

THE AIRSPACE CONTROL OF THE REPUBLIC OF SERBIA AS A SECURITY CHALLENGE, RISK AND THREAT TO NATIONAL SECURITY

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Problems that occur when trying to control in an efficient and timely manner the airspace of the territory of the state surrounded by challenges and threats are becoming more frequent. They arise as a process that accompanies the development of modern lethal weapons for the attacks from the ground and airspace, by increasing the growth of pretensions of great states and state alliances, and the development and spread of economic globalism. One of the causes that can lead to the loss of sovereignty and territorial integrity in the airspace is the slow and long-lasting adoption of strategic documents, which define the control of this part of the state territory. These documents should be adapted to respond flexibly to the challenges and changes that threaten the state territory, with special emphasis on its airspace. Through the presentation and consideration of security challenges, risks and threats, this paper will point out the problems that arise in the procedures for the airspace control of the state, in modern times, which fluctuates very quickly in the military and economic sense. Examining the characteristics of the airspace of the Republic of Serbia, as part of its territory, through the terms of sovereignty and territorial integrity, national security strategy and defence strategy, the difficulties and problems in its defence and control will be considered.

Key words: airspace, control, security, challenge, threat, national security
Introduction

Introduction

The National Security Strategy, like in many countries, in the Republic of Serbia does not consider and does not develop in detail the options according to which threatening national security is increasingly manifested by threatening the

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airspace, both when it comes to the territorial integrity of the state – violating its borders and the issue of the state sovereignty – threatening its population, economy, health system, etc. Threats to the state, expressed through the airspace, as a part of its territory, in addition to the military dimension, increasingly have the non-military dimension, the dimension of cybercrime, international terrorism and illegal trade in weapons and narcotics. The claims are supported by the fact that an increasing number of such attacks, official or unofficial, are organised by high-tech weapons and equipment, for which, more often, we do not have the possibility of a hint or information that they have happened, are happening or will happen.

As an example of threatening the state, illegal and unreported transport of dangerous goods through its airspace, change of routes, entry and exit corridors of the planes of powerful airlines, in order to save time – money, on a particular flight, is often cited. This threatens the rest of the civil-military air traffic, regular planned activities in the airspace control performed by the Air Force and Air Defence units (hereinafter AF and AD) of that state, which leads to threatening its territorial integrity, and thus sovereignty, as well.

Considering the characteristics of the airspace of the Republic of Serbia, definitions and provisions of international treaties and agreements, it can be concluded how complex is the control of this part of the territory. Therefore, the state airspace should be considered as a special subsystem of national security, both in peace and at war. Only in this way the concrete challenges, risks and threats can be correctly defined in the adoption of documents important for the security and defence of the state.

Territorial integrity and state sovereignty

Today, the terms territorial integrity and state sovereignty are differently defined, depending on the circumstances in certain situations. Conflicts of opinions on the definitions of these two terms lead to the possibility of aggravating relations in the region. Classic definitions treat these terms as some of the main characteristics of the nation states.

Territorial integrity – positive and negative examples

Territorial integrity (lat. *integritas*), which represents the completeness, indivisibility, and also perfection, considered from the aspect of the state territory, implies its territorial integrity and indivisibility.¹ By defining the state airspace, in general, and also in a particular case of the airspace of the Republic of Serbia, it can be concluded that indivisibility, as one of the characteristics of territorial integrity, does not have strong support. These parts of the state territory are divided very much, both physically and according to their interests, and represent a possible and most probable range of destabilisation, impact on the state sovereignty, as well as the possibility of starting a war (e.g. the NATO aggression on various world sites).

¹ <https://sr.wikipedia.org/sr>

The examples of interpretations and solutions to the issue of territorial integrity, which are presented in this part of the paper, and which are well-known and often considered in the literature, actually speak of complexity, lack of definition and diverse arbitration in interpreting the concept of territorial integrity. Even recent history offers the insight into the causes and consequences of "playing" with the territories of the states that have problems with national minorities or majorities in certain parts of their or foreign territory and views on problem solving. In addition, the concept of territorial integrity is also considered through the airspace control, as a part of the state territory.

Even without analysing the past and considering the historical and cultural aspects of these problems, it can be concluded that the great powers decide when the right to self-determination is implemented, and when not. This right is considered to be arbitrarily implemented at the international scene.

On the other hand, the situation with threatening the state integrity, violating, taking away or illegally using its airspace, has some specifics. Namely, the intention for such an action will rarely be obvious and expected, precisely because of the physical definition of the territory of the state above it, as well as technical achievements and speed of access to the airspace of the "victim state". The airspace is still a part of the territory of the state in which, in the easiest and most frequent way, is possible to violate its security and threaten its territorial integrity.

The examples for such a claim can be found in the recent past. Namely, after the signing of the technical agreement between the state leadership and KFOR, after the fighting in Kosovo and Metohija, in 1999, the Air Safety Zone (hereinafter ASZ) was established, which was initially 25km long.² In this zone, according to the mentioned agreement, Serbia had to withdraw all the AF and AD forces, and not to threaten the zone directly or indirectly with these forces. At the same time, the NATO forces used ASZ, flew their aircraft through it and performed aerial photography deep into the territory of the Republic of Serbia. This zone has been reduced to 10km, and recently it has been completely relaxed for civilian traffic, but it is still under the control of the NATO member - the Republic of Hungary.

A little bit earlier, after the dissolution of the Socialist Federal Republic of Yugoslavia (hereinafter SFRY), the Drina River was strictly observed from great heights, by Lockheed-SR 71 aircraft, from altitudes over 18000m, to 30km in depth of the territory of the Republic of Serbia, in order to collect data on the movement of the Serbian Armed Forces, the movement of equipment, population and other elements, which directly threatened the territorial integrity of the state.

