

SIGNIFICANCE AND PROSPECTS OF THE DEVELOPMENT OF AIR DEFENCE SYSTEM*

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The actualization of the importance of the air defence system capabilities in performing tasks of defence system, both in peace and in war, is the result of changed conditions of warfare in contemporary armed conflicts and other conflict situations. In contemporary armed conflicts, air and air defence forces realize strategic effects through their operations and have decisive influence on the outcome of armed conflicts. In peacetime, these forces are the main factor in diverting and eliminating potential asymmetric threats from the air space.

In addition to the introduction and conclusion, the paper consists of three more parts. The first part deals with a conceptual definition of air defence system. The second part gives an overview of the importance of defence system and the development of anti-missile, i.e. anti-cosmic defence system of NATO alliance and the Russian Federation. The third part describes prospects of the development of organizational structures and objectives of the development of air defence system of the Republic of Serbia.

Key words: Air defence system, anti-missile defence, anti-cosmic defence, armed conflicts

Introduction

The historical-comparative analysis of armed conflicts that took place at the end of the 20th century and at the beginning of the 21st century, unequivocally indicates the strategic significance of air and air defence operations. Modern aircraft and aviation ordnance, in the times of current technological development, have reached such a level that they play a decisive role in achieving the goal of combat operations [2]. Namely, not

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only do air and air defence operations, i.e. forces that carry out operations, influence the outcome of contemporary armed conflicts, but , at the same time, they also change the basic characteristics of armed conflicts, with particular emphasis on asymmetry and nonlinearity, which are new characteristics of contemporary armed conflicts. In these armed conflicts, it is particularly important to achieve, i.e. to maintain dominance in the air space during the first phase of air force and air defence operations (hereinafter: AF and AD). This is where duty forces of air defence system have the key role for the side that carries out air defence operation (hereinafter: AD).

It is also necessary to highlight that contemporary, asymmetric, security and terrorist threats often find their support in the attempt to conduct terrorist operations from the air space. These terrorist operations are interesting for potential subjects of terrorism because they are typical of being sudden, ephemeral and causing devastating consequences, which brings terror in a target group the terrorist attack is aimed at. An example of a way of conducting terrorist air operations and effects that these operations can cause is the terrorist attack that took place on 11 September 2001 in the United States. This has resulted in significant changes in security culture and new, enhanced measures that were taken at airports and in aircraft around the world, before, during and after the realisation of flight.

Taking into consideration the aforementioned, there have been some changes in how the place and role of air defence system is understood, as the bearer of the implementation of the air space control and protection.

Conceptual Definition of Air Defence System

Air defence is heritage of the civilization of the 20th century. It is the result of the development of science, technology and technological solutions for carrying out aviation operations [4]. In fact, as in some other cases, dialectical unity and struggle of opposites in civilization development have imposed a need, on the one hand, for continuous innovation of technological solutions in the field of military aviation, as well as tactics of the air force engagement, but on the other hand, for continual improvement of the organisation and functioning of air defence.

With the development of military thought, the standpoint of what air defence essentially presents has changed. In the period after the Second World War, when the expansion of the development of air and air defence forces took place, it was thought that air defence presented the component of combat operations. According to this point of view, air defence was placed in the same logical level with anti-armor combat, infantry operations and other activities of combat operations [1].

These viewpoints changed substantially at the end of 20th and at the beginning of 21st century. The qualitative shift in the importance of air defence is the result of rapid development of means for reconnaissance and operations from the air space. Nowadays, which of the warring parties will gain advantage in the initial period of the armed conflict (or in the armed conflict as a whole) depends largely on the readiness of air defence and success of their operations. It is certain that the side with insufficiently prepared and inefficient air defence in the initial period of the conflict will suffer a loss that could be decisive for the outcome of the conflict as a whole.

Bearing in mind the experience related to the use of aviation resources for achieving asymmetric threats, duty forces of air defence system have an important role, not only in the Armed Forces and defence system, but also in preserving the security of the country as a whole. Duty forces of air defence system are forces engaged in peace to continuously monitor and prevent violations of the air space, thereby realizing the tasks of: deterring from aggression by air, preventing surprises by aviation operations of potential enemies, as well as creating conditions for neutralizing asymmetric threats that had already taken place from the air space.

Applying the real definition, the conceptual definition of a terminological syntagm "air defence system" is determination of what is included in the first senior term (genus proximum) in relation to a term that is defined, as well as the specific difference (diferencia specific) which substantially separates air defence system from all other terms that could be found in the first senior term.

