consequently, practical effects of conditional release can be used mainly in the segment of encouraging the convicted to accept certain individual goals of treatment, and to actively participate in the implementation of treatment programs. Only in that sense this institute is a place suitable for the purpose of criminal sanctions and the idea of reduction of recidivism.

Behavior of the convicted as criteria in deciding on conditional release

Referring to the provisions of the Criminal Code,¹⁷ Article 46 stipulates that the court may conditionally release a convicted person, who has served two thirds of their sentence in prison.¹⁸ The given solution, thus, seems more restrictive compared to the previous concept, which allows such an option after a lapse of half of the sentence.¹⁹

¹⁵ Pavlović, Z. (2009). Conditional release in the criminal legislation of Serbia. *Law: Theory and Practice*, 26 (11–12), 87–100.

¹⁶ Soković, S. (2014). Conditional release - contemporary issues and regulatory solutions. *CRIMEN*, 5 (1), 35–49.

¹⁷ Criminal Procedure (Official Gazette of RS, No. 85/2005, 88/2005 – corr., 107/2005 – corr., 72/2009, 111/2009, 121/2012, 104/2013 i 108/2014).

¹⁸ Čejović, B. & Kulić, M. (2014). *Criminal Law*. Novi Sad: Faculty of Law for Commerce and Judiciary.

¹⁹ Srzentić, N., & Lazarević, Lj. (1995). *Comment of the Criminal Code of the Republic of Serbia*. Beograd: Modern administration.

When deciding on a petition for conditional release, the court takes an assessment of whether during imprisonment the convicted person has improved their conduct in such a way that they can reasonably be expected to behave well when released and in particular that before the expiration of punishment they will refrain from committing a new criminal offense.²⁰

This explanation is consistent with the specific purpose of criminal law sanctions. However, such a decision seems to be problematic in several segments. Thus, when assessing the level “of repair” the law specifies that the conduct of the convicted during imprisonment should be taken into account, as well as the performance of work duties and other (undefined) circumstances indicating that in relation to this the purpose of punishment is achieved.²¹

In view of the context of the law and regarding certain educational criteria of correction, the issue of the behavior of prisoners is specifically emphasized. Namely, a frequently expressed opinion of the convicted persons in prisons is that if a person has not been assigned a disciplinary sanction during the enforcement of a sentence, the manifested behavior can be enough evidence of their pro-social adjustment. However, this certainly cannot be taken as reliable evaluation criteria. Respect for the house rules is considered to be a regular obligation of convicts, and their infringement foresees disciplinary measures including coercive measures. This has finally been accurately stated, as well as the content of the previously valid Regulations on measures for maintaining order and security in penal institutions,²² where Article 3 indicates that during the execution of the prison sentence the convicted person must act in accordance with the laws and regulations adopted by the law, as per the orders of the officials, except when the execution of the order was an unlawful action. Although the current Rulebook²³ rejected the given provision, the same continues to be implicitly understood in the context of Article 2, which provides for the same obligation to respect the orders of officials.

The fact that behavior during the enforcement of a sentence cannot be the primary element of the assessment of achieved correction by the convicted, it stands out in relation to the perception of the practice according to which a significant percentage of people in prisons shows highly assertive, even servile behavior. However, this cannot be *a priori* linked to the internal inspection and correction of pro-criminal attitudes, and it primarily represents the result of situational pressure.^{24, 25} The good behavior of physically weaker or stigmatized prisoners (sex offenders) can attribute as a reflection of an emergency that would otherwise bear an increased risk of some form of victimization.^{26, 27}

²⁰ Stojanović, Z. (2006). *Comment of the Criminal Code*. Belgrade: Official Gazette.

²¹ Simić, B. (2012). Institute of parole in a legislation of the Republic of Serbia. *Security*, 54 (2), 265–276.

²² Ordinance on measures for maintaining order and security in the prisons (Official Gazette of RS, No. 105/2006).

²³ Ordinance on measures for maintaining order and security in the prisons (Official Gazette of RS, No. 105/2014).

²⁴ Kovčo Vukadin, I., & Mihoci, M. (2010). Violence in penal institutions. *Croatian chronicle of Criminal Law and Practice*, 17 (1), 333–367.

²⁵ Krstić, Ž. (2002). The prison's double bottom. *Sociology*, 44 (3), 223–240.

²⁶ Pavlović, Z. (2013). *Sexual abuse of children - criminological and criminal justice aspects*. Novi Sad: Faculty of Law for Commerce and Judiciary.

²⁷ Pavlović, Z., & Bijvoets, J. (2016). Situational prevention of child sexual abuse. *Science, security, police*, 21(1), 114-132.

The behavior problem, as a criterion of 'repairedness', does not end here. Namely, while the Criminal Code in Article 46 stipulates that a convicted person cannot be released on parole if, during the execution of a disciplinary punishment, they were punished twice, or their granted benefits were taken away, the question arises whether the allocation of the extended rights is a sufficient or significant argument regarding the merits conditioning the remainder of their sentence.

Although research such as the one by Jovanić²⁸ which was conducted on a sample of 6,326 requests for parole, speaks for the fact that the courts have frequently granted parole to persons who have been granted the extended rights, there are important points to be taken into account in this context. Firstly, inconsistent practices should be noted in a correctional institution or prison, where, in practice, the extended rights in individual institutions were assigned by default, and in conjunction with the specific period of time.

This cannot be justified given the fact that the Law on Execution of Criminal Sanctions²⁹ and the Rulebook on treatment, treatment program, classification and subsequent classification of prisoners³⁰ stipulate that the extended rights and benefits can be awarded only on the basis of good governance and special efforts in achieving the treatment program and fulfilling individual goals.

The abovementioned problem of behavior assessment is particularly complex in the part related to conditional release, which can be documented by the fact that the law allows for the extended rights to be granted to all prisoners, regardless of their treatment group. In this sense, in practice, it occurs that one of the extended rights is assigned to a person categorized in V-2 group. However, the aforementioned criteria of "good behavior and commitment in achieving treatment program" in the abovementioned category may not be supported by appropriate correction of pro-social attitudes and the degree of risk of recurrence.

Behavior during the enforcement of a sentence is a significant factor in the decision-making process for parole only in the case of persons with medium or low risk of recurrence. For persons accommodated in closed wards, or group V-1 or V-2 with a high degree of risk, good conduct and particular commitment are not sufficient criteria. This is accentuated due to the legal implications pursuant to which the mentioned group of persons carries high likelihood of criminal recidivism, as well as the established limits of the capacity for change.

If we allow for the abovementioned statement that good behavior will not be a sufficient criterion to award conditional release to persons who are estimated to have a high degree of criminal recidivism, it can be concluded that the institution will give minimal motivating effect of behavior correction. Namely, if for the specified group of persons justification for the award of parole is predetermined as marginal, the leading mechanism and the reason why the prisoners should act in compliance with the house rules is lost. Ultimately, this leads to the conclusion that conditional release as means of maintaining security within the institution consequently appears to be impotent.

²⁸ Jovanić, G. (2012). *The standardization process of conditional release as a protection measure of recidivism* (Doctoral dissertation). Belgrade: Faculty for Special Education and Rehabilitation.

²⁹ Law on Enforcement of Penal Sanctions (Official Gazette of RS, No. 55/2014).

³⁰ Rulebook on treatment, treatment program, classification and subsequent classification of prisoners (Official Gazette of RS, No. 66/2015).

At this point, however, we need to address the results of the research conducted by Jovanić.³¹ According to his findings, among persons categorized in the V-1 and V-2 group of 62 reviews of institutions for parole, the reports were positive in as many as 17 cases (27.4%). The same source also indicates that, in the given sample, in 6 cases (9.5%) conditional release was also granted by the court.

Following the previous remarks, it would be favorable to consider nearly a third of specific cases in which the institution is established for persons bearing a high risk of recurrence, and it is reasonable to expect that, when released, they will not commit new criminal offenses. In effect, it would be vital to determine how the convicted person's limited capacity for change was established, while they carry a significant risk of security breach in the institution. Nevertheless, they can be released on parole for the remainder of the sentence.

By further analysis of the existing legal framework, the significance of conduct during the enforcement of a sentence is particularly viewed in a negative context, i.e. within behaviors bearing a disciplinary sanction.³² Nevertheless, there are several problems in this segment, as well. Namely, not only the Criminal Code does fail to distinguish minor and serious disciplinary offenses, but it leaves the possibility of significant conflict of clinical and formal-legal aspects. Thus, guided by Article 36 of the Rules on the Treatment, it is anticipated that the convicted person may be subsequently classified into a group with a lesser degree of the extended rights and benefits as a result of a disciplinary punishment for a minor offense.

The aforementioned optional framework allows the convicted person, who has been categorized in A-1 group to make two minor disciplinary offenses without being re-categorized into a group with the lower frame of law or without getting deprived of the previously granted extended rights for the same reason. Although low criminal recidivism was estimated during the assessment, the fact that a person was twice disciplined eliminates the legal possibility of awarding conditional release.

The problems of assessing the conditions for awarding conditional release to prisoners can be observed in the other examples from practice. For instance, it happens that during admission the person is put in B-1 category with the established medium risk, a level of 33 points. The same convict was awarded more extended rights including non-custodial, which were used without abuse. However, during the enforcement of a sentence the convict gets into physical conflict with another convicted person and the circumstances impose more severe disciplinary measures like deprivation of the extended rights. In the same scenario, during the re-evaluation of the degree of risk a negative correction can be made, and the convict remains at medium level with 38 points alongside with re-categorization into group V-1, and they are moved to a closed ward.

Furthermore, if the convicted person has denied their benefits, they will not meet the normative framework of Article 46 of the Criminal Code. Therefore, their conditional release will not be approved. However, this example can be compared to a person who is in the semi-class and group B-2, with no assigned extended rights, which may also have

³¹ Jovanić, G. (2012). *The standardization process of conditional release as a protection measure of recidivism* (Doctoral dissertation). Belgrade: Faculty for Special Education and Rehabilitation.

³² Ilijić, Lj., & Jovanić, G. (2014) Disciplinary punishment of the damned. *Institute of Criminological and Sociological Research*, 33 (2), 163–176.

a medium level of risk, and fixed at the level of 52 points. In the given comparison, although the risk assessment questionnaire clearly provides better prediction of criminological recidivism in the first case, the Criminal Code gives priority to the person with the higher number of points, but in the context of conditional release.

Work as a criterion for deciding on conditional release

The second segment of the legal framework concerning conditional release refers to the work of the convicted as the assessment of the justification of the award criteria of the mentioned institute. Although Article 98 of the PSEA foresees that the work of the convicted is an integral part of the treatment, it is not conditioned as an obligation, but merely as a treatment option. In this sense, it is questionable whether the person who refuses the opportunity to be engaged in work, by default, cannot meet the necessary criteria for the award of conditional release.

Looking back at the aforementioned experiences from practice, the answer to this question becomes highly complex. Thus, for example, there were cases in which a person during the execution of a sentence was continuously engaged in work, which is the reason why that person received the appropriate extended rights. However, following the restrictions of the Questionnaire for the risk assessment for persons sentenced to imprisonment up to three years, the risk level reduction associated with work engagement is possible only at a negligible level.³³ In this regard, although work is characterized in the Criminal Code as a vital criterion for the evaluation, the development of working habits in the abovementioned questionnaire grants maximum 2 points out of the total of 106 points.

The list of issues related to the work as a variable in estimating prisoners becomes problematic considering another indisputable fact. According to the data presented in the reports of the Helsinki Committee for Human Rights,³⁴ the number of working-age convicts does not exceed one third in most penal institutions. In this sense, the question is whether the lack of jobs points to the responsibility of the state in terms of failure to ensure minimum conditions of treatment, or may be viewed as a circumstance, which indicates that the convicted person has not developed working habits, regardless of the direction of accountability. Therefore, is it fair to say that the absence of work engagement, for any reason, necessarily means a lack of positive response to the prisoner request for parole?

In summary of the abovementioned arguments, it appears that the legal text, though logically sustainable *per se*, is in a significant conflict with other legal and sub-legal segments, and it is also inconsistent with the current professional practice. Work as a segment of the educational course correction holds an absolutely justified place in treatment facilities.³⁵ However, the literal interpretation of the existing legal text would have to be verified regarding the hypothesis according to which persons engaged in work, who have

³³ Petković, N., & Pavlović, Z. (2016). Some problems in applying the "Questionnaire for the risk assessment for those sentenced to imprisonment up to three years". *Temida*, 19 (1), 161–189.

³⁴ Helsinki Committee for Human Rights (2016). The situation in prisons in Serbia. *Taken from*: <http://www.helsinki.org.rs> (date of access: 12 April 2016).

³⁵ Jašović, Ž. (2000). *Prison Education*. Belgrade: Institute for Sociological and Criminological Research.

shown adequate commitment at work during the execution of a sentence have a lower rate of criminal recidivism risk. Only by establishing a positive correlation between the listed dependent and independent variables a conclusion could be drawn on the justification of incorporating labor as an element of assessment in the legal text.