At the beginning and in the first quarter of 2019, sensors for the airspace control of the Republic of Serbia from the Serbian Armed Forces units, began to detect and monitor targets in the airspace, which did not have legal and timely announcements and reports of flights over the territory of our country. In order to prevent threatening of the territory and population, the capacities of the AF and AD units were engaged in detecting threats, which were determined to be caused by modern technological equipment for actions from a distance.

² 1999. *Military-Technical Agreement*. Kumanovo.

Recently, there has been the growing abuse of unmanned aerial vehicles, which can affect security at all three levels: tactical, operational and strategic. All of them are related to the airspace control, i.e. the implementation of laws, initiatives and agreements on the manner of using such equipment over the state and its territory.

State sovereignty – concept and types

Sovereignty (French *souveraineté*, from the Latin word *superanus*, supreme power, unlimited power, inviolability) represents the independence of the state in performing foreign and internal affairs. It implies freedom and independence from any external influences on the state supreme power. The close connection between these two concepts and their direct proportion can be followed through the genesis of relations between states and nations, through foreign and national political relations. It mainly refers to the manner of solving the issues of sovereignty and territorial integrity in some states, and certain examples can be used to explain the fragility in defining these two concepts. The term has never been explicitly defined at the international scene, so it is often interpreted in different ways.³

The sovereignty of the nation state has an internal and external aspect. *The internal aspect* of the sovereignty of the nation state is autonomy. The people as a nation are the author of the laws that are intended for them. Self-determination involves the nation's responsibility for its decisions. The nation as a source of sovereignty is a means of legitimising the power. *The external aspect* of the sovereignty of the nation state is independence. The external sovereignty consists of the capability of the nation state to defend its independence from the other nation states.⁴

The modern age is the age of globalisation, in which due to the liberalisation of exchange and movement and the development of transnational phenomena, everything that is national is questioned including sovereignty, particularly this external aspect of sovereignty. Most states depend, if not on attitudes and interests of a more powerful state or alliance, then at least on the resources and funds of great financial institutions. Furthermore, in today's world, the sovereign power is often embodied in one person (monarch, president, prime minister, etc.), who has a decisive influence on the decision-making, prescribing laws and other normative legal acts (often the term "sovereign" is also used for the person who acts as the head of the state).⁵

Bearing in mind that various alliances are established between the states in the world, it can be said that the concept of sovereignty in certain fields of social life is not fully sustainable, since there are some regulations that are binding for all member states. An example can be the European Union, where certain acts of its institutions are binding for all member states.

³ Subotić Strahinja, 2015. „Teritorijalni integritet i suverenitet nasuprot pravu na samoopredeljenje.“ *Institut za Evropske poslove*. 3.februar.

⁴ Čirić Jovana, 2008. „Suverenitet u savremeno doba.“ *Filozofija i društvo*, p. 3.

⁵ Šabotić Hajrudin, 2017. *Mogući oblici ugrožavanja vazdušnog prostora Republike Srbije*, Beograd, p. 8.

On the basis of the abovementioned views of the concept of sovereignty, it can be concluded that the existence of the state, therefore, implies its sovereignty. It is a characteristic of the state power that it is consciously and voluntarily assigned to an individual or a group of people in a certain territory. This group will rule over the population, united in order to protect, preserve and defend the territory against the enemy. That government is independent of external interference and free to regulate the social order within its territory.⁶

The exercise of the state sovereignty in the airspace of the state is closely linked with many international agreements on the use of the airspace. The third chapter of this paper will pay more attention to transport of passengers and goods, as well as the flights of the military aircraft of the state or alliance over the state that is not in an alliance.

Sovereignty and territorial integrity of the Republic of Serbia

The Republic of Serbia defines the preservation of sovereignty and territorial integrity through the Constitution of the Republic of Serbia,⁷ the National Security Strategy of the Republic of Serbia,⁸ the Defence Strategy of the Republic of Serbia⁹ and other acts and documents, through which it defines its national interests in more detail by considering challenges, risks and threats.

National interests, as a permanent need and aspiration of the Republic of Serbia and its citizens, are based on universal and national values that derive from the Constitution and the heritage of the Serbian people and all citizens living in Serbia. The main national values are: freedom, independence, peace, security, democracy, rule of law, social justice, human and minority rights and freedoms, equality and equality of citizens, tolerance, transparency, solidarity, patriotism and a healthy environment. The fulfilment of national interests protects the main national values.

The national interests of the Republic of Serbia are: preservation of sovereignty, independence and territorial integrity; preservation of internal stability and security; preservation of the existence and protection of the Serbian people wherever they live, as well as national minorities and their cultural, religious and historical identity; preservation of peace and stability in the region and the world; European integration and membership in the European Union; economic development and the overall prosperity and preservation of the environment and resources of the Republic of Serbia.¹⁰

Preservation of sovereignty, independence and territorial integrity is a condition for the survival of the Republic of Serbia as a state. The fulfilment of the national interest is based on the international law, cultural and historical heritage and main national values. The protection and fulfilment of the national interest ensures the

⁶ Ibid.

⁷ „Official Gazette of the RS“, No. 98, November 10, 2006.

⁸ „Official Gazette of the RS“, No. 94, December 27, 2019.

⁹ „Official Gazette of the RS“, No. 94, December 27, 2019.