According to one definition, air defence system is a relatively autonomous subsystem of defence system, and is at the same time the organizational entity of Air Force and Air Defence, which includes a set of measures, activities in defensive operations of Air Force and Air Defence forces with the goal of protecting the air space, territory, groups of the Armed Forces and other defence forces, the most important civilian and military facilities, population and material resources of the country from reconnaissance and operations from the air space. The working definition of air defence system is also applicable, according to which it is a subsystem of defence system, and, at the same time, it is an organisational entity of Air Force and Air Defence, whose organization, structure, weapons and equipment are adapted for the implementation of the control and protection of the air space and facilities from all forms of threats to aviation in the territory of the Republic of Serbia, [4]. Accepting the fact that air defence system is the organizational system containing a number of elements that present its subsystems, using system access, it is defined as follows: air defence system is a system composed of a set of (composition) forces, trained by its subsystems, deployed on land and in the air space according to predetermined principles and prepared for the realization of control and protection of the air space and facilities from all forms of threats to aviation on the territory.

According to the criterion of their function, these are the following subsystems of air defence system: air surveillance and reporting, arms systems for air defence operations and air defence protection [3]. Air defence system, according to modern conceptions, also contains: command subsystem and subsystem of electronic countermeasures protection (unique to air defence protection). These subsystems realise their role and tasks through the training of the following forces: command forces, forces in charge of the air space control and forces in charge of anti-aircraft operations.¹

How is Air Defence System Understood by NATO

After the dissolution of the Warsaw Pact up to the terrorist attack that took place on 11 September 2001 in the United States, there has been stagnation in the development of NATO's air defence system. However, with the emergence of real asymmetric threats

¹ Subsystem of anti-aircraft and electronic countermeasures protection does not have special forces. The realisation of the role and tasks of this subsystem is the goal and duty of all forces of air defense, system, and other forces in the defence system.

from the air space to the security of countries - members of NATO, as well as with an increase of political, economic and military influence of regional powers (China, Russia, India) on global terms, air defence system and within it the development of anti-missile defence system (hereinafter: AMDS) has regained strategic significance again [4]. New momentum in the development of anti-missile defence was given in particular by the armed conflict in eastern Ukraine, which was partly the result of direct confrontation between NATO and the Russian Federation (hereinafter: Russia).

Initial alleged reasons for the establishment of anti-missile defence in Europe were threats from Iran and North Korea. Realistically speaking, current military assets of Iran are not at the level that may threaten Europe and they are far from being able to threaten the United States. Iranian missiles of the longest range threaten only Russia and Belarus, while it is obvious that in the case of attacking North Korea the flight of missiles across the air space of Europe is not possible (Figure 1).

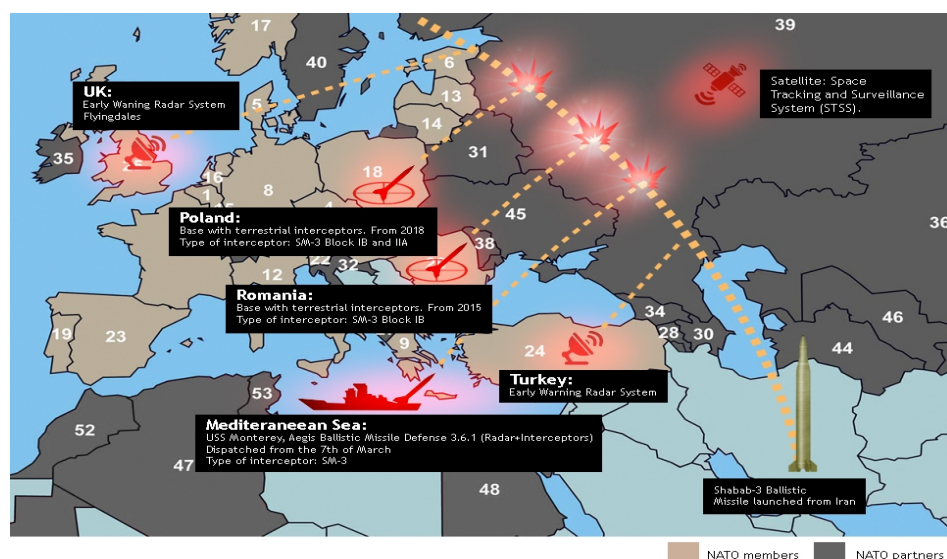


Figure 1 – Possible scenario of intercepting Iranian ballistic missiles with European anti-missile defence

Despite the opposition that mainly comes from Russia, the US and Europe are persistent in this project. After Poland and Romania, anti-missile defence was joined by Spain whose ports will be used by the naval component of anti-missile defence (the ships having installed radar means and missile systems for anti-aircraft operations (hereinafter: MS for AAO) and Bulgaria is expected to join.