Finally, assessing the work done by convicts who are serving sentence at this moment seems to be entirely unadjusted in the context of the topic of conditional release. While scientific literature highlights work engagement as desirable for economic reasons and for the sake of organizing the excess of free time that convicts have,³⁶ it becomes questionable whether it is justified to say that the work itself is the holder of correctional education. Although the authors such as Jašović³⁷ suggest that production work has an insuperable value in rehabilitation and re-socialization, change of beliefs and the worldview, as well as the adoption of positive attitudes, a more correct conclusion would seem to be that work training and skills development are the bearers of positive resources that reduce the likelihood of recurrence.

Namely, a certain percentage of people who are serving prison sentences have no primary education or the minimum skills in certain crafts.³⁸ Only the acquisition of appropriate knowledge and skills in a specific field could carry the potential for a convicted person, for example, the one sentenced for property crimes, that after the expiration of their sentence, and strengthened by new capacities, they could find employment instead of turning to crime again.

However, let us imagine the scenario in which a car mechanic, prone to alcohol abuse, convicted of domestic violence, imprisoned for a year-long execution of sentence, is allocated a job as a co-worker in the prison garage. Can his outstanding engagement in restoring the outdated vehicle fleet be really regarded as a sufficient criterion of "repair"? It does not seem to be the case!

Individual goals as other circumstances during imprisonment

The existing legal and sub-legal framework of criminal sanctions bears fairly good assumptions concerning the need for the convicted person at the start of serving their execution of prison sentence to be observed by experts from the corresponding fields.³⁹ Additionally, after staying in the admission department, specific individual goals are foreseen, ones which will practically dictate the flow of the program of conduct.

However, when it comes to individual treatment goals, which constitute the core of subsequent (methodology of) re-socialization, the legislator is rather vague. Although Article 13 of the Rules on the Treatment states that this will ensure the achievement of individual goals to increase the individual's capacity, successful adaptation and reduction of the risk of committing criminal acts, it lacks more detailed elaboration.

³⁶ Uggen, C. (2000). Work as a turning point in the life course of criminals: a duration model of age, employment, and recidivism. *American sociological review*, 65 (4), 529–546.

³⁷ Jašović, Ž. (2000). *Prison Education*. Belgrade: Institute for Sociological and Criminological Research.

³⁸ Odović, G., Žunić-Pavlović, V., & Jovanić, G. (2014). Professional training as a factor in the rehabilitation of convicted persons in the institutions for enforcement of prison sentence. U G. Nedović & G. Odović (ur.). *III International Scientific Conference Special Education and Rehabilitation - Adults with Disabilities* (pp. 353–366). Belgrade: Faculty for Special Education and Rehabilitation, Department of Somatopeddy.

³⁹ Radoman, M. (2013). *Penology and criminal executive law*. Belgrade: Medical Edition.

The Directive on the work of treatment officers in institutions is set only as a reference point (No. 110-00-1/13-03 of 24th February 2013), stating that in defining procedures and activities for the convict individual objectives and their implementation dates must be defined. The same document conditions that the objectives must be established on the grounds of test results, and they must be clear, measurable, and time-bound, while the maximum number is limited to five.

Guided by the further content of the mentioned Directive, institutions for enforcement of criminal sanctions were submitted the appropriate annex containing the explication of general objectives for all the convicted, as well as individual goals that are awarded according to the established needs. However, the text of the document states that employees of the Office can implement the mentioned objectives, but without defining imperatives. The same can be observed in the Directive on the means of treatment in prisons, work procedures and the design and content of documents during the identification, implementation and change of the program dealing with individuals convicted of crimes and misdemeanor, and the method of application of the Ordinance on treatment, treatment program, classification and subsequent classification of prisoners (number 110-00-00014/2015-01 dated 29th October 2015), which only contains nonbinding examples of individual goals.

Analyzing subordinate normative framework, it should be noted that the draft of objectives as set by the Directive includes the content of rather heterogeneous framework, whose implementation does not always refer to contributions in the context of special criminological prevention of recidivism.

Furthermore, although the authors such as Aćimović⁴⁰ point out that inmates, who participate in group model work in prisons are primarily driven by intrinsic motivation and a desire to improve their own personality, the authors of this paper, guided by practical experience, do not share such optimism. In this sense, participation in treatment programs, although it may be of (general) benefit to the convicted persons, must bear a more concrete assessment of the achievement impact in the context of reduction of recurrence risk. This is especially significant due to different experiences worldwide, which indicate that participants in specialized programs in penal conditions not only have the annuitant attitude towards taking part in the programs, but often adjust their testimonies to the expectations of the program leader, without actually correcting their own attitudes.^{41, 42, 43}

There are numerous examples which point to the fact that (sub)legislation does not work best in practice when it comes to implementing measures to reduce criminal recidivism. For instance, we can imagine a situation in which the convicted person was assigned the following individual goals: "Developing and maintaining working habits", "Increasing health care" and "Organization and participation in leisure activities." However, given the limited need for labor in the institution, the convict will work only three days a month. Moreover, given the fact that the goal of "Increasing health care" is predominantly

⁴⁰ Aćimović, D. M. (2013) Implementation and evaluation of group forms with the work with convicts, case study of Novi Sad. *Andragoške studije*, (2), 137-148.

⁴¹ Kokish, R. (2004). The current role of post-conviction sex offender polygraph testing in sex offender treatment. *Journal of Child Sexual Abuse*, 12 (3-4), 175-194.

⁴² Lotringer, S. (2007). *Overexposed: Perverting perversion*. New York: Pantheon.

⁴³ Pavlović, Z. (2009). Conditional release in the criminal legislation of Serbia. *Law: Theory and Practice*, 26 (11-12), 87-100.

assessed through accepting cooperation with the Health Service, the convict accepts and is subjected to regular medical inspections. Finally, the convicted person may be involved in the Sports and Arts Section, whereby they express initiative, actively and regularly participate thus organizing their free time.

In summary of all the above mentioned, we are faced with a peculiar situation in which the convicted person was formally work-engaged, established a satisfactory relationship with the Health Service and regularly attended the Sports Section, having practically fulfilled all the assigned individual objectives. However, can the fact that they regularly visited the doctor and played basketball for a year be taken as solid grounds to assume that having such an achieved degree of correctional education the convicted person, when released, will not commit new crimes?

By further analysis of the content of the Directive, it is noted that the nonbinding nature of this act has led to the absence of standardized framework for the identification of convicts' needs, the appointment of treatment objectives, and their allocations. In practice, this means that every penal institution in Serbia can have its own model of establishing individual goals, as well as their evaluation, without any uniformity of operation or confirmation of reliability assessment.

The following instance illustrates that the aforementioned situation leads to numerous problems. For example, a person sentenced to imprisonment for a term of 2 years may be granted an individual goal in a correctional institution (whose implementation has not been completed), and subsequent to their transfer to the county prison to serve the same sentence, the assigned goal is not even recognized. Ultimately, if there is any compatibility of the appointment of goals, it is likely that their fulfillment is monitored using dissimilar instruments, which certainly points to the problem of comparison of the current effects.

Furthermore, the question is whether, after the formulation of a broader list of individual goals, it would be justified to formulate some recommendations concerning their adoption. For example, all convicts convicted of (minor/serious) physical injury, murder, bullying and similar offences, need to be covered by a specific individual goal, which concerns non-violent resolution of interpersonal conflicts. Such is the case with persons who are perpetrators of crimes against sexual freedom or, for instance, persons convicted for offenses related to drug use, and in the context of compatible objectives.

Having returned to observations in practice, it is obvious that in addition to the arbitrariness in the appointment of unstandardized individual goals, the same level applies to the content and forms of their implementation. This particularly applies to the contents of specialized programs and educational workshops. Thus, for example, in some institutions in Serbia individual goals are presented as "Problem solving and decision-making", which is again implemented through the educational workshop entitled "Constructive problem solving."⁴⁴ Thereby, not only it is unclear who the mentioned objective is defined for, but the question is in what way the content of the specific workshop was formed, and the same thing is brought into connection with the reduction of a relapse.

To remain in the same context, the largest segment of educational workshops in penal institutions in Serbia, whether and where they are organized at all, is the result of the indi-

⁴⁴ Aćimović, D. M. (2013). Implementation and evaluation of group forms with the work with convicts, case study of Novi Sad. *Andragoške studije*, (2), 137-148.

vidual contributions of employees. However, their content is usually insufficiently scientifically based and empirically not tested in a penal context. This is mainly related to the attempts to adapt the knowledge acquired while working with unconvicted population.⁴⁵

It stands out that the aforementioned is completely unjustified due to the development and availability of various effective treatment programs. Therefore, in contemporary references there are dozens of different described and evaluated program options aimed at perpetrators of virtually all crimes.^{46, 47, 48} Additionally, while having respect for linguistic limitations pertaining to the review of foreign sources, it should be noted that national authors have devoted ample attention to the subject.^{49, 50} Consequently, re-socialization program activities should rightly be expected to be in accordance with scientific requirements.

Although we did not want to take this opportunity to criticize the contributions of experts in penal institutions, which are certainly an expression of positive aspirations to improve professional work, it seems to be unjustified to expect that the indirect executors, i.e. educators are the ones who will formulate the basic assumptions of the treatment of prisoners. However, the obligation of the Board for Implementation appears unequivocal by which, in addition to defining and listing individual goals, their implementation framework should also be clearly defined.

Let us return to the topic of conditional release. The methodology of re-socialization dictates that when a convicted person is assigned an individual goal, its fulfillment must be monitored in a certain way. Thus, concerning the evaluation of re-socialization Žunić-Pavlović⁵¹ in her work clearly highlights all the criteria that are important for assessing the effectiveness of a program. However, the situation in practice is again limited to the ingenuity of educators and their not tested idea on how to follow a certain goal.

In penal institutions, assigned individual goals are monitored through an appropriate "watch list". In addition, the given framework represents an attempt to form certain instruments that carry some form of quantification of the progress made, as well as a qualitative description.

In the objectives which are appointed by the Directive, the "watch lists" are by content adapted to the given recommendations. Nevertheless, the problems do not end here. For instance, while the individual goal of "Establishing and maintaining functional family relationships" definitely finds its justification in a number of cases, there remains the question of its monitoring. Accordingly, the 2013 Directive stipulates that the same will be followed through

⁴⁵ Aćimović, D. M. (2013). Implementation and evaluation of group forms with the work with convicts, case study of Novi Sad. *Andragoške studije*, (2), 137-148.

⁴⁶ Marques, J. K., Wiederanders, M., Day, D. M., Nelson, C., & Van Ommeren, A. (2005). Effects of a relapse prevention program on sexual recidivism: Final results from California's Sex Offender Treatment and Evaluation Project (SOTEP). *Sexual Abuse: A Journal of Research and Treatment*, 17 (1), 79-107.

⁴⁷ Andrews, D. A., Bonta, J., & Wormith, J. S. (2011). The risk-need-responsivity (RNR) model: does adding the good lives model contribute to effective crime prevention?. *Criminal Justice and Behavior*, 38 (7), 735-755.

⁴⁸ McLaren, K. (1992). *Reducing reoffending: What works now*. Wellington: Penal Division, Department of Justice.

⁴⁹ Petković, N., & Pavlović, Z. (2016). *Abuse and neglect of children in Serbia*. Belgrade: Institute for Sociological and Criminological Research.

⁵⁰ Popović-Čitić, B. (2013). Principles of effective prevention programs. *Social thought*, 20 (1), 103-116.

⁵¹ Žunić-Pavlović, V. (2004). *Evaluation in resocialization*. Belgrade: Partenon.

checking the frequency of visits, received letters, telephone contacts with the family, accepting to participate in family meetings, and assessing the quality of family relationships.

Looking at experiences from practice, we can, for example, observe a situation that a convict regularly receives letters and parcels, and/or regularly has family visits. Nevertheless, this fact does not say anything about the actual quality of family relationships (or about the correction of the convict's attitude in relation to, for example, a criminal offense against marriage and family) which the educator is only indirectly informed about. In addition, the question arises whether through the implementation of individual goals it could be considered that a convict, who has had six visits in a given period, has improved to a greater extent than the convicted person who has not had a single visitor. This stands out due to the significant number of prisoners who have a difficult financial situation that, in turn, limits the family members to travel outside a town.

The situation is similar with other goals, such as "Healing addiction / establishing and maintaining abstinence". Accordingly, this would primarily lead to the conclusion that the establishment and maintenance of abstinence is the logical consequence of their imprisonment, having in mind the lack of access to drugs. Only if the individual misused psychoactive substances in some way, it would be considered a disciplinary offense. In that sense, respect for the house rules is an obligation of the convicted person, not a goal whose fulfillment can be correlated with the reduction of the recidivism risk.

Furthermore, relative to the contents of the mentioned 2013 Directive, the proposal of monitoring the abovementioned objective includes the development of motivation to change the old ways of life, requesting or accepting the help of others when needed, and recognition of circumstances and risk factors that lead to a relapse. Although somewhat logically sustainable, this is disputable for several reasons.