¹⁰ National Security Strategy, „Official Gazette of the RS“, No. 94, December 27, 2019.

right to independently exercise legislative, executive and judicial power in the entire territory of the Republic of Serbia, and to preserve the integrity of its territory, security of population and continuity of economic activities, in accordance with the Constitution. The Republic of Serbia fulfils its aspirations within that interest in accordance with the international law, assumed and ratified international obligations. In this regard, it does not recognise the illegal separation of any part of its territory.¹¹

Preservation of internal stability and security is a condition for continuous development of all parts of the society, the rational use of available resources and meeting the needs of citizens. The fulfilment of this interest ensures the protection of the state, society, citizens and property from threatening, which leads to the improvement of the quality of life of citizens and better institutional development and efficiency. Moreover, it enables the improvement of economy, the establishment of trust and cooperation, and civic responsibility, which, in the end, results in the fact that the Republic of Serbia is a desirable place to live and work.¹²

On the basis of the abovementioned, through the National Security Strategy, in order to preserve sovereignty, independence and territorial integrity, the Republic of Serbia is fulfilling one of the goals that can be directly and indirectly related to the airspace control. The procurement of the new AD equipment and systems such as the Pantsir-S1, AN/TPS-70 radar, the overhaul of MiG-29 aircraft, the procurement of new helicopters and their implementation in the defence system, discourages opponents from the armed threats and lays the grounds for effective defence of the state territory. Through the defence policy, the preservation of the internal stability and security of the Republic of Serbia and its citizens, improvement of the security of the citizens, state and society, is partly achieved by the efficient airspace control of the Republic of Serbia. Preservation of peace and stability in the region and the world is reflected in the participation of the military and civilian capacities in multinational exercises with the AF and AD forces of the Western and Eastern Bloc.

An example can be the joint exercise with the AD forces of the Russian Federation, where firing from the newly procured system Pantsir-S1 was executed at the end of 2019. As for the joint activities with the NATO states, the "Shabla 2019" exercise can be mentioned, when the AF and AD units of the Serbian Armed Forces, which fired targets in the airspace, took part.

The airspace as a part of the state sovereignty and territorial integrity

Predrag Pejčić made a great contribution to the definition of the concept of the airspace sovereignty, stating that "views on the sovereignty in the airspace date earlier than the idea of a man to soar up into the air and made a revolutionary turn in science

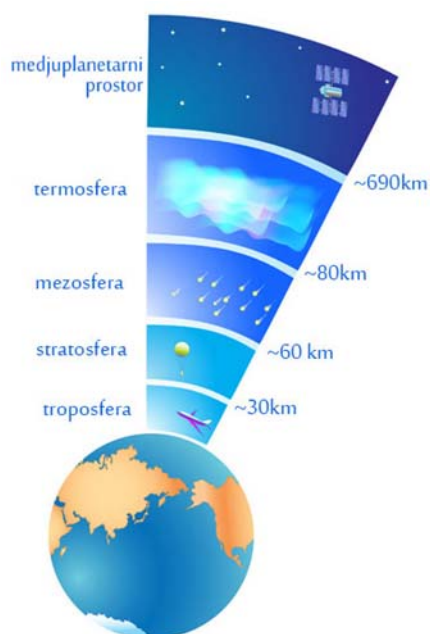
¹¹ Ibid.

¹² Ibid.

and technology, that is, brought people closer and contributed to developing and cultivating friendship and understanding between the nations and people in the world".¹³ This part of the paper will consider the definition of the state airspace, its characteristics and divisions, specifically related to the airspace of the Republic of Serbia.

Definition of airspace

According to physical definition, the airspace, as a geographical term, is the gaseous mantle of the Earth that extends from the Earth's surface in height.¹⁴ Its upper limit is not precisely defined because that was not even considered until human activities had begun in the space that is considered to be super air, that is, in the space.



The social definition determines the state airspace as the space in vertical and horizontal plane above its territory and water surface, which forms a part of its state territory and to which its sovereignty extends. The state airspace is inviolable. This statement has several shortcomings for a few reasons. From the point of view of docu-

¹³ Pejčić Predrag, 1980. „Nepovredivost vazdušnog prostora” VIZ.

¹⁴ Stanković Vitomir, 2012. „Kontrola i zaštita vazdušnog prostora Republike Srbije.” Vojnotehnički glasnik, oktobar.

ments that define the integrity and strategic foundations of the state, it can be accepted as original. In all other cases, it is noticeable that the inviolability of the state airspace is a very fragile category and that the mentioned concept of inviolability can be called into question at any time. Namely, every object in the airspace above the state can at any time become an object that has violated such a space, without the possibility of that threat being removed immediately. The upper limit of the state airspace is not precisely determined, but in practice it is limited to the capability of the sensor (radar) and the height at which it detects the target. The space in vertical plane is conditionally limited to about 30km from the land and sea surface, and in horizontal plane it extends over the entire state territory including the space over the enemy territory to the depth where that space can be effectively controlled.

As the potential battlefield, the airspace is subject to special rules of international law. In the context of operational and strategic considerations, the airspace represents the area above a certain state or battlefield, i.e. above the entire territory affected by war and represents the environment in which and through which the fighting of units takes place.

From the legal aspect, the state airspace is defined as the space above the land and the sea, which is an integral part of the territory over which the state exercises the sovereign power. Over the open sea, the airspace is free and not subject to the state sovereignty. In the last 50 years, a part of the atmosphere over the territory of a state, above 400km, has been massively exploited due to scientific research, the operation of telecommunications equipment and the equipment for recording the rest of the interplanetary space. Of course, this space is also used for setting up platforms for military operations, ballistic missiles, espionage, etc. Hence, one can have doubts over the claim that the airspace of a state is under its sovereignty because such a part of the territory is incomprehensible to it.