In terms of organization and function, NATO anti-missile defence system consists of command force and forces in charge of anti-aircraft operations (fighters and missile systems for anti-aircraft operations of fourth and fifth generation of technological development).

Command force of anti-missile defence also realise the process of a unique command of combined forces of Air Force and Air Defence in Europe applying "Air Command

and Control System – ACCS” and “NATINEADS” command systems (“NATO Integrated Extended Air Defence System”), introduced in operational use in 2005. This system is intended to carry out reconnaissance of air targets, which could be a threat to the interests of the alliance through some operations from the air space, as well as to provide the command of other forces of anti-missile defence throughout the whole area of responsibility of the strategic command of NATO combined air force in Europe.

Special attention was paid to the subsystem of combat fighters, based on high-performance multi-purpose planes of the fourth and fifth generation. “The least attention”, in technical terms, is paid to the subsystem of missile units for anti-aircraft operations, principally through the implementation of modifications of the existing missile systems for anti-aircraft operations: Patriot and Hawk. This concept of the development of air defence system where the aviation units are given priority is typical of the countries with doctrine of the use of forces outside its own territory (from intervention to open aggressions).

Prospects of the development of forces that realise the control and protection of the sovereignty of the air space of the US and NATO members are: numerous reduction in manpower and technology, modernization of equipment and ordnance, the development of means of “STEALTH” technology, the development of universal planes and aircraft, the development of combat unmanned aircraft, the development of laser, energy and magnetic weapons, return into space (revival of the program Star Wars) and super mobility.

Conceptually, the control and protection of the air space from the attacks coming from the air - cosmic space are realised through a system of active and passive air defence, which is organized according to the following multi-layer principle: early detection - at great distances, using systems and radars located on land; interception at great distances - using combat fighter patrols and anti-missile systems (aviation in the air space and on aircraft carriers); interception - by fighter airplanes stationed at airports on land; interception - short range (direct defence of facilities using air defence system).

The development and installation of anti-missile defence in Europe implies the deployment of surveillance means and interceptors missiles “Standard Missile SM-3”. It is also planned to strengthen missile units armed with: missile system for anti-aircraft operations Patriot, Hawk and Roland. The project of the development of a new satellite system “Helios -2” has also been initiated, as well as of a satellite system “Horus” intended for day and night reconnaissance. The central zone of Air Defence (Germany, Benelux countries, northern regions of Austria and Switzerland) consists of two regions of Air Defence. The air space under the authority of the region and the sector is divided into front and rear area. In the central zone, air defence system is developed on the principle of protecting the entire territory with concentration of basic forces in the most important directions. The introduction of the “AWACS” system has significantly shifted the boundaries of combat fighters and missile systems for anti-aircraft operations.

The importance of the anti-missile defence for the US and NATO is best shown in the initiation of the project “Star Wars” which is based on “starting the experiments which will enable the installation of missile - interceptors in space”. American estimates are that the current anti-missile defence system in the distant future will not be able to protect the US territory from ballistic missile attacks, especially from those which have shared nuclear warheads that are self-guided towards targets. It is considered that such missiles can be successfully destroyed only immediately after the start or in the middle stage of flight and that it can only and most

effectively be done from the cosmos. Also, this project, as a part of the national cosmic American policy, envisages the transformation of the US Air Force into the “Air and Space Expeditionary Force” capable of “acting from every point of the planet and in the universe” as in the near future, besides everything else, they are supposed to have “thousands of stealth bombers and the whole constellation of satellites armed with laser and electromagnetic weapons” at their disposal. In addition to that, at the latest by 2025, there are plans related to the development of supersonic missile aircraft that would unerringly hit targets at distances up to 12,000 km and guided supersonic unmanned aircraft that would carry up to 500 kilograms of the most destructive explosives and fly at speeds incomprehensible to today’s technology.

How is Air Defence System Understood by the Russian Federation

Thanks to its enormous scientific and technological base, the Russian Federation has managed to build quantitatively and qualitatively large air defence system which can hardly be surpassed in the near future, when it comes to its characteristics and numbers. The main initiator of intensive development of Russian Air Defence is the doctrine of air-land battle. [4]

The concept of national security of the Russian Federation, after clashes in Ukraine, has developed a draft of “a new military doctrine”, which emphasizes that Russia intends to use nuclear weapons vigorously in order to protect its sovereignty and territory of its allies (it can also be the first one to use it); that it gives itself the right to use nuclear weapons in response to aggression, and that it gives up the principle of balancing the volume of its nuclear potential with all the countries and it orients to act as a deterrent to the strongest country within the coalition.

Strategic concepts of the use of anti-cosmic defence (hereinafter: ACD) are elaborated and specified through the following functions:

- passive