Thus, a significant number of modern program contents that are designed for some form of correction of attitudes and behaviors are evaluated by the principle of test-retest model, i.e. baseline characteristics are established and the dependent variables changed subsequently to participation in a program.^{52, 53, 54} However, if we imagine a heroin addict who has been repeatedly treated on their own initiative, who is intelligent, well aware of the consequences of drug abuse, has acquired knowledge about risk factors and emotional turbulence as triggering factors before coming to the execution of a sentence, can they be considered to have achieved the assigned individual target (in the largest segment) before its implementation started? Finally, would the fact that a convict has regularly used substitution therapy, visited a psychiatrist and expressed pro-social intentions, really prove their commitment to the establishment of permanent abstinence and a lower risk of recurrence of the criminal act? For this reason, there is a need to define the pre-

⁵² Schuringa, E., Spreen, M., & Bogaerts, S. (2014). Inter-rater and test-retest reliability, internal consistency, and factorial structure of the instrument for forensic treatment evaluation. *Journal of Forensic Psychology Practice*, 14 (2), 127–144.

⁵³ Rees-Jones, A., Gudjonsson, G., & Young, S. (2012). A multi-site controlled trial of a cognitive skills program for mentally disordered offenders. *BMC Psychiatry*, 12 (1), 12–44.

⁵⁴ Klepfisz, G., O'Brien, K., & Daffern, M. (2014). Violent offenders' within-treatment change in anger, criminal attitudes, and violence risk: associations with violent recidivism. *International Journal of Forensic Mental Health*, 13 (4), 348–362.

cise content of treatment to determine a baseline and post-program evaluation point, which would in this regard facilitate the quantifying of the achieved progress.

The example of the individual goal called "Proper use of special rights outside the institution" illustrates that the proposed set of goals is often outside the context of risk reduction and special prevention. Thus, the given objective, pursuant to the Directive, is monitored by means of record-keeping regarding the behavior of the convicted person and their usage of benefits without abuse and their establishment of a relationship with the family.

In fact, when it comes to awarding non-custodial law, the same shall be done in cases where the convicted person has deserved such a benefit by their behavior and commitment to the program. Respect for the rules related to the conduct of the convicted person outside the institution, for example during weekends, does not seem logical to be defined as an objective. The proper use of non-custodial law is considered to be an obligation, whose non-compliance leads to disciplinary sanctions, and as a rule, to consequential re-categorization.

A particular problem in the evaluation of individual objectives relates to participation in specialized programs and educational workshops, which should logically be the most potent treatment segment. However, unlike the scientific demands of reliability and verifiability, the educators' attempts to formulate assessment instruments in national penal institutions are an expression of mere arbitrariness. The variables contained are the result of an agreement at the level of individual institutions, and they are not scientifically proven elements. The watch lists hence usually include three-point or five-point scales on the items at makeshift, where the practice indicates that negative reviews are given, as a rule, only to those prisoners who renounce participating in group work.

In summary of the abovementioned arguments, the assessment of achievement of individual goals at the level of the Directorate for Execution of Criminal Sanctions in Serbia would require the formulation of scientifically based and proven program curricula and evaluation instruments. It is exactly in this context that the most important conclusions concerning conditional release are imposed. Only in a situation where there is no clearly defined treatment goal, in a situation in which the contents of the fulfillment of individual targets are not precisely defined, or in a situation where there is no reliable monitoring mechanism achieved, the question is what exactly the ground of conclusion of experts employed in the Service for Treatment is in (thousands of) applications for parole.

References for practice – in lieu of conclusion

On the subject of parole, in some countries, such as the USA, approximately 80% of cases at the request of the convicted person are given a positive response.⁵⁵ However, in contrast to seemingly insufficiently selective jurisprudence in the United States, conditional release in the Republic of Serbia is awarded only in exceptional cases. Only when it is fully justified to expect that the released person will not commit new crimes, the criminological and victim logical aspects of penalty can substantiate that the convict should be released earlier from serving the sentence.

⁵⁵ Jovanić, G. (2012). *The standardization process of conditional release as a protection measure of recidivism* (Doctoral dissertation). Belgrade: Faculty for Special Education and Rehabilitation.

In the same context, the positive assessment of the justification of the proposal by the institution requires fulfillment of strict scientific criteria and the absence of arbitrariness and subjectivity. In this sense, it appears necessary to change the basic settings of the Service for Treatment in the Directorate for Execution of Criminal Sanctions, as the instance which is responsible for the context of formulating reports on the convicted necessary in the procedure for conditional release.

Summing up previous observations, there is primarily the need of significant correction of convicts assessment instruments stipulated in the Regulation on the treatment and separation of security risk and relapse.⁵⁶ Furthermore, there is requirement for the standardization of treatment activities and the introduction of contents, whose effectiveness is proven in practice. However, this does not have to involve only the incorporation of previously used foreign programs. It also allows for the full creativity of local experts and devising new curricula with respect to all scientific and evaluative requirements.

The fact that there is a need for the formulation of clear evaluation criteria stands out in comparison to the aforementioned annuity nature of the conduct of the convicted. For instance, some observations suggest that in practice convicts are actually employed during the execution of a sentence, and then for several months they give a certain sum of money (not exceeding a few thousand dinars) to charity. This action could, on the one hand, be interpreted as an expression of remorse and an attempt of reparation, which is certainly positive in the context of an application for conditional release. However, whether it is genuine remorse or an object of manipulation, it must certainly be determined through appropriate instrumentation and objective clinical assessment.

The same conclusions apply to the fulfillment of short-term and long-term plans for post-penal convicts, as well. In fact, one of the possible ways of assessment, in the context of conditional release, refers to what the former convict actually plans after their release from prison. If the person has been provided with employment, they can be expected to have a source of income and some form of social inclusion, so a positive prediction could be given with a greater degree of certainty. However, the state of facts in the present-day social situation shows that numerous convicts obtain various (false) certificates, which indicate that they are employed in private firms. However, the fact is that they have not stepped an inch further away from pro-criminal orientation.

In summary of the above mentioned, the question arises whether it is justified that if during the execution of a sentence the convict shows good (annuity) behavior, is given (automatically) the extended rights, if medium or low risk has been determined (using a questionnaire whose reliability is questionable),⁵⁷ if he expresses (inauthentic) remorse and pro-social goals, and if he provides a certificate (guaranteeing nothing) that a job awaits him on the same day after his release from prison – is not granted a positive opinion by the Department for Treatment in the context of an application for conditional release? Within the existing provisions, he would certainly be granted one. Nevertheless, the decision must be well substantiated.

⁵⁶ Petković & Pavlović (2016). Some problems in applying the "Questionnaire for the risk assessment for those sentenced to imprisonment up to three years". *Temida*, 19 (1), 161–189.

⁵⁷ Petković & Pavlović (2016). Some problems in applying the "Questionnaire for risk assessment sentenced to imprisonment up to three years". *Temida*, 19 (1), 161–189.

The assessment of achievement of the purpose of criminal sanctions, i.e. the prediction of social rehabilitation must therefore include only those variables that have been proven in connection with the reduction of the special relapse. This is especially significant because of the fact that since the amendment of the Criminal Procedure, the courts explicitly require the institution to determine whether they do or do not propose that the convicted person should be released on parole.

Although the reported attitude of the institution is not legally binding on the court decision, it is an ethical and professional imperative that the institution report be based on the principles of objective and reliable assessment, which substantially aids the court's decision-making, strengthens the penal policy and raises the professional reputation of professionals, who work in the Department for Treatment.

The issue of objectification and standardization of evaluating the prisoners in the context of conditional release is of particular importance and it stands out in comparison to the observed law case. Namely, with reference to the work by Jovanić,⁵⁸ we can see that although the reports from the institution, where the sentence is executed clearly indicate the unjustified allocation of conditional release, the court still grants it for the rest of the sentence. This situation not only devalues the importance of treatment and expert evaluation during the execution of a sentence, but it poses the objective question whether educators/facilitators of treatment can be observed in the specific, informal status of an expert witness, or their role is merely advisory and aesthetic. Finally, the need and possibility of limiting judicial review are also questioned, given the fact that the court deciding on conditional release practically has no other means of obtaining information on the convicted person from the moment of final judgments and decisions of the executive up to the submission of an application for conditional release.

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⁵⁸ Jovanić, G. (2012). *The standardization process of conditional release as a protection measure of recidivism* (Doctoral dissertation). Belgrade: Faculty for Special Education and Rehabilitation.

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RELIGIOUSNESS LEVEL AND CITIZEN PREPAREDNESS FOR NATURAL DISASTERS

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The subject of quantitative research was examination of relationship between the level of religiousness and perception of citizen's flood disaster preparedness. The aim of such research was a scientific explanation of relationships of these characteristics and the perception. Bearing in mind all local communities in Serbia, where floods occurred or there is a high risk of flooding, the sample including 19 of 150 municipalities and 23 towns was randomly selected,, as well as the city of Belgrade, where 2,500 persons were surveyed in 2015. The research included the following communities: Obrenovac, Šabac, Kruševac, Kragujevac, Sremska Mitrovica, Priboj, Batočina, Svilajnac, Lapovo, Paraćin, Smederevska Palanka, Jaša Tomić, Loznica, Bajina Bašta, Smederevo, Novi Sad, Kraljevo, Rekovac and Užice. The research of selected communities was undertaken in the areas which were most affected in relation to the amount of water or potential risk of flooding. The survey used strategy of testing in households with the use of a multistage random sample. The parts in the administrative headquarters, which were threatened by hundred-year-old water or a potential risk of high water were determined in the first stage. In the second stage streets and their parts were established, and in the third stage the households in which the survey was conducted were determined. The number of households was coordinated with the size of the community. The fourth stage of sampling referred to the procedure of respondent selection within previously defined household. The respondent selection was conducted using a random sampling method on the adult household members, who were present at the time of the survey. The results indicate that there is a statistically significant correlation level of religiosity with perception in terms of citizens' preparedness to respond. The research results can contribute to the improvement of citizens' preparedness to respond to such events and can be used to develop the strategy for enhancement of the level of citizens' preparedness to respond.

Key Words: security, natural disasters, citizens, religiosity level, perception

Introduction

Exploring academic works and government reports connected with human security,¹ security threats seem so horrible and so endless: war threats, war, organised crime, social disagreements, political repression, economic crises, long-term changes in the environment, poverty, mass migrations and internal displacement, terrorism, technological and natural disasters, etc. The central part of the topic of human security is based on these threats, their inclusion or exclusion from the human security program, their gradation and prioritization. In the past decades, vulnerability to natural hazards took precedence over technological and other hazards threatening the community. According to the data from the OFDA/CRED International Disasters Database (EM-DAT), the number of natural disasters appears to be increased worldwide. In the decade 1900-1909, natural disasters occurred 73 times, but in the period 2000-2005 the number of occurrences rose to 2,788. Furthermore, the International Federation of Red Cross and Red Crescent Societies reported in 2004 that 231,764 people were killed by disasters in Asia from 1972 to 1996. (Kusumasari, Alam & Siddiqui, 2010)

Studying natural disasters (Jakovljević, Cvetković & Gačić, 2015) from the aspect of governing, the researchers have dealt directly/indirectly with the issue of preparedness as a theoretical concept and a practical discipline (Cvetković, 2015, 2016b, 2016c; Cvetković, Gačić & Jakovljević, 2015). Russell and associates (Russell, Goltz & Bourque, 1995) view preparedness as any preventive activity done by an individual, a household, a community or a state before and during a disaster, including obtaining, dealing with and distributing significant information on preventive activities, getting plans, supplies and equipment. In the theory of disasters, researchers looked at the influence of different factors on the preparedness of citizens to respond: sex (Becker, 2011), age (Levac, Toal-Sullivan & OSullivan, 2012), fear (Dooley, Catalano, Mishra & Serxner, 1992), perception of risk (Mulilis, Duval & Rogers, 2003), knowledge/education (Çakın, Petal, Sezan & Türkmen, 2006), etc. Determining the influence of different factors on the preparedness of citizens to react is important because of planning strategy and campaigns for promotion of preparedness, and emergency and rescue services actions, as well (Cvetković, 2016a; Cvetković & Gačić, 2016).

Religiousness could be connected to spiritual health, as the part of holistic model of health: physical, social, emotional, intellectual and spiritual health, thus enhancing the motivation for community and self-protection. (O'Donnell, 2009) The frequently asked

¹ Despite the fact that the needs of this work are not such that request deeper consideration of the problem of defining the human security, we regard it as necessary to explain our approach to this phenomenon. The term "human" indicates the focus on an individual and the term "security" refers to the need of protection against threats and the creation of safe environment. Therefore, we consider "human security" as the new, incoming concept dealing primarily with the security of people and individuals rather than the security of state territory and which is based on the survival, everyday life and dignity of human beings. The word "survival" reflects the security aspect and means the protection against an attack on physical integrity, as well as the satisfaction of basic needs; the word "dignity" refers to the strong bond between human rights and human security, whereas the word "everyday life" indicates the specific nature of human security, ie. it goes further than achieving security and dignity, connecting safety problems with the issues of living in communities and families, enlarging the scope of security against violent threats problems to yet unexplored fields. This leads to further examination of human security as "designed to include management and protection of political communities into the broader scope of concern for achieving individual prosperity and invulnerability. In that context, we have dealt with the abovementioned topic in this work.

question about percentage of religious citizens of Serbia is not so simple to answer. The research survey of religiousness of citizens of Serbia and their relation to the European Union with the sample of 1,219 examinees shows that a very high percentage of citizens express themselves as believers (93%) (Bigović & Bone, 2011). According to the results, 3.1% of examinees are absolutely unreligious, 7.8% are unreligious to a certain extent, 57.9% are neither religious nor unreligious, 20.7% of examinees are religious to a certain extent, and finally 7% of examinees are absolutely religious. According to the results of cross-examination, there were more unreligious males than females. The aim of our investigation was to search the influence of religiousness on the preparedness of citizens to respond to a natural disaster caused by flood in the Republic of Serbia.