Characteristics and division of the airspace of the Republic of Serbia

The Republic of Serbia has defined its airspace in the Air Transport Law. In Article 4 of the Air Transport Law, the airspace of the Republic of Serbia is defined as "the area above the territory of the Republic of Serbia".¹⁵ The same Article of the Air Transport Law states that the use of the airspace of the Republic of Serbia is free for all aircraft that perform air traffic according to international acts, laws and other regulations. By defining the airspace in this way, the Republic of Serbia did not precisely determine its upper limit (height).

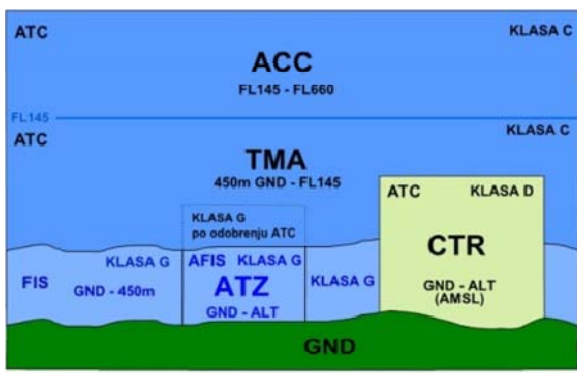
The airspace can be divided into controlled and uncontrolled one. The controlled airspace is the space of certain dimensions in which air traffic control services are provided in accordance with the airspace classification and it includes:

- Terminal Control Area – TMA,
- Control Zone – CTR,

¹⁵ Air Transport Law, „Official Gazette of the RS”, No. 73/2010, Belgrade, 2010.

- Control Area – CTA,
- Upper Control Area – UTA.

The uncontrolled airspace means the free flight space in which in-flight information service is provided and search and rescue operation is initiated. Depending on the level of air traffic security, types of flights and rules for the execution of those flights, both the controlled and uncontrolled airspace are divided into classes in accordance with Annex 11 document of the International Civil Aviation Organization (hereinafter ICAO¹⁶). According to this division, there are 7 classes of the airspace (A-G). Each ICAO member state has decided to implement classes according to its air traffic, geographical characteristics and technical equipment. ICAO classes C, D and G of the airspace are implemented in the Republic of Serbia¹⁷. At the international level, the airspace strategies are based on its harmonisation of the classification. The main idea is to make it easier for the airspace users to use it by harmonising its classes. Over time, the existing seven classes would be reduced to three categories of the airspace (iNtended, **K**nown, **U**n-known), and then two (**K**nown, **U**n-known). In cooperation with ICAO, we are working on prescribing the conditions for the use of these categories of the airspace.



After these divisions, it can be said that the airspace of the Republic of Serbia is precisely classified, and in its daily work SMATSA Lic (Serbia and Montenegro Air Traffic Services) provides air traffic control services at all altitudes. According to international standards, each state has the obligation to control and protect its airspace, which arises from membership in international organisations and acceptance of regulations related to international air traffic.

¹⁶ ICAO – International Civil Aviation Organization (Međunarodna organizacija za civilno vazduhoplovstvo).

¹⁷ Uredba o klasama vazdušnog prostora Republike Srbije i uslovima za njihovo korišćenje, „Službeni glasnik RS”, No. 106/2013.

One of the most important documents is the IACTA agreement (International Air Services Transit Agreement – International Air Transport Agreement), adopted at the Chicago Convention in 1944, which defines 9 main freedoms.

The first two rights in the airspace are binding for all signatories to the IACTA agreement.

The first freedom implies free flight over the territory of the country signatory to the agreement.¹⁸

The second freedom allows free technical landing due to aircraft maintenance, refuelling and similar activities, but without the right to transport passengers and goods. Although the first two freedoms are guaranteed to all signatories to the IACTA agreement, it should be noted that so far some of the greatest states in the world, such as Canada, China, Russia, Brazil and Indonesia, have not been among the signatories. The states that are not signatories to the IACTA agreement, solve the mentioned rights of flying over and landing in the territory of the other state by bilateral agreements. This means that the European airlines, when flying to the Far East, should have special permission from Russia to fly over the shortest Trans-Siberian route. Russia charges this overflight, which is the reason for frequent disagreements between this country and the European Union. The signatory countries to the IACTA agreement made the first two freedoms automatic by mutual consent, which is not the case with other freedoms in the airspace, which are decided in each individual case.¹⁹

The third and fourth freedom go together and form the basis of all regular and charter passenger and cargo lines. These two freedoms provide the possibility for airlines to fly from one country to the other, transporting passengers and goods according to a defined flight schedule. Since these freedoms are established by bilateral and multilateral agreements, they can also be restrictive, i.e. in a way that they provide these rights only to national airlines of the countries signatories to the IACTA agreement.²⁰

The fifth freedom in air traffic implies the right to perform traffic between two states, with commercial landing in the third state. This freedom belongs to the airline from Belarus, which is permitted to fly to Serbia, with the right to land in Budapest and transport passengers from this point of intermediate landing. The fifth freedom is very rare and is enjoyed by only a few countries in the world. Apart from the Belarusian airline, the same right was given by Italian authorities to the the Emirates airline, which can land and collect passengers in Milan on its flight from Dubai to New York. Hungary has granted the fifth freedom to Qatar Airways on the Doha-Budapest-Zagreb route. The fifth freedom is highly appreciated among airlines because it reduces the risk on less sought routes, as well as operating costs, all with a significant increase in inflow.²¹

¹⁸ 1944. „The convention on International Civil Aviation.” *Chicago Convention*. Chicago.

¹⁹ 1944. „The convention on International Civil Aviation.” *Chicago Convention*. Chicago.

²⁰ Ibid.

²¹ Ibid.

The sixth freedom can be interpreted as a variation of the fifth freedom. It allows a foreign airline to land in its state during the flight between two foreign destinations, where it can pick up passengers and goods.²²

The seventh freedom allows airline of a state to maintain an international airline route between the other two states. This is the most common and well-known freedom that is implemented in the airspace.²³

The eighth freedom also represents a variation of the fifth freedom. It provides an opportunity for airline to establish a route from its country with destination in the other country, but with the right to perform intermediate landing in it.²⁴

The ninth freedom is a variation of the seventh freedom. Airline from a state can fly in the national traffic of the other state without any restrictions, which is not so common, having in mind that foreign airlines thus exercise great rights. This freedom is enjoyed by a great number of low-cost airlines.²⁵

Security challenges in the airspace control of the state

The control and protection of the airspace sovereignty of the Republic of Serbia is the main and daily task of the AF and AD in peacetime. In order to consider all potential challenges, i.e. potential forms of threatening the security of the airspace of the Republic of Serbia in peace, an analysis of possible risks and threats to this space is conducted. The protection facilities against threatening from the airspace, individual possibilities for its control and protection and the proposal of the use of forces are also analysed.

The geostrategic position of the Republic of Serbia, from the aspect of the control and protection of the airspace sovereignty, is unfavourable, primarily due to the small depth of the territory and the high intensity of the air traffic. Having this in mind, the forces for the control and protection of the airspace sovereignty of the Republic of Serbia are faced with the detection, identification and reliable monitoring of possible equipment of threatening from the airspace in a timely manner.

The security environment of the Republic of Serbia, and thus the situation in the airspace of the Republic of Serbia, is currently stable, and the factor of instability can be the complex political and security situation in Bosnia and Herzegovina and North Macedonia, and the constant uncertainty in the territory of Kosovo and Metohija. The fact that Montenegro has joined the NATO, and that there is a possibility of leaving the joint airspace control system (SMATSA), as well as the opening of the lower layer of flights over Kosovo and Metohija, can also complicate the security situation of the airspace of the Republic of Serbia.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

The security of the airspace of the Republic of Serbia has recently been significantly affected by drones and unmanned aerial vehicles. Their use is regulated by the Rules for Unmanned Aircraft²⁶, which requires prior notice, i.e. the allocation of the airspace in which these aircraft will be used. Thus, one can gain insight into the activity of this type of flying. The problem are the so-called illegal users who do not announce flights and can certainly misuse this type of equipment. The AF and AD system for the control and protection of the airspace of the Republic of Serbia is not intended, and does not have technical equipment, which enables efficient control of the use of such aircraft. Therefore, in order to effectively oppose the abuse of drones, the participation of other structures is necessary, both the defence system (the Ministry of Interior, Military Intelligence Agency, Military Security Agency) and other civilian structures that regulate their flight.

In our region, there are areas in which it is either not completely defined who performs the protection of the airspace or the existing and declared forces are insufficient. There is no fully developed system for the control and protection of the airspace of Bosnia and Herzegovina (hereinafter B&H) and above Kosovo and Metohija (hereinafter KiM). It can be expected that international factors will use pressure to establish the control and protection of the airspace over this area, as well, which can have a broader political and diplomatic dimension of direct expansion of influence. Since Serbia has taken the status of a "military neutral" state, the fact that other countries in the region, except B&H and North Macedonia (soon joining the NATO), are the NATO members has to be taken seriously. Some of these countries control and protect the airspace sovereignty by their own forces (Hungary, Romania, Bulgaria and Croatia), while the planes of the NATO member countries control the airspace of Albania and Montenegro. All mentioned countries, in addition to national operations centres, send a picture of the situation in the airspace above their territory to the Combined Air Operations Centre in *Torrejón*, Spain.

In addition to the all mentioned, the NATO-led International peacekeeping forces helicopters' flying activities are carried out daily over the territory of KiM, whose task is to maintain order and peace, i.e. to maintain security in Kosovo and Metohija (hereinafter KFOR). Since the migrant crisis, KFOR has intensified reconnaissance activities from the airspace, especially in the area of the administrative line with the Republic of Serbia, mainly in order to control the illegal movement of migrants, and also to detect and monitor illegal activities of criminal and extremist groups. One of the regular flying activities in the airspace over the territory of KiM are the overflights of the NATO transport aviation for the needs of KFOR. Such flights are regularly reported during overflights following the approved routes through the airspace of the Republic of Serbia. In addition to these military flights, the overflights of commercial civil aircraft, then private aviation (e.g. for medical transport), as well as the aircraft rented for the purpose of transporting certain political delegations, are carried out every day in the airspace over the territory of KiM, along with landing and take-off at

²⁶ „Official Gazette of the RS”, No. 1, January 10, 2020.

the airport Priština. Such flights generally do not pose a threat to the airspace sovereignty of the Republic of Serbia. Commercial planes landing and taking off from the airport Priština are prohibited from flying over the territory of the Republic of Serbia. However, over the past year, flights that deviate from the corridors announced in the registration and flight announcements have been occasionally registered, and they are conducted over a part of the territory of the Republic of Serbia (for example, instead of leaving KiM and going to the airspace of North Macedonia, a plane flies directly to Vranje and then to the airspace of Bulgaria and the like). Such flights can pose a potential risk and, if registered, require the most urgent response of the on-duty units for the control and protection of the airspace sovereignty of the Republic of Serbia.