Methodology of research

For the purpose of conducting the survey, statistical method and the method of empirical generalization stratified the local communities with high and low risk of flooding in the Republic of Serbia. Thus, the stratum was obtained, i.e. the population that consisted of adult residents of local communities where flooding took place or a risk of flooding existed. Using the random sampling method, 19 out of 154 communities with the induced risk of flooding were chosen from the resulting stratum. The research included the following communities: Obrenovac, Šabac, Kruševac, Kragujevac, Sremska Mitrovica, Priboj, Batočina, Svilajnac, Lapovo, Paraćin, Smederevska Palanka, Jaša Tomić, Loznica, Bajina Bašta, Smederevo, Novi Sad, Kraljevo, Rekovac and Užice. The multilevel random sampling was used in the further procedure. The parts in the administrative headquarters, which were threatened by hundred-year-old water or by a potential risk of high water were determined in the first stage. In the second stage streets and their parts were established, and in the third stage the households in which the survey was conducted were determined. The number of households was coordinated with the size of the community. The fourth stage of sampling referred to the procedure of respondent selection within previously defined household. The respondent selection was conducted using a random sampling method on the adult household members, who were present at the time of the survey. 2,500 citizens were involved in the survey (Table 1).

Table 1 – Structure overview of features of local communities in which citizen surveys are conducted

Municipality	Total area in km ²	Settlements	Population	Number of households	Number of respondents	Percentage (%)
Obrenovac	410	29	72,682	7,752	178	7.71
Šabac	797	52	114,548	19,585	140	6.06
Kruševac	854	101	131,368	19,342	90	3.90
Kragujevac	835	5	179,417	49,969	91	3.94
Sremska Mitrovica	762	26	78,776	14,213	174	7.53
Priboj	553	33	26,386	6,199	122	5.28

Municipality	Total area in km ²	Settlements	Population	Number of households	Number of respondents	Percentage (%)
Batočina	136	11	11,525	1,678	80	3.46
Svilajnac	336	22	22,940	3,141	115	4.98
Lapovo	55	2	7,650	2,300	39	1.69
Paraćin	542	35	53,327	8,565	147	6.36
Smed. Palanka	421	18	49,185	8,700	205	8.87
Sečanj - Jaša Tomić	82	1	2,373	1,111	97	4.20
Loznica	612	54	78,136	6,666	149	6.45
Bajina Bašta	673	36	7,432	3,014	50	2.16
Smederevo	484	28	107,048	20,948	145	6.28
Novi Sad	699	16	346,163	72,513	150	6.49
Kraljevo	1,530	92	123,724	19,360	141	6.10
Rekovac	336	32	10,525	710	50	2.16
Užice	667	41	76,886	17,836	147	6.36
Total	10,784	634	1,500,091	283,602	2,500	100

Table 2 gives a detailed structure overview of the interviewed citizens. The implementation of these sampling techniques provided solid representation of the sample; the sample size provided reliability in the conclusion regarding the basic set – population.

Table 2 – Structure overview of the sample of the interviewed citizens

Variables	Categories	Frequency	Percentage (%)
Gender	Male	1,244	49.8
	Female	1,256	50.2
Years of age	From 18 to 28 years	711	28.4
	From 28 to 38 years	554	22.2
	From 38 to 48 years	521	20.8
	From 48 to 58 years	492	19.7
	From 58 to 68 years	169	6.8
	Over 68 years	53	2.2
Level of education	Primary school	180	7.2
	Three-year-long secondary education	520	20.8
	Four-year-long secondary education	1,032	41.3
	College (three years)	245	9.8
	Faculty (four years)	439	17.6
	Master	73	2.9
	Doctor of Philosophy (PhD)	11	0.4

Variables	Categories	Frequency	Percentage (%)
Marital status	Single	470	18.8
	Related	423	16.9
	Engaged	67	2.7
	Married	1,366	54.6
	Divorced	99	4.0
	Widow / widower	75	3.0
Distance of household from the river	Up to 2 km	1,479	59.2
	From 2 to 5 km	744	29.8
	From 5 to 10 km	231	9.2
	Over 10 km	46	1.8
Incomes	Up to 25,000 dinars	727	29.1
	Up to 50,000 dinars	935	37.4
	Up to 75,000 dinars	475	19.0
	Over 90,000 dinars	191	7.6

Results

Results of χ^2 -square test of independency (χ^2) have showed that there is a statistically significant correlation between the level of religiousness and the following variables: preventive measures ($p = 0.03 < 0.05$, $v = 0.072$); engaged in the area ($p = 0.010 < 0.05$, $v = 0.076$); engaged in the reception centre ($p = 0.000 < 0.05$, $v = 0.135$); prolonged raining ($p = 0.034 < 0.05$, $v = 0.068$); increasing the level of rivers ($p = 0.000 < 0.05$, $v = 0.098$); media reports ($p = 0.007 < 0.05$, $v = 0.079$); the level of preparedness ($p = 0.000 < 0.05$, $v = 0.078$). On the other side, significant correlation with the following variables is not observed statistically: visits to the flooded sites ($p = 0.100 < 0.05$, $v = 0.059$), financial means ($p = 0.090 < 0.05$, $v = 0.060$) (Table 3). According to the obtained results, the highest percentage of the citizens who are not religious to a certain extent would offer help to the endangered citizens in the area (28.9%), would help in one of the reception centers (10.8%), thoughts of preparedness are aroused by media reports (45.2%), do nothing to prepare themselves to respond (66.2%); religious people to a certain extent are aroused to think about preparedness to respond by the increase of water level (41.5%), have taken preventive measures in order to lessen the flood effects (21%), are still not ready, but are going to start preparations next month (14.3%), have recently started preparations (11.8%); absolutely religious citizens are aroused to think about preparedness to respond by prolonged raining (48.2%), are still not ready, but are going to do it in the next six months (15.2%), have been preparing for at least 6 months (7.9%).

On the other hand, the smallest percentage of unreligious citizens to a certain extent are aroused to think about preparedness to respond by the increase of water level (26%), have been preparing for at least 6 months (1.4%); neither religious nor unreligious

citizens would help in one of the reception centers, have recently started preparations, are still not ready, but are going to start preparations next month; religious citizens to a certain extent have taken preventive measures in order to lessen the flood effects (10.2%), would offer help to the endangered citizens in the area (14.3%); absolutely religious citizens are aroused to think about preparedness to respond by prolonged raining (35%), media reports (25.3%), are still not ready, but are going to do it in the next six months (10.4%), do nothing to prepare themselves to respond (52.6%).

Table 3 – Results overview of X-square test of independency (χ^2) of religiousness level and mentioned variables on perception of preparedness to respond

	value	df	Asymp. Sig. (2 - sided)	Cramers V
Preventive measures	22,899	8	.003*	.072
Financial means	8,055	4	.090	.060
Engaged in the area	13,302	4	.010*	.076
Engaged in the reception center	41,751	4	.000*	.135
Visit to the flooded sites	7,769	4	.100	.059
Prolonged raining	10,433	4	.034*	.068
Increase of river level	21,857	4	.000*	.098
Media reports	13,993	4	.007*	.079
Level of preparedness	53,994	20	.000*	.078

* statistically significant correlation – $p \leq 0.05$

One-way analysis of variance (*one-way ANOVA*) examines the influence of religiousness level on dependant continual variables the perception of preparedness to respond. Subjects are divided in 5 groups according to the level of religiousness (absolutely unreligious, unreligious to a certain extent, neither religious nor unreligious, religious to a certain extent, absolutely religious).

According to the results, there is a statistically significant difference among mean values in mentioned groups with the following dependant continual variables: preparedness of local communities ($F = 2.79$, $p = 0.026$, $ek = 0.0070$); preparedness of the state ($F = 4.75$, $p = 0.001$, $ek = 0.0044$); the importance of taken measures ($F = 3.77$, $p = 0.005$, $ek = 0.0063$); I do not have time for that ($F = 4.57$, $p = 0.001$, $ek = 0.0061$); It will not influence the security ($F = 2.41$, $p = 0.049$, $ek = 0.0037$); I am not able ($F = 5.69$, $p = 0.000$, $ek = 0.0087$); I do not have support ($F = 3.17$, $p = 0.013$, $ek = 0.0054$); I can't prevent it ($F = 4.70$, $p = 0.001$, $ek = 0.0067$); neighbors ($F = 3.22$, $p = 0.013$, $ek = 0.0051$); non-governmental humanitarian organizations ($F = 4.93$, $p = 0.001$, $ek = 0.0082$); international humanitarian organizations ($F = 4.57$, $p = 0.001$, $ek = 0.0077$ – little influence); religious community ($F = 15.37$, $p = 0.000$, $ek = 0.0243$); police ($F = 5.59$, $p = 0.000$, $ek = 0.0094$); BCJ ($F = 2.71$, $p = 0.030$, $ek = 0.0051$); awareness ($F = 4.24$, $p = 0.002$, $ek = 0.0070$); state institutions work ($F = 2.70$, $p = 0.031$, $ek = 0.0038$); citizens from the flooded area ($F = 6.31$, $p = 0.000$, $ek = 0.0086$); lack of time ($F = 7.67$, $p = 0.000$, $ek = 0.0115$); too expensive ($F = 3.97$, $p = 0.004$, $ek = 0.0071$); police efficiency ($F = 2.96$, $p = 0.020$, $ek = 0.0038$); efficiency of firefighters and rescue brigades ($F = 3.17$, $p = 0.014$, $ek = 0.0058$); and medical emergency service efficiency ($F = 2.60$, $p = 0.036$, $ek = 0.0047$) (Tabela 2).

Citizens who are neither religious nor unreligious showed higher level of individual preparedness to respond to flood compared to absolutely religious citizens; citizens who are absolutely unreligious showed higher level of state and local community preparedness to respond to flood compared to absolutely religious. Regarding the barriers of preparedness, citizens who are absolutely unreligious point out to a greater extent the reason like "I don't have time for that" and "I don't have the local community support" for not taking preparedness measures compared to citizens who are exceptionally religious. On the other hand, citizens who are exceptionally religious point out to a greater extent "I think that it won't influence my personal security nor the security of my family" for not taking preparedness measures compared to citizens who are absolutely unreligious. Citizens who are absolutely unreligious point out to a greater extent "I am not able to do that" as a reason for not taking preparedness measures compared to citizens who are absolutely religious. Citizens who are absolutely unreligious point out to a greater extent "I can't prevent the consequences in any way" as a reason for not taking preparedness measures compared to citizens who are absolutely religious. From now on, regarding the expectancy of help in a situation of natural disaster, citizens who are absolutely unreligious rely on household members' and neighbors' help to a greater extent compared to citizens who are absolutely religious. On the other hand, citizens who are exceptionally religious rely on non-governmental humanitarian organizations' help to a greater extent compared to citizens who are absolutely unreligious. Citizens who are neither religious nor unreligious rely on non-governmental humanitarian organizations' help to a greater extent compared to citizens who are absolutely unreligious. Citizens who are unreligious to a certain extent point out to a greater extent "I expected citizens from the flooded area to be engaged in the first place" as a reason for not helping the endangered people with the flood consequences compared to citizens who are absolutely unreligious. Citizens who are absolutely unreligious point out to a greater extent "I didn't have time" as a reason for not helping the endangered people. Citizens who are unreligious to a certain extent estimate the efficiency of police reaction to a greater extent compared to citizens who are religious to a certain extent.

Results of χ^2 -square test of independency (χ^2) have showed that there is a statistically significant correlation between the level of religiousness and the following variables: knowledge about flood ($p = 0.000 < 0.05$, $v = 0.090$); evacuation ($p = 0.000 < 0.05$, $v = 0.074$); education at school ($p = 0.001 < 0.05$, $v = 0.076$); education in a family ($p = 0.000 < 0.05$, $v = 0.087$); education at work ($p = 0.038 < 0.05$, $v = 0.061$); assent to evacuation ($p = 0.000 < 0.05$, $v = 0.114$); help – the elder, the invalids ($p = 0.000 < 0.05$, $v = 0.087$); neighbors – individually ($p = 0.000 < 0.05$, $v = 0.081$); flood risk chart ($p = 0.000 < 0.05$, $v = 0.087$); potential infection ($p = 0.018 < 0.05$, $v = 0.064$); water valve ($p = 0.031 < 0.05$, $v = 0.060$); electricity switch plug ($p = 0.000 < 0.05$, $v = 0.091$); handling water valve ($p = 0.000 < 0.05$, $v = 0.079$); handling gas valve ($p = 0.009 < 0.05$, $v = 0.074$); handling electricity switch plug ($p = 0.000 < 0.05$, $v = 0.087$); information by the household members ($p = 0.030 < 0.05$, $v = 0.069$); information by neighbors ($p = 0.000 < 0.05$, $v = 0.120$); information by friends ($p = 0.001 < 0.05$, $v = 0.088$); information from family ($p = 0.001 < 0.05$, $v = 0.093$); information through the informal system ($p = 0.002 < 0.05$, $v = 0.088$); information at work ($p = 0.001 < 0.05$, $v = 0.090$); information on TV ($p = 0.004 < 0.05$, $v = 0.082$); information by radio ($p = 0.008 < 0.05$, $v = 0.078$); information by

press ($p = 0.000 < 0.05$, $v = 0.121$); information by the Internet ($p = 0.005 < 0.05$, $v = 0.081$); wish to attend a training course ($p = 0.000 < 0.05$, $v = 0.079$); education over video games ($p = 0.000 < 0.05$, $v = 0.155$); education over the Internet ($p = 0.044 < 0.05$, $v = 0.066$); education over lectures ($p = 0.002 < 0.05$, $v = 0.088$).