International terrorism can also threaten the security of the region in the coming period. Although the threat level is evaluated to be low, the security of the Republic of Serbia can be threatened by terrorist actions in and from the airspace by one of the following models: hijacking, suicide actions with the use of aircraft and dispersion of chemical and biological weapons from aircraft. Terrorists can hijack our or a foreign airliner and forcibly land it at one of the airports in the Republic of Serbia or abroad, demanding that certain political or other conditions be met, threatening to kill the hostages if their conditions are not met. Moreover, the hijacked plane can be directed to vital facilities on the ground, by forcing a pilot to do so or by taking control of the aircraft. Such actions could be carried out by nationalist or Islamist terrorist groups, whose members originate from the Republic of Serbia. However, due to the complexity of such an organisation, suicide actions with the use of aircraft are more likely to be organised and carried out by international terrorist organisations with the help and cooperation of local terrorist groups.

The Republic of Serbia is exposed to all mentioned and other risks due to its neutral position, strengthening of the Albanian factor and inability to control non-military threats in Kosovo and Metohija, strengthening of separatism and religious, primarily Islamic extremism. Therefore, there is a real possibility that these risks will also be manifested through the airspace of the Republic of Serbia.

Security risks in the airspace control

The main security risks, possible threats and forms of threatening the forces and equipment for the control and protection of the airspace, during the conduct of the operation of the control and protection of the airspace of the Republic of Serbia, are the following:

- threatening air traffic safety due to poor civil-military coordination (allocation of the airspace during the deployment of fighter aircraft for identification and interception);
- leakage of classified military data on the organisation and manner of the use of the AD systems (command, state and use of fighter aircraft and artillery and missile units for the AD operations, current capabilities of the AD systems, etc.);

- intensive electronic interference with flight monitoring and control systems (radar systems and landing flight control systems);
- threatening command and information systems (CIS) and command systems due to cyber attacks;
- failure of the system for announcing and reporting flights of civil and military aircraft (AFTN network)²⁷ and the system for controlling flights due to cyber attacks;
- intentional failure of target detection and tracking systems in the airspace (SAF and SMATSA radar positions), the AD systems and fighters in peacetime locations, and
- interruption of telecommunications with hijacked aircraft or emergency aircraft.

In modern times, information transfer and security of information transfer come to the fore, when it comes to the systems for the control and protection of the airspace and air traffic control ("ethernet" or other type of information networks). Technological development has enabled today a wider audience the access to modern technical telecommunications equipment, and also the equipment used to reconnoitre or interfere with telecommunications. In this regard, the occurrence of terrorist activities related to the effect on telecommunications and electronic systems, and thus on air traffic monitoring and control systems, is frequent. These forms of threats, where the main cause is possible access to communication technologies and terrorist organisations, represent a serious problem in the systems of automated data processing on the situation in the airspace. This is also due to the trend of exponential increase in the density of air traffic, and thus the dependence of a man on such systems.

Since potential security challenges, risks and threats from endangering the airspace security are constantly present, the ultimate desired state of the airspace security of the Republic of Serbia can only be achieved by preventive actions. Preventive forms of actions before the airspace security becomes threatened, from the point of view of the impact on the system of its security, are:

- top competence of each individual in the control and protection system;
- constant monitoring of the conditions in which the airspace control and protection operation is performed in peacetime;
- continuous analysis of potential challenges, risks and threats to the airspace security;
- preparation and constant development of documents regulating procedures in cases of the airspace violation and terrorist threats in and from that space;
- improvement of cooperation and coordination with all structures for the airspace control and protection operation;
- maintenance of the equipment used in the airspace control and protection in the most correct condition;
- implementation of all prescribed flight safety measures and use of combat systems in the AD system and

²⁷ Aeronautical Fixed Telecommunication Network (Aeronautička fiksna telekomunikaciona mreža).

- implementation of all security measures to prevent the leakage of classified military data and implementation of cryptographic data protection measures.

Preventive forms of actions after the airspace security becomes threatened, from the point of view of the impact on the system of its security, are:

- detailed analysis of all procedures during the airspace control and protection operation;

- comprehensive analysis of all procedures during the airspace protection and

- implementation of the lessons learned system in the organisation and conduct of the airspace control and protection operation.

All the mentioned preventive measures are only a precondition, and not a guarantee of the success of the airspace control and protection operation because every case of threatening its security is special, different and unrepeatable. There are many variables, which at a given moment and limited time for the reaction of the forces for the airspace control and protection operation may be unknown.

The countries in the region, with their systems for controlling the airspace sovereignty and territorial integrity, may at some point pose a threat to Serbian airspace and use it to threaten our national interests.

Objectives and tasks of airspace control

Many countries, through national security strategies, have not considered and analysed in detail the possibility of threatening the airspace from the aspect of endangering national security, except in terms of military threats from that space. It is possible to launch an attack exclusively from the airspace, with logistic assistance from the ground, with the development of the society and technology, as well as their mass use and availability to the broad masses (including terrorist organisations, which have respectable latest IT equipment). The airspace control in peacetime includes activities aimed at detecting, identifying and monitoring aircraft, coordination with air traffic control of neighbouring countries, providing information to aircraft during a flight, providing assistance to aircraft in emergency and initiating search and rescue operations.

In the armed conflicts, the dominance in the airspace provides significant military advantages, allowing individual forces greater freedom of action during the execution of assigned tasks, reducing their vulnerability to enemy action. The importance of the airspace, as one of the dimensions of warfare, which is becoming one of the most important in modern wars, is of strategic importance for each state and for preserving its sovereignty and integrity. Therefore, the airspace security in relation to its importance comes into the focus of interest of all those who take into account the national interests of the state, and also those who would like to threaten those interests.

The airspace control and protection system is a set of measures, actions and procedures for preserving the airspace sovereignty of the Republic of Serbia and includes monitoring, identification, procedures in case of its violation and terrorist threats, as well as civil-military coordination.

Monitoring of the airspace of the Republic of Serbia is a unique system that encompasses all civilian and military potential, and is performed in order to establish and maintain the required level of the airspace protection and to secure air traffic over the territory of the Republic of Serbia.²⁸

The identification of the aircraft in the airspace of the Republic of Serbia is performed in order to prevent its violation, and to ensure the safe conduct of air traffic. The identification of the aircraft is performed in a unique way (according to internationally prescribed standards), and on the basis of an agreement between the Ministry of Defence and the air navigation service provider authorised by the Government (Serbia and Montenegro Air Traffic Control SMATSA Llc).²⁹

The airspace violation is the entry of the foreign aircraft into the airspace of the Republic of Serbia, i.e. its exit from this space, contrary to the instructions of the air traffic control service provider, or the flight of the national or foreign aircraft contrary to the conditions specified in the approval of the competent authority or flight schedule.³⁰ The flight of foreign directed and undirected flying objects³¹ in that area without the permission of the Ministry of Defence is also considered the airspace violation.

The terrorist threat from the airspace of the Republic of Serbia is every threat, activity or illegal action that may endanger the aircraft, passengers and human and material resources of our country. The procedures for the actions of the competent authorities in the case of terrorist threats are prescribed by an act of the Government, at the proposal of the Ministry of Defence (Standard Operating Procedure of the Operations Centre of the AF and AD in the case of the terrorist threat from the airspace).

Civil-military coordination and communication system that take place for the protection of the airspace of the Republic of Serbia are regulated by special agreements concluded by the Ministry of Defence and aviation entities (Civil Aviation Directorate and the competent air navigation service provider - SMATSA). Civil-military coordination and information exchange between the Serbian Armed Forces and the air navigation service provider authorised by the Government on the situation in the airspace of the Republic of Serbia is conducted by the civil-military coordination unit established by the Ministry of Defence. It is the section for the airspace control and protection, which is a part of the AF and AD and is directly subordinated to the AF and AD Commander, and is physically located in SMATSA.

It can be concluded that the airspace control and protection system of the Republic of Serbia is extremely complex. It includes not only military systems for its control and protection, but also civilian potential. This is achieved through mutual coordination in reaching the airspace security over the territory of the Republic of Serbia, as well as the safety of air navigation of civil and military aircraft over our territory. The system is also determined by international agreements and regulations on air navigation.

²⁸ Air Transport Law of the Republic of Serbia, Article 21.

²⁹ Air Transport Law of the Republic of Serbia, Article 22.

³⁰ Air Transport Law of the Republic of Serbia, Article 23.

³¹ An unmanned device, which uses an engine for its propulsion and performs its flights in a temporarily separate part of the airspace.

Civil control of the airspace of the Republic of Serbia

The Civil Aviation Directorate of the Republic of Serbia is a public agency that performs the tasks of state administration entrusted to it by the Air Transport Law of the Republic of Serbia. The legal position of the Civil Aviation Directorate is defined by the Air Transport Law.³²

On the basis of the legal obligations of institutional and functional separation between the regulator and the air traffic service provider in the Republic of Serbia, the division of tasks and responsibilities in the traffic management system in the airspace has been done. Serbia and Montenegro Air Traffic Control SMATSA and the Civil Aviation Directorate of the Republic of Serbia have been established. Serbia and Montenegro Air Traffic Control (SMATSA) provides air traffic control services in the airspace with a total area of 145.556 km², which includes the airspace of the Republic of Serbia, Montenegro, a part of the airspace above the Adriatic Sea and still 55% of the upper airspace of Bosnia and Herzegovina above 10.000 metres.

The Directorate is the National Supervisory Authority of the Republic of Serbia in air navigation. It issues certificates of competence for the provision of air navigation services and controls whether the providers of air navigation services still meet the conditions for the provision of services.³³ It also enacts regulations and first-instance administrative acts, issues public identification documents, keeps the records, performs the audit of aviation entities, participates in the work of international aviation organisations and institutions and their working bodies and cooperates with competent authorities of other countries. In accordance with the law regulating air traffic, the Directorate performs activities related to the safety and security of air traffic, the regulation of the airspace, monitors and evaluates the requirements of international civil aviation organisations in order to be included in national regulations.

Military component and airspace control systems

The Air Transport Law of the Republic of Serbia imposes a legal obligation on the Ministry of Defence to regulate the airspace control and protection. The responsibilities of the Ministry of Defence in the joint civil-military air traffic management system for the needs of defence are regulated by Article 21 of the Law on Defence³⁴. According to doctrinal documents, through the definition of missions and tasks arising from missions, this task is performed by the AF and AD, which implements the

³² Air Transport Law, „Official Gazette of the RS” No. 73/10, 57/11, 93/12, 45/15, 66/15 – other law, 83/18 and 9/20.

³³ Air Transport Law, „Official Gazette of the RS” No. 73/10, 57/11, 93/12, 45/15, 66/15 – other law, 83/18 and 9/20.

³⁴ „Official Gazette of the RS”, No. 116 since December 11, 2007, 88 since October 28, 2009, 88 since October 28, 2009 – other law, 104 since December 16, 2009 – other law, 10 since January 29, 2015, 36 since May 10, 2018.

organisation and functioning of the permanently engaged forces for the control and protection of the airspace sovereignty of the Republic of Serbia.