On the other hand, statistically significant correlation is not determined with variables: the elder, the handicapped ($p = 0.058 < 0.05$); gas valve ($p = 0.092 < 0.05$); familiarity with security procedures ($p = 0.064 < 0.05$); official warning ($p = 0.0051 < 0.05$); information at school ($p = 0.658 < 0.05$); information at faculty ($p = 0.563 < 0.05$); information in a religious community ($p = 0.503 < 0.05$); completed training course ($p = 0.237 < 0.05$); education by TV ($p = 0.566 < 0.05$); education by radio ($p = 0.286 < 0.05$); informal system ($p = 0.933 < 0.05$) (Tabela 3)

According to the obtained results, the greatest percentage of citizens who are unreligious to a certain extent know what is flood (90.7%), would evacuate in a reception centers (9.5%), point out that a person at school talked about floods (33.8%), received information on floods on TV (67.5%), would like to attend training course for treating such natural disasters (49.3%), would like to be educated over the Internet (29.3%); neither religious nor unreligious citizens would evacuate to neighbors (15.8%), to friends (38.6%), would evacuate in the case of incoming flood wave (94.9%), are familiar what kind of help the elders, the invalids and the infants need (58.6%), think that their neighbors can rescue themselves on their own in the case of flood (47.8%), would like to be educated on floods through video games (8.2%); citizens who are religious to a certain extent would evacuate to reception centers (14.2%), are familiar with handling electricity switch plug (74.3%), gained information on floods at work (16.3%), by press (36.5%), over the Internet (31.5%), would like to be educated on lectures (32.9%), are familiar with the flood risk chart of a local community (19.4%), gained information on floods from household members (36.2%), through informal system of education (10.9%); absolutely religious citizens would evacuate to higher floors of the house (49%), point out that a household member talked about the floods (45.1%), someone at work talked (33.3%), are familiar with viruses and infection threatening after the flood (48.8%), are familiar with where the water valve is (85.3%), electricity switch plug (80.8%), know how to operate water valve (78.3%), gas valve (53.2%), gained information on floods from neighbors (31.2%), from friends (20.4%), family (15.9%), by radio (18.6%);

Results of χ^2 -square test of independency (χ^2) have showed that there is a statistically significant correlation between the level of religiousness and the following variables: household supplies ($p = 0.000 < 0.05$, $v = 0.116$); food supplies ($p = 0.000 < 0.05$, $v = 0.146$ – a little influence); water supplies ($p = 0.000 < 0.05$, $v = 0.225$); radio transistor ($p = 0.005 < 0.05$, $v = 0.111$); a torch ($p = 0.007 < 0.05$, $v = 0.107$); a shovel ($p = 0.000 < 0.05$, $v = 0.132$); a hack ($p = 0.050 < 0.05$, $v = 0.088$); a hoe and a spade ($p = 0.012 < 0.05$, $v = 0.102$); initial fire extinguisher ($p = 0.028 < 0.05$, $v = 0.097$ – a little influence); supplies renewal ($p = 0.001 < 0.05$, $v = 0.103$); supplies in a vehicle ($p = 0.000 < 0.05$, $v = 0.078$); first aid kit in a house ($p = 0.000 < 0.05$, $v = 0.103$); first aid kit in a vehicle ($p = 0.047 < 0.05$, $v = 0.066$); first aid kit – easily accessible ($p = 0.000 < 0.05$, $v = 0.086$); acting plan ($p = 0.000 < 0.05$, $v = 0.112$); discussion about a plan ($p = 0.000 < 0.05$, $v = 0.089$ – a little influence); copies of documents ($p = 0.000 < 0.05$, $v = 0.109$); insurance ($p = 0.017 < 0.05$, $v = 0.064$).

According to the obtained results, absolutely unreligious citizens have food supplies for two days (21.7%); to a certain extent unreligious citizens have food supplies for four days (43.2%), water supplies for one day (59.5%), never renew supplies (57.1%); neither religious nor unreligious citizens have a radio transistor (19.7%), a shovel (36.4%), an initial fire extinguisher (15.9%); religious citizens to a certain extent have supplies in the case of flood (35.3%), have water supplies for two days (41%), a radio transistor (41.8%), a hack (29.2%), renew supplies once a month (43.5%), keep a first aid kit at an easily accessible place (73.2%), have a written plan for action in the case of flood (3.3%), have unwritten plan for action in the case of flood (17.7%); absolutely religious citizens have food supplies for four days (77.3%), water supplies for four days (66%), a shovel (43.6%), renew supplies once a year (24.2%), have supplies in a vehicle (10.4%), first aid kit at home (61.3%), discuss about the plan of action (19.6%), have copies of important personal, financial documents (32.2%), insure household against flood consequences (10.5%).

Conclusion

Taking into account the correlation between the level of religiousness and preparedness of citizens to respond, the following conclusions are reached:

- statistically significant correlation is determined among the level of religiousness and the following category variables regarding the perception of preparedness: preventive measures, engagement on the site, engagement at the reception centres, prolonged rain, increased level of rivers, media reports, level of preparedness. Furthermore, statistically significant correlation is determined with the following continual variables: preparedness of a local community, preparedness of a state, the importance of preventive measures, I don't have time for that, It won't influence the security, I am not able, I don't have support, I can't prevent, neighbors, non-governmental humanitarian organizations, international humanitarian organizations, religious communities, police, firefighter and rescue brigade, awareness, state institution work, citizens from the flooded area, lack of time, too costly, efficiency of police, firefighter brigades and urgent medical services;

- statistically significant correlation is determined among the level of religiousness and the following variables regarding knowledge about flood, evacuation, education at school, education in a family, education at work, assent to evacuation, help to the elders, the invalids, neighbors – individually, flood risk chart, potential infection, water valve, electricity switch plug, handling water valve, handling gas valve, handling electricity switch plug, information by household members, information by neighbors, information by friends, information by family, information through informal system, information at work, information on TV, information by radio, information by the press, information over the Internet, wish to attend a training course, education over video games, education over the Internet, education on lectures;

- statistically significant correlation is determined among the level of religiousness and the following variables on supplies: supplies at home, food supplies, water supplies, radio transistor, torch, a shovel, a hack, a hoe and a spade, initial fire extinguisher, renewal of supplies, supplies in a vehicle, first aid kit at home, first aid kit in a vehicle, first aid kit -easily accessible, acting plan, discussion about the plan, copies of documents, insurance.

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POSITION OF TOURISM IN GLOBAL ECONOMY AND ITS IMPACT ON GDP, EMPLOYMENT AND INVESTMENTS

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The world has already undergone the globalization process in all segments of the economy. This paper addresses the issue of the ways in which globalization affects tourism as the industry and economic activity. Furthermore, tourism as an economic activity exerts a considerable impact on other activities. Therefore, we have to focus more on the extent and the way this influence is exerted. Also, tourism has an impact on the formation of the gross domestic product, as well as employment and investment. Tourism cannot develop without foreign direct investment, and this paper shows the position of tourism in relation to other activities concerning the number and value of green field investment.

Key Words: *tourism, globalization, gross domestic product, employment, foreign direct investment*

Introduction

Global changes have affected almost every segment of social, political, cultural life and the overall economy. They are manifested through neutralization of practically every barrier, which has resulted in liberalization of international trade, competition, free movement of capital and workforce independently of national borders, free movement of investments, etc. As an increasingly important activity, tourism undergoes all of these changes, especially mass tourism, which can be seen in all dimensions of global change. Tourism is an example of the very strong impact of globalization, especially concerning the development of information technology, communications, transport etc. As an example of rapid growth and its increasingly important role in the world market, tourism exerts a significant impact on other related industries, either in indirect or direct manner. The initial idea that tourism is the consequence of economic development has evolved with empirical research into a new idea that tourism is rather becoming an important factor of economic development. Taking that into account, tourism is gradually becoming a strong mover and engine of development for other related industries. Also, tourism is gaining important potential for development, having in mind the fact that this commercial activity connects the sale of goods and services, and its characteristic to bring the consumer to the producer and not vice versa. The influence of tourism can also be seen in creating possibilities for small

businesses to expand and develop their business activity which, in other conditions, could not breach global supply chains. An increasingly growing economic role and impact of tourism undeniably exerts considerable influence on creation of the gross domestic product (GDP) in both direct and indirect way as the appropriate analysis and display. From the broadest perspective, the direct and indirect impacts of this industry on GDP, employment and investment analyzed through the Travel & Tourism (T & T), which includes the application of the methodology, is constructed by the United Nations Statistic Division entitled the Tourism Satellite Account (TSA), which is recommended when it comes to the impact of tourism on the development of economic relations. This activity employs an increasing number of people each year and it also exerts direct or indirect impact on development of not only their own, but other activities, as well. In the context of tourism development, foreign direct investment (FDI) is unavoidable as a factor of growth dynamics, especially the need to use developing countries and economies. Regardless of the importance of FDI as a factor of tourism development, numerous problems occur in the analysis of this field. This happens mostly because tourism is not labeled as formal tourism industry in the classification of national accounts, which means that there is not a trustworthy and single piece of evidence that FDI is directly connected with this industry. This situation creates many methodological issues, having in mind that there is no single methodology for recording FDI in this industry. The initial efforts for outlining a single methodology have been done by forming twelve separate national accounts connected to tourism activities. When analyzing FDI forms, one can observe that mergers, acquisitions and privatization are more common forms of entering foreign markets than green field investments. However, green field investments have an advantage in certain cases having in mind their character and effects on employment, keeping the invested capital, as well as the transfer of new technologies, management, introduction of new kinds of long - term services, etc. Keeping in mind the listed characteristics, green field investments in the hospitality sector have been analyzed (by the classification of UNCTAD), taking into account that tourism does not have full evidence of FDI, as previously mentioned.

Results and Discussion

This research is based on three elements that are in the focus of this analysis: tourism in relation to globalization, relationship between tourism and economic development and impact of tourism on other industries and FDI in tourism.

Tourism in relation to globalization

Globalization as a global phenomenon has affected almost every sphere of social life, especially in the post-war period. There are numerous and varied definitions of this concept, which is why the complexity of the concept in both science and literature initiates different approaches necessary for providing its definition.

Global economy, as a specific dimension of globalization has initiated various changes, firstly in the sphere of liberalization of international trade, competition, free movement of capital and workforce, investments, etc. A special characteristic of this

phenomenon is the removal of barriers for capital, goods, financial and investment flows (Vukadinović et al., 2013). One of the most important economic activities in the process of globalization is tourism. This view is especially related to mass tourism which is considered to be one of the visible manifestations of globalization, so that tourism development can be seen in every dimension of these processes: economic, social, cultural and even political one (Halowiecka et al., 2011). On the basis of huge significance of tourism in the worldwide economy, the same authors stress the importance and popularity of researching these relations, particularly in connection with economic dependence between tourism and globalization at a global or regional level. In both research and theory, tourism stands out as an example of a very strong influence of globalization. Progress and transfer of technology, efficient transportation of travelers, open borders, etc. are some of the important characteristics of globalization impact on tourism development. Certain authors (Pantelescu & State, 2008) assert that tourism is one of the examples of globalization that is the most visible because people are given the chance to spend their free time comfortably. Also, many companies have the fundamental experience of globalization. Air traffic is growing exponentially (the time it takes to get to the destination is shorter, which leads to more time spent at a tourist location itself), borders have opened, as well as free markets. Globalization has opened new possibilities for tourism development through development of electronic technology, communications and transport. The Internet, fast communication and smaller costs of air travel are becoming more important every day. The Internet has drastically lowered costs by reducing the importance of intermediaries or excluding them all together, and it has also become one of the most sought ones after perks of comfortable accommodation. In general, a large number of authors agree with the fact that globalization has increased the interdependence of economies, countries and people. This interdependence does not only include mega companies, but it also includes small and medium-sized enterprises, as well as family businesses. The process of globalization has affected the creation and functioning of the global tourism market, which demands competition on an equal basis regardless of the country of origin. Finally, globalization has opened completely new possibilities for the overall development and the development of tourism market. One can say that globalization plays a crucial role in the growth of international tourism in the world market. The contribution of globalization in economic, political and cultural terms also reflects on the evolution of tourism in the context of increase of travels both inside and outside borders. Globalization, openness of borders, growth of all types of transport, especially air traffic, appearance of the Internet and increase in the number of people who can afford to take vacation and travel outside the national borders, have all influenced the strengthening of international tourism over national one (Nedeljković et al., 2013).

Tourism and economic development-impact of tourism on other areas of economy

The history of the importance of tourism for economic development and its impact on the development of other economic areas ranges from views that tourism is a consequence of economic development to the current position that tourism is a factor of economic development. According to Bošković (2009), it has long been widely accepted that tourism is a con-

sequential phenomenon of economic development, which is based on the premise that tourism could have an impact on economic development, but with a previously achieved certain level of economic development. This view is based on the notion that the most significant factors driving the development of tourism are also primarily the results of economic development. However, later studies have pointed out that tourism makes an impact on other economic activities, which have in fact established tourism as one of the factors of economic development. In the context of globalization, international tourism continues to strengthen its role in relation to national tourism. Given the ever-growing importance of international tourism, Table 1 shows the indicators of international tourism development.

Table 1 – *Development of international tourism – quantitative indicators*

	International Tourist Arrivals (in millions)							Market share (%)	Change in growth (%)			Yearly percent. (%)
Year	1990	1995	2000	2005	2010	2013	2014	2014*	12/11	13/12	14*/13	
World	435	527	674	809	949	1,087	1,133	100	4.2	4.6	4.3	3.8
Developed economies	296	336	420	466	513	586	619	54.7	4.0	4.7	5.8	3.2
Developing economies	139	191	253	343	435	501	513	45.3	4.4	4.5	2.4	4.6
Regions by UNWTO:												
Europe	261.5	304.7	386.4	453.0	488.9	566.4	581.8	51.4	3.9	4.9	2.7	2.8
Asia and the Pacific	55.8	82.1	110.3	154.0	205.4	249.8	263.3	23.2	6.9	6.8	5.4	6.1
America	92.8	109.1	128.2	133.3	150.1	167.5	181.0	16.0	4.5	3.1	8.0	3.5
Africa	14.7	18.7	26.2	34.8	49.5	54.4	55.7	4.9	4.8	4.7	2.4	5.4
Middle East	9.6	12.7	22.4	33.7	54.7	48.4	51.0	4.5	-5.3	-3.1	5.4	4.7

Source: World Tourism Organization (UNWTO), Tourism Highlights edition 2015, Data as collected by UNWTO May 2015. pp.4.

Globally, tourism has exhibited a steady increase in the number of tourists in the last 24 years (analyzed for the period 1990-2014). In 1990, the recorded number of tourists was 435 million, reaching 1,133 million tourists by 2014, i.e. 2.6 times more than in 1990. This trend is also present in developed economies, where the number of tourists rose from 296 million in 1990 to 619 million, or 2.09 times. In developing economies, this number grew from 139 million tourists in 1990 to 513 million in 2014, or fantastic 4.7 times.

The growth in the number of tourists at a regional level is also constant. Europe has recorded growth in the number of tourists from 261.5 million in 1990 to 581.8 million in 2014, or 2.22 times. Asia and the Pacific are becoming increasingly important tourist destinations, as the number of tourists rose from 55.8 million in 1990 to 263.3 million in 2014, or 4.72 times. America also recorded an increased number of tourists from 92.8 million in 1990 to 181 million in 2014, or 1.95 times. Africa is rapidly progressing towards becoming an interesting tourist destination with the number of tourists growing from 14.7 million in 1990 to

55.7 million in 2014 or 3.78 times. The Middle East also follows the growth trend in the number of tourists, as their number increased from 9.6 million in 1990 to 51 million in 2014, or 5.31 times, which is also the largest regional increase in the number of tourists.

The analysis of the growth rate in the number of tourists in 2014 compared to 2013 shows that the achieved growth rate at a global level was 4.3%, developed economies achieved a growth rate of 5.8%, while developing economies recorded a growth rate of 2.4 %. At the regional level, the highest growth rate was achieved by America-8%, followed by Asia, the Pacific and the Middle East with a growth rate of 5.4%, then Europe with 2.7% and Africa with 2.4%.

The highest average annual growth rate in the analyzed period (1990-2014) was observed in Asia and the Pacific with a growth rate of 6.1%, indicating the growing attractiveness of tourist destinations in the region, followed by Africa with 5.4%, Middle East with 4.7 % and Europe with 2.8%. Developed countries had an average annual growth rate of 3.2% in the number of tourists, while developing economies recorded an average annual growth rate of 4.6%. The global average annual growth rate in the number of tourists was 3.8%.

In addition to these quantitative indicators, financial indicators also point to the intense tourism development, as shown in Table 2.

Table 2 – Development of international tourist-financial indicators

Year	International tourism revenues (% of change)				Market Share (%)	Revenues (USD) (billion) per tourist		
	11/10	12/11	13/12	14*/13		2013	2014*	2014*
World	4.6	3.9	5.1	3.7	100	1,197	1,245	1,100
Developed economies	5.8	3.7	5.7	3.2	65.5	784	815	1,320
Developing economies	2.5	4.4	4.0	4.6	34.5	413	430	840
Regions by UNWTO:								
Europe	5.0	1.9	4.2	3.6	40.9	491.7	508.9	870
Asia and the Pacific	8.6	6.7	8.6	4.1	30.3	360.7	376.8	1,430
America	4.6	4.7	4.7	3.1	22.0	264.2	274.0	1,510
Africa	2.3	6.0	2.6	2.9	2.9	35.5	36.4	650
Middle East	-15.6	0.9	-6.9	5.7	4.0	45.2	49.3	970

Source: World Tourism Organization (UNWTO), Tourism Highlights edition 2015, Data as collected by UNWTO May 2015. pp. 5.

At a global level, international tourism revenues have grown from 1,197 billion USD to 1,245 billion USD, which shows a growth rate of 3.7%. This kind of growth was also recorded in developed economies, where revenues rose from 784 billion USD in 2013 to 815 billion USD in 2014, or by 3.2%. In developing economies, revenues rose from 413 billion USD in 2013 to 430 billion USD in 2014, or by 4.6%. Revenue growth has also been recorded at a regional level. Europe had the biggest revenue growth, where revenues amounted to 17.2 billion USD, which shows the growth of 3.6%, whilst the smallest growth was observed in Africa and amounted to 0.9 million USD, or by 2.9%.

The effects of tourism on the overall economic development, i.e. the economic effects of tourism can be treated as direct and indirect. The direct effects of tourism on the overall economy can be viewed through a few of the most important effects: effects on the national product and income, development of economic industries related to tourism sector, balance of payments, population and employment, investments and effects on insufficiently developed areas and countries. The indirect effect is related to industries that usually follow the tourism activities, primarily agriculture, industry and construction (Bošković, 2009). The tourism effects on other economic activities are presented in Figure 1.

Box figure 1. Tourism value chain

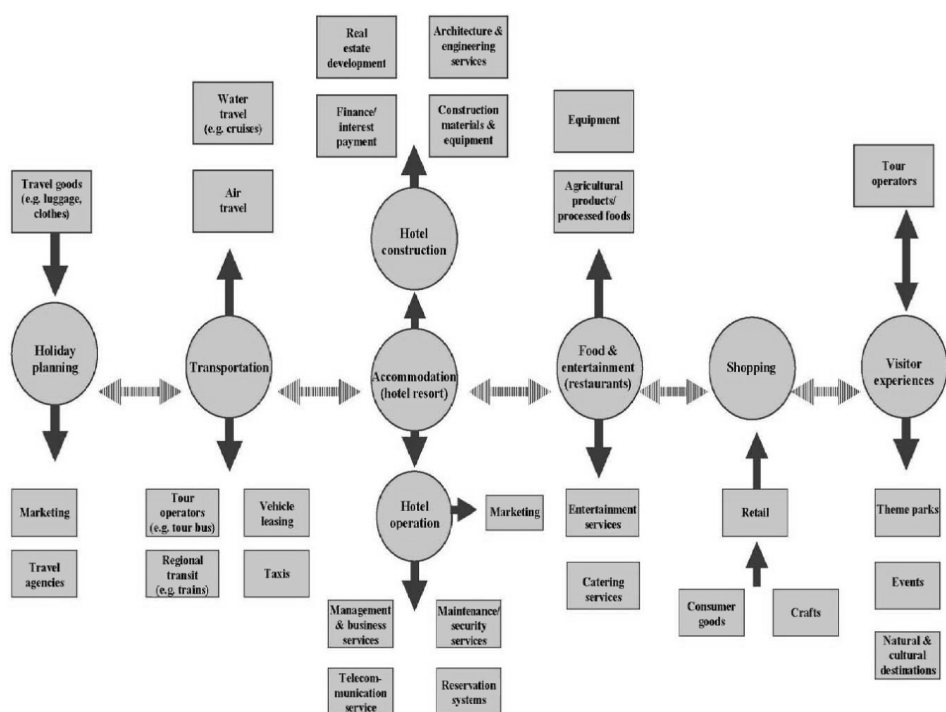


Figure 1 – The influence of tourism industry on other service industries and production

Source: Gollub et al. (2003), FDI in Tourism: The Development Dimension, UNITED NATIONS, New York and Geneva, 2007, p. 3.

Tourism possesses the important development potential. This stems from the fact that tourism cross - connects both sales of goods and services, such as accommodation, transport, entertainment, sale of agricultural products, etc. An important fact is that tourism enables the consumer to come to the producer and not the other way round, so that even the smallest transaction becomes a part of the global economy. Every sale of goods or services to foreign tourists has a significant positive effect on small businesses,

which otherwise could not breach the global supply chains (UNCTAD, 2007). Apart from direct and indirect effects on the economy, it is also important to show the possible positive and negative effects that can be seen in multiple elements, as displayed in Table 3:

Table 3 – Possible effects of tourism

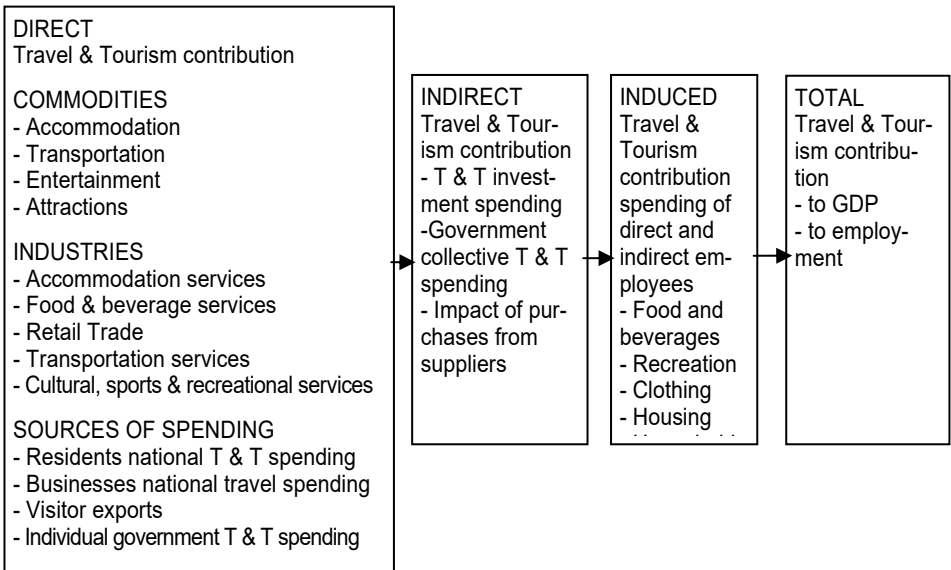
POSITIVE EFFECTS	NEGATIVE EFFECTS
Increase of revenues/increase of living standard	Big dependence on tourism
Employment opportunities	Increased living costs-accommodation, food and services
Improvement of infrastructure in tourism	Pollution and traffic congestion
Increase of tax income	TNC* dominate the tourism market
Raising awareness and increasing resources for cultural and natural heritage	Harmful effects on cultural and natural heritage
Capital inflows	Sensitivity of business cycles and changes of business attitude
Transfer of professionalism and managerial skills	Little control of tourism development
Market connections	Unacceptable form and volume of development
Visible effects for local entrepreneurs	Invasion of open spaces

*TNC – Trans National Companies

Source: UNCTAD (2010), expanding on UNESCAP (2001) and on Kusluva S and Karamustafa K (2001).

Direct, indirect and total impact of tourism (T & T) on GDP, employment and investment

From the widest standpoint tourism as T & T performs direct, indirect and total impact on both national economy and global economy. As shown in Figure 1, the TSA model is based on the following:



Direct, indirect and total impact on GDP, employment and investment provides a more complete picture of the impact of T & T on other activities and industries because TSA model takes into account all created values, employment and investments that are in any of these ways connected with tourism activities. The figure clearly shows a large number of services and industries related to tourism and that tourism also greatly affects them.

T & T Impact on GDP

However, according to statistical indicators, the global economic crisis induced in 2008 resulted in variable motion of GDP growth rate worldwide. The sudden fall in GDP was recorded in 2011 compared to 2010, from 4.09% to 2.80% and further to 2.18% in 2012. However, from 2012 to 2014, GDP growth is not spectacular, but still notable as optimistic, bearing in mind all the global economic problems, as well as the number of national economies in which there was a decrease of GDP in this period, while a number of national economies started recovering. Since 2012 the growth of GDP was recorded by 2.18% per annum to 2.48% in 2014. The activity of T & T follows this GDP growth, but it can be seen that the growth of T & T is slightly faster than indicated by GDP growth rates. This ratio indicates that T & T is one of the groups of industry that exerts a more significant impact on GDP growth, as shown in Table 4.

Table 4 – *T & T Impact on GDP (in billion US dollars)*

	2010	2011	2012	2013	2014
1. Gross domestic product-world*	65.430	72.443	73.699	75.641	77.451
1.2. Growth rates of GDP per year	4,09	2,80	2,18	2,28	2,48
2. Direct contribution of Travel & Tourism to GDP**	2.058	2.132	2.210	2.285	2.365
2.1. % of whole economy GDP	3,15	2,94	3,00	3,02	3,05
2.2. Growth Direct contribution of Travel & Tourism	2,20	3,60	3,70	3,40	3,50
3. Total contribution of Travel & Tourism of whole economy GDP**	6.567	6.846	7.083	7.316	7.581
3.1. % of whole economy GDP	10,04	9,45	9,61	9,67	9,79
3.2. Growth Total contribution of Travel & Tourism	1,30	4,30	3,50	3,30	3,60

Source: *GDP: UNCTAD STATISTICS, **Direct and Total Contribution T & T: World Travel & Tourism Council, Travel & Tourism-Economic Impact 2015, World, annual Report.

The analysis of direct contribution of T & T to GDP growth reveals a slight increase in the nominal value of the amount for the entire analyzed period 2010-2014. The realizable value increased by 2.058 billion US dollars in 2010 to 2.365 billion US dollars in 2014. Bearing in mind that in the same period the nominal value of GDP recorded growth, a rele-

vant indicator of growth and constant influence on GDP growth is the percentage of participation of realizable values and growth rates of T & T in the period analyzed in relation to GDP. However, regardless of the nominal growth of average value of T & T in 2011 compared to 2012, growth rates in the past two years indicate the impact of the global economic crisis in T & T, as the rate of participation of this sector in GDP fell from 3.15% in 2010 to 2.94 in 2011. However, the recovery of T & T activities is evident in the upcoming period, i.e. in the period 2011-2014, during which the percentage share of this activity grew continuously from 2.94% in 2011 to 3.05% in 2014 (3.00% in 2012, 3.02% in 2013). It cannot be said that this growth is spectacular, as you could not have expected this, taking into account the prolonged effects of the global economic crisis and a drop in purchasing power. However, the growth rate is still stable, which indicates that T & T as the industry found a solution to prevent the recession, which began with a decline in the share of this sector in 2010 compared to 2011. With 2.20 in 2010, the growth rate of T & T direct impact increased to as much as 3.60 in 2011. This sudden increase has not kept the same growth rate in the coming period, because in 2012 the growth rate rose to 3.70 followed by an evident decline to 3.40 in 2012 and a slight rise in 2014 to 3.50. This was triggered by relatively stable growth rates in the structure of T & T direct impact on GDP.

The total impact of T & T (including direct and indirect impacts using TSA models) in nominal terms shows steady growth from year to year during the analyzed period. Nominal growth of realizable value of T & T with 6.567 billion US dollars in 2010 reached the level of 7.581 billion US dollars in 2014, which represents a jump of as much as 19.55%. The total impact of T & T in GDP, as measured by percentage share in GDP, firstly decreased in participation or impact on GDP from 10.04% in 2010 to 9.45% in 2011. The continued growth in the share of the total impact of T & T in GDP is evident after the fall in 2011, so that the participation increased in 2012 at 9.61%, 2013 percentage participation grew at 9.67%, to the highest level of participation – the impact of T & T was manifested in 2014 in the amount of 9.79%. Such trend, nominal and percentage of total-impact of T & T to GDP, indicate that the industry has a stable effect and growth and thus a stable and growing impact on GDP. The analysis of the growth rate of the total impact shows that exactly the same rule is observed when it comes to direct impact. The growth rate of 1.30 in 2010 increased to 4.30. However, the decline in the growth rate of this sector at 3.50 was observed in 2012, and in 2013 it amounted to 3.30. The industry experienced the recovery in 2014, when the growth rate reached a level of 3.60, which is higher than in the previous year.

Impact of T & T employment on the overall employment

One of the most negative effects of the global economic crisis is related to employment and job creation. The consequence of the economic crisis is jobs reduction or downsizing. National economies that have managed to find a solution to combat and mitigate the effects of the global economic crisis or greatly reduce its adverse effects managed and preserved jobs and the number of employees. Moreover, some national economies have succeeded in presenting and increasing the number of jobs since 2008, or to be on the road to recovery, by increasing the number of jobs to be reduced in the first wave of the global economic crisis.

Globally, the statistics (UNCTAD statistics) show that during the analyzed period the number of employees worldwide increased from 3,236,325 in 2010 to 3,282,415 in 2011. In 2012, that number rose to 3,328,256 and 3,373,455 in 2013, reaching its peak of 3,417,573 employees in 2014. Such trend indicates a slight recovery of the economy at the global level, bearing in mind that this increase in the number of employees is not that spectacular, but the increase in the number of jobs or the number of employees gives grounds for optimism that there is a slight recovery and possibility for overcoming the crisis. One should not expect quick and spectacular solutions because this is a process. (Table 5).

Table 5 – *Impact of T & T employment on the overall economy employment (in thousands)*

	2010	2011	2012	2013	2014
1. Total labor force and agriculture labor force	3,236,325	3,282,415	3,328,256	3,373,445	3,417,573
1.1. Growth of total labor force and agriculture labor force	1.20	1.42	1.40	1.36	1.31
2. Direct contribution of Travel & Tourism to employment	98,192	99,558	101,486	103,297	105,408
2.1. Growth of direct force and agriculture labor force	0.4	1.39	1.94	1.78	2.04
2.2. % of the overall economy employment	3.03	3.03	3.05	3.06	3.08
3. Total contribution of Travel & Tourism to employment	254,477	259,996	265,169	270,723	276,845
3.1. Growth of total labor force and agriculture labor force	-1.30	2.17	1.99	2.09	2.26
3.2. % of the entire economy employment	7.86	7.92	7.97	8.03	8.1

Source: *Total labor force: UNCTAD STATISTICS, **Direct and Total Contribution T & T: World Travel & Tourism Council, Travel & Tourism-Economic Impact 2015, World, annual Report.

The analysis of employment rates in tourism industry, and the number of employees follow the global trend of employment growth. This increase is not insignificant bearing in mind that these activities are classified in the services sector, which is characterized as a labor-intensive sector, and it does not employ a large number of people, as is the case with the secondary-manufacturing sector. It is encouraging that the direct impact of T & T number of employees grew each year of the observed period in this activity from 98,192 thousand employees in 2010 to 99,558 thousand in 2011, 101,486 thousand in 2012, 103,297 thousand in 2013 to the maximum of 105,408 thousand employees in 2014. It is characteristic that since 2012 we undertook the employment in T & T activities as noticeable on the basis of an analysis of the nominal number of employees. Employment growth in T & T supports this thesis given that by 2012 this rate was growing faster than the employment rate at the global level, which is noticeable because the growth rate in T & T increased in 2012 to 1.94, in 2013 to 1.78, in 2014 to 2.04, while globally we observed slower employment growth rates – in 2012 at 1.40, in 2013 at 1.36 whereas in 2014 it fell to 1.31, while the growth rate in the same year in T & T advanced to 2.04. The analysis of the employment growth rate at the global level and T & T indicates faster employment growth in T & T than at the global level, which shows that this industry (T & T) has developed more actively than at the global level.

The analysis of the total impact of unemployment on the global employment is better maintained than the growing influence of this industry on the global employment. The number of employees in nominal terms increased each year during the analyzed period, with 254,477 thousand employees in 2010 to 259,996 thousand in 2011, then 265,169 thousand in 2012 to 270,723 employees in 2013, reaching 276,845 employees in 2014, which is the largest annual increase in the number of employees. The employee growth rates indicate that after a negative rate of -1.3 in 2010, a sharp increase of 2.17 was observed in 2011, followed by a decline in the employment rate in 2012 to 1.99. After 2012 the analysis shows continuous employment growth, as well as in 2013 and 2014, to 2.09 and 2.26, respectively. Such growth rates are optimistic and favorable provided that they continue. The total impact of T & T on the global employment is constantly growing, as demonstrated by the analysis of the growth of participation in employment in the total number of employees globally. The share has been growing continuously since 2010 from 7.86% to 7.92% in 2011, then to 7.97% in 2012. Such growing tendency continued in 2013 to 8.03%, while the share of this activity by the number of employees in the global number of employees amounted to 8.10% in 2014.

Impact of T & T on Foreign Direct Investment

Participation in impact of T & T investment is analyzed as the impact on FDI (Foreign Direct Investment) using the data from the TSA United Nations statistic division model to cover not only investments in hotels and restaurants, but also investment in other industries that are directly or indirectly related to T & T. In this way, it is possible to realistically show the impact of all investments that have to do with tourism in the aforementioned manner. This analysis is presented in Table 6.

Table 6 – *Impact of T & T investment on Foreign Direct Investment (million US dollars)*

	2010	2011	2012	2013	2014
1. Foreign direct investment	1,328,215	1,564,935	1,403,115	1,467,149	1,228,283
1.1. Growth Foreign direct investment	11.94	17.82	-10.34	4.56	-16.28
2. Capital investment in Travel & Tourism ¹	718,000	740,000	767,000	784,000	814,000
2.1. Growth Capital investment in Travel & Tourism	-4.80	3.06	3.65	2.22	3.83
2.2. % of whole Foreign Direct Investment	54.06	47.29	54.66	53.44	66.27

Source: *Total labor force: UNCTAD STATISTICS, **Direct and Total Contribution T & T**: World Travel & Tourism Council, Travel & Tourism-Economic Impact 2015, World, annual Report, *** Capital investment – includes capital investment spending by all industries directly involved in Travel & Tourism. This also constitutes investment spending by other industries on specific tourism assets such as new visitor accommodation and passenger transport equipment, as well as restaurants and leisure facilities for specific tourism use. This is consistent with the total tourism gross fixed capital formation in Table 8 of the TSA: RMF 2008 (World Travel & Tourism Council, Travel & Tourism-Economic Impact 2015, World, annual Report, pp.15).

¹ United Nations, 2008, Tourism Satellite Account: Recommended Methodological Framework, Table No. 8, pp. 66, Statistic Division, New York.

By analyzing FDI movement, fluctuation of rise and decline of this investment is clearly noticeable. Following an increase of 11.94% in 2011 and 17.82% in 2012, a sharp decrease by 10.34% was observed. Short recovery occurred in 2013 with a growth of 4.56% followed again by a decrease of 16.28% in 2014. According to the UN WIR 2015, this fall of investment was due to the instability of the global economy, political uncertainty and geopolitical risk as the most important factors of falling investment. The movement of investments in T & T points to a completely different situation. The analysis of investment in this industry (T & T) shows a steady and continuous growth of investment each year of the analyzed period. This growth is manifested by a continuous increase in investments starting from 2010 with 718,000 million US dollars to 740,000 million US dollars in 2011, 767,000 million US dollars in 2012, 784,000 million US dollars in 2013 to the maximum investment reached in 2014 at the amount of 814,000 million US dollars. Growth rates of investments in T & T point to the stable growth, as the negative growth rates in 2010 by 4.80% were followed by rapid growth of investment in this industry in 2011 by 3.06%.

This continued in 2012 with the growth rate of 3.65%, while a fall in the growth rate by 2.22% was observed in 2013 primarily due to higher investment growth at the global level than in T & T. However, the growth rate of investment in T & T in 2014 was 3.83%, while there was the already mentioned decline of investment on a global scale. This growing tendency observed in nominal amounts and growth rates shows that the tourism industry is more interesting for investment. This statement indicates and analyzes the share of tourism investment in the amount of investments globally. In 2010, the share of investments in T & T amounted to 54.06%, while a decline in the participation by 47.29% was observed in 2011, and it increased again in 2012 to 54.66%. The circular movement of participation measured by percentage fall in 2013 was 53.44%, but a sudden increase in participation by 66.27% was observed in 2014. Such a high share of investment in T & T in relation to the global amount of investment is the result of the TSA model application, which has already been mentioned and includes investments that are directly or indirectly connected to tourism activity on the respective schemes-pictures shown. If we take into account only investment in hotels and restaurants, they would be far less and unrealistic as the indicator takes into account just the direct connection with tourism and indirect connection with other services and industries. Therefore, the TSA model designed by the UN Statistic Division is used to show more realistically tourism impact by investing in this industry in total and the global investment flows.

Foreign direct investment in tourism

Foreign direct investment (FDI) is the factor of growth dynamics that should be principally used by developing countries i.e. developing economies. However, there are an insufficient number of empirical analyses in this field, keeping in mind the small number of empirical indicators showing the effects of FDI on tourism development in the global economy (UNCTAD, 2007). The main research problem is the fact that tourism is not considered to be the formal tourism industry in the classification of the national accounts. The complexity of tourism as industry and absence of a single methodology for recording FDI in tourism creates methodological problems, meaning that, for example, FDI in hotels and catering facilities can be found under "real estate", FDI in transport is presented as "transport, communications and warehousing", which generally imposes great issues in FDI quantification in tourism, especially concerning properties, revenues or employment. However, in recent times (WTO 2004, pp. 13-14) and with

the approval of the statistical commission of the United Nations (2000), new methodological framework has been recommended, which includes twelve separate national accounts related to tourism activities. This methodology includes companies that are directly incorporated into the production and consumption of tourism services and indirectly incorporated companies. Research conducted by the UNCTAD shows these twelve activities that can be assumed to be typical for tourism activities in both direct and indirect way through the TSA model (Tourism Satellite Account), wherein an indicator of FDI frequency in these activities is formed. The model presents the *most common* TSA frequencies: hotels and similar structures, restaurants and “second homes”, *occasional* FDI frequencies related to transport of travelers and rent of goods and services of railway transport, and *scarce* FDI frequencies in air traffic services, waterway transport, services that are in the function of traveler transport, tourist agencies, cultural services, sports and other recreational services. With respect to FDI forms, we can conclude that mergers and acquisitions are more common forms of FDI for entering foreign markets as it is more efficient and simple to buy the existing distribution network rather than start business from scratch, which is the characteristic of green field investments, and that is why they are not that widespread as mergers and acquisitions (M&A), (UNCTAD, 2010).

Foreign companies will invest in international markets if the following three terms are simultaneously met:

1) Ownership: the company has to have ownership as an advantage to be able to efficiently compete with the local companies;

2) Location: companies use the advantages of relocating to the foreign country (big land areas, cheap workforce, rich cultural heritage and a pleasant climate);

3) Internationalization: the company benefits because it directly controls the business activity rather than relying on the services of the local company;

This principle is otherwise known as the “OLI” principle (ownership, location, internationalization).

The analysis of the number and value of green field investments has been performed based on the facts shown in Table 7 and 8 (M&A), (UNCTAD, 2015).

Table 7 – Number of green field projects by industries, 2010-2014

	2010	2011	2012	2013	2014
Services	7 533	8 422	8 066	7 816	7 280
Electricity, gas and water	335	394	285	319	237
Construction	176	166	198	176	223
Trade	805	810	712	859	638
Hotels and restaurants	268	176	128	170	76
Transportation, warehousing and communications	954	1 019	996	1 140	963
Financial services	1 321	1 569	1 401	1 141	1 198
Business services	3 321	3 898	3 945	3 698	3 622
Education	102	113	127	71	68
Health and social services	64	82	60	39	71
Social and personal service industries	142	164	186	163	150
Other services	45	31	28	40	34

Source: UNCTAD, WIR 2015

Throughout the observed period, a total of 818 green field projects were implemented in the tourism industry with the largest number of projects implemented in 2010. A decrease in the number of these projects began this year, registering a fall from 268 in 2010 to 76 in 2014. The largest number of green field projects was implemented in the business service sector amounting to 18.484 projects. The tourism industry assumes the seventh place out of the eleven analyzed industries based on the number of implemented projects.

The value of the implemented green field projects can be seen in Table 8.

Table 8 – *Value of green field projects by industries, 2010-2014 (million USD)*

	2010	2011	2012	2013	2014
Services	331 654	355 508	318 019	402 615	340 773
Electricity, gas and water	67 990	90 258	65 543	93 638	65 054
Construction	36 793	36 426	57 389	38 510	63 257
Trade	29 400	25 899	19 426	26 606	23 808
Hotels and restaurants	26 684	18 568	13 801	20 815	8 955
Transportation, warehousing and communications	52 697	56 445	42 355	65 883	60 522
Financial services	43 278	48 577	44 437	36 253	36 073
Business services	62 587	67 346	58 908	112 268	72 659
Education	1 468	1 618	1 662	864	898
Health and social services	2 012	1 291	2 040	399	2 331
Social and personal service industries	6 237	6 309	10 912	6 183	6 611
Other services	2 510	2 773	1 546	1 197	605

Source: UNCTAD (2015)

The value of implemented green field projects in the observed period in the tourism industry has accounted for 88.821 million USD. The largest value of implemented projects was generated in the energy industry and amounted to 382.482 million USD. According to the value of implemented green field projects, the tourism industry is ranked seventh out of the total number of eleven analyzed industries.

Conclusion

Globalization process has brought about significant changes in all spheres of social, political and economic life. Due to the effects of globalization, certain changes can be observed in the world economy, primarily in liberalization of international trade, free movement of capital, workforce and goods, as well as provision of services, breaking down the barriers that were on the way of these changes. Tourism is among those industries that can be considered increasingly important for the global economy, in particular mass tourism. We can also conclude that the process of globalization, new technologies

and the Internet have triggered changes in the field of transport and communications and they exerted a considerable impact on the overall tourism development. This influence can be observed in the constant rise of tourist trips and tourists, as well as continuously rising revenues in the tourism industry with an incessant reduction of costs. It can be concluded that the globalization processes, which have altered the global economy, especially tourism-related industries, have greatly affected tourism development, principally mass tourism. The development and progress of tourism have also produced certain changes, which exert a strong impact on tourism-related industries. In that sense, the view of tourism as an outcome of economic development has evolved based on a great number of studies to a new view of tourism as a factor of economic development. Such conclusion is grounded on the fact that tourism cross - connects certain industries, so that their interdependence becomes greater, as well as their dependence on tourism development. The economic tourism activity has direct and indirect effects on the overall economic development, which is increasingly evident through time and thus the fact that tourism influences economic development and not vice versa can no longer be overlooked. The growth rates manifest direct and total effects of T & T on GDP and qualify tourism industry in those activities to grow faster than GDP growth at the global level. This shows that this industry may be the solution to combating adverse effects of the global economic crisis and it is increasingly becoming a factor of development of the world economy, exerting more significant impact on GDP growth. Nominal values measured by the earned value, and development of measured growth rates make this industry increasingly important and must be seriously considered in the future, especially concerning the tertiary sector of the economy, where we should not neglect the impact of these activities on the secondary industry sector as a significant factor in GDP growth. The positive impact of T & T employment is apparent, and it is measured both by the number of employees and employment growth rates. These indicators clearly point to the employment growth rates in T & T and the growing impact of employment on a global scale. The number of employees observed through a total impact of tourism (direct, indirect and induced) indicates that this industry has a more significant impact concerning this economic indicator. Constantly growing participation in the overall number of employees indicates that a positive trend should certainly continue in the future. Foreign direct investment is an important factor of tourism development dynamics, especially in developing countries. However, there are many methodological problems of quantifying the effects of FDI on tourism development in this field, and new models are being proposed to overcome such an issue. So far, the accepted models used to define the quantification of the effects of FDI on tourism development include: the TSI model and "Oli" model. When it comes to investments, measurement of the abovementioned models is unequivocally proven by concluding that the investments in T & T are constantly growing both in nominal terms and in terms of progress measured by growth rates. These indicators point to the strong impact of investments in T & T activities, particularly in the field of measuring the total impact of the TSA model, and thus, it can be concluded that this activity is not only increasingly important investment destination, but it has become an increasingly attractive investment destination for investors because it shows the current economic conditions, solid stability and capacity for further investment. According to the UNCTAD classification, there are eleven service industries in the statistical database. Tourism is ranked seventh by the number and value of green field projects.

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BOOK REVIEW “WISDOM AND SWORD” BY ILIJA KAJTEZ

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Ilija Kajtez

Wisdom and Sword

Volume II - Philosophers of the New Age on the
Riddles of War and Peace



Wisdom and Sword, Volume II, Philosophers of the New Age on the Riddles of War and Peace, by Ilija Kajtez, LAP LAMBERT Academic Publishing, Saarbrücken, Germany, 2017, 409 pages

The reconstruction of political pluralism in the territory of former Yugoslavia in the last decade of 20th century has brought a myriad of significant changes not only in the political sphere, but in the cultural, as well. With the nerve of an insightful observer, Miloš Knežević has noticed at that moment that two categories of educated people dedicated to work in two important institutions – the church and the military have come back to the public. Both institutions have several significant common characteristics: conservatism, focus on supreme goals, tendency towards the monolithic and uniformity, distinctive feeling of belonging to the institution expressed by its

employees, reputation of their profession... However, it is certain that the aforementioned institutions differ to a great extent in their social roles, and surely (not the least) in the incentives rendered to their members to take an active part in the public. Those differences explain to a certain extent the unequal contribution to spiritual culture and the effect in the cultural sphere of these two institutions and persons related to them. It would be precious if some young talented researcher dealt with the contribution of the military personnel to the national culture since the introduction of a multi-party system in our country.

The Media Centre „Odbrana“ has vastly contributed to opening of the military thought to the national cultural sphere by its diverse activities, particularly publishing. This publisher released in 2012 a very unusual book “Wisdom and Sword: Philosophers on the Secrets of War and Peace” by Ilija Kajtez. This book is already unusual because in the period of McDonaldisation of everything, including science, the author has prepared it for years, patiently arranging a mosaic dedicated to complex phenomena of war and peace

composed of dominant philosophical and social ideas and theories from the oldest forms of war conflicts to globalization of war. The book is also unusual because of its volume of 748 pages, bibliography including 463 books and 2,004 footnotes, which stand firmly against light-mindedness of modern times. It is also unusual because it glorifies Mind and Spirit when practical reason and body govern in a sovereign manner (not only masses). This book has become by its comprehensiveness and thoroughness unavoidable literature for everyone who would like to seriously deal with philosophy and sociology of war and peace in total or in certain segments. Therefore, the destiny of this book was to come out of the national framework and become available to wider philosophically oriented reading audience, which confirms the author's competence and nice style, and publishing and business wisdom of the Media Centre "Odbrana", as well, which has recognized, as the publisher, the potential of the book itself and has published it, without shortening and cutting, which would mostly damage philosophical totality and truth about peace and war (which is, according to many, the same).

The publishing company LAP LAMBERT Academic Publishing from Germany has become interested in the book „Wisdom and Sword“ by Ilija Kajtez. The author has prepared for the abovementioned company a special edition of the book in English in three volumes with certain updates and in cooperation with the talented translator Dragan Stanar. Two volumes have been published so far whereas the third one is to be published soon. The second volume was printed in 2017 and it deserves special attention because it encompasses the most important and the most vital ideas and theories of war and peace from the pen of a great number of significant philosophers and sociologists, from the Empiricism, Rationalism and Enlightenment to Sociological Organicism and Social Darwinism. It is particularly important that some of very controversial, yet unavoidable, theories of war have been dealt with in this volume.

The pages devoted to Carl von Clausewitz, the most significant European war philosopher (in a general's uniform) are precious because they bring up-to-date interpretation of one of the most influential, and the most controversial theories of war in the last 30 years. Theorists of new wars do not miss to make a departure from the concept of war by Clausewitz, but the resistance which this theory renders does not stop to fascinate scientists dedicated to research of war. Kajtez represents Clausewitz (and his theory, of course) in the manner, which was made famous by the historian in antiquity, who sought the historical judgement to be deprived of hatred and bias. He does not accept admirable, shocking theses, which would be quoted only because they are extravagant. He tries to ascertain and fathom what is really permanent and current in the universe of Clausewitz, what still makes him one of the great world teachers.

The next controversial giant of the social thought, including the one on war is Karl Marx, whose social thought has been in the focus of interest of social sciences, and also social reality, political, even economic practice for more than a century and a half. Once celebrated as a messiah of the new age, after the dissolution of the Soviet Union, the theory by Marx was often in Post-communism in the position of a culprit sentenced to public humiliation and the world had to be affected by great economic crisis, so that in Post-communism, under the influence of the same striving in the West, the theory by Marx is again regarded as a still possible source of inspiration. Kajtez rightfully emphasises the importance of the classical works of Marxism for comprehension of war as a so-

cial-historical phenomenon, and raising hope in the development of human potential of a man and ending the history of war in harmonic international cooperation of nations in meaningful international peace.

The last, eighth chapter of the second part of the English edition of „Wisdom and Sword“ is dedicated to sociologists, who have developed and expressed their considerations of society and social phenomena under the influence of biology, particularly Darwin's theory of evolution. To what extent this topic is still current can be best seen exactly in Serbia, where a petition for revision of studying the theory of evolution in schools and at faculties has been in the focus of interest not only of expert, but the widest audience. Kajtez realises that biologism in sociology has a significant achievement, which cannot be disputed and should not be missed – man is a natural being, inseparable from the nature, whose laws apply to them, as well. However, as the author realises, biologists stop where one should begin. They do not see specificity of social phenomena and they bring a man down to a layer, which cannot lead us to the truth about man, no matter how important that layer might be. As the author correctly notices, „man is a natural being, but a natural human being“ (p. 394). If we take man, like Đuro Šušnjić, as a being who searches for their rational and human possibilities, we can say that this book represents contribution to humanisation of man, a being whose the most profound layer is necessarily and irrevocably natural despite all technics, equipment and machines.

„Wisdom and Sword, Volume II, Philosophers of the New Age on the Riddles of War and Peace“ from the pen of Ilija Kajtez in the edition of German publisher LAP LAMBERT Academic Publishing is the book which gives excellent insight into the history of new century ideas and theories of war and peace with characteristic author's reviews on universal values, effect and actuality of each individual theory. At the same time, the book is a good guide to the most significant books from various spheres of social sciences, mainly political philosophy and political sociology through English originals and translation into English.

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Printed by Vojna štamparija – Beograd, Resavska 40b

CIP – Catalogisation in the publication:
National Library of Serbia, Belgrade