During the war, the AF and AD executes the control and protection of the airspace sovereignty of the Republic of Serbia by all available forces and in coordination with other units of the Serbian Armed Forces. The ultimate goal is to achieve a different degree of the airspace control and protection. The airspace control can vary from local, in a certain area or a part of the zone, to the control of the entire airspace, which provides favourable conditions for conducting tasks on their own. In relation to the situation in the airspace, the following levels of its control and protection are possible:

- *unfavourable situation in the airspace*, which means that the AF and AD forces do not have sufficient capabilities to effectively interfere with the actions of the enemy AF;

- *dominance in the airspace*, which can be partial and complete. Partial dominance in the airspace includes dominance in a certain part of it or in a certain period when our forces can perform actions and counteractions without particularly restrictive influence on the enemy AF;

- *complete dominance in the airspace* includes dominance in an area of operation or in the entire territory of the Republic of Serbia during the conduct of an operation, when our forces have supremacy in the airspace and can perform actions without restrictions and influence of the enemy.

The airspace control is very complex because it is used simultaneously by military and civilian aircraft. Time exchange of information through interoperable means of telecommunications should be effectively coordinated and integrated in order to prevent conflicts in the airspace. The frequency of international air traffic over the territory of the Republic of Serbia is constantly increasing, so the airspace control is also an international obligation which, due to the growing threat of terrorist actions from such space, is gaining in importance.

Conclusion

The defence of the state airspace, as a part of its territorial integrity, is a great challenge, having in mind that it is difficult to achieve sovereignty in it. The development of the technologies of commercial and combat systems, international agreements and agreements on the use of the airspace, make this problem more complex.

According to the strategic documents of the Republic of Serbia, some of the main national values are the state sovereignty and territorial integrity. The part of the territory, which is located above the ground, extends to certain height and is limited by the possibilities of the state to reach it in any way: electronically (by observation) or physically (by aviation) and is implemented in the mentioned national values. Analysing the importance of this part of the state territory (especially the importance for the state's defence), it can be concluded that it is necessary to consider in detail the decision-making on its protection.

The airspace above the territory of the state is divided into zones and classes. Depending on whether it is the division according to the level of air traffic security,

type of flight, rules for the execution of those flights and the airspace control, the classification and responsibilities in relation to those classes have been defined.

The airspace of the Republic of Serbia is constantly exposed to possible dangers, risks and threats to security, which endangers the state sovereignty. Our airspace is largely protected from various forms of threatening. The fact that today civil aircraft, military planes and drones have better performance (high speeds, higher flight ceilings, reduced dimensions, reduced radar reflection, high flight autonomy, etc.) requires the consideration of the improvement of the airspace control and protection system. Therefore, the military component engaged in this strategic task should be in detail defined through the state documents. Through the National Security Strategy, the Defence Strategy and lower acts, it is necessary to determine the forces and funds for equipping the Armed Forces with modern systems and platforms, such as multirole combat aircraft, modern radars and missile systems for the long-range AD operations. In the last few years, we have witnessed the modernisation of weapons, as well as their testing and introduction into use by the Serbian Armed Forces.

The airspace control, since it is the weakest link in the chain of the defence of the state territory, has to be precise and decisive. From the aspect of the economy and the profit of the state, it has to be flexible and adaptable, due to the influence of great global airlines and countries that use our airspace to achieve their national interests. On the one hand, the pillar of the airspace control and preservation is the military component, and the other pillar are civilian structures. The state's security, preservation of sovereignty and territorial integrity is reflected in the cooperation between these two factors of its defence.

The Defence Strategy of the Republic of Serbia, through defence policy, expresses the view that efficient management of the defence system and timely detection and prevention of challenges, risks and threats has one of the main roles in protecting sovereignty, independence and territorial integrity. Much greater attention has to be paid to the airspace control when developing doctrinal documents, which derive from the objectives, values and interests of the National Security Strategy of the Republic of Serbia because challenges, risks and threats to the state from the domain of the airspace control can cause long-term and far-reaching consequences for the sovereignty and territorial integrity of Serbia.

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Summary

The National Security Strategy, both in many countries and in the Republic of Serbia, does not consider in detail and does not develop options according to which endangering national security is increasingly manifested by endangering the airspace, as well as on the territorial integrity of the state – its borders, as well as on the issue of state sovereignty – endangering its population, economy, health system and more.

As an example of endangering a state, illegal and unreported transportation of dangerous goods through its airspace, change of routes, entry and exit corridors of planes of powerful airlines, in order to save time – money, on a particular flight, is often cited.

Considering the characteristics of the airspace of the Republic of Serbia, definitions and determinants of international treaties and agreements, it can be concluded that there are many challenges in its control. For that reason, this part of the state territory must be considered as a special subsystem of national security, both in peace and in war. Only in this way can the specific challenges, risks and threats in the adoption of documents important for the security and defense of the state be properly identified.

The paper deals with the analysis of documents of national importance, such as the National Security Strategy, as initial acts for planning the defense of a state. The chapters define the concepts of sovereignty and territorial integrity, theoretically but also in the specific case of the Republic of Serbia. As a special unit of the territory, the airspace of the Republic of Serbia is defined and described with all its characteristics, challenges and threats that may be caused by its endangerment.

Finally, the importance of the implementation of airspace, as an integral part of the territory of each state, in the development of documents that are strategically important for defense and protection was pointed out. Documents, important for the functioning and survival of our state, still have a lot of space, which should be filled with "care" for airspace control, in the sense of even stronger deterrence from the possibility of violating the state's integrity and sovereignty. to surrounding countries and world powers.

Key words: Airspace, control, security, challenge, threat, national security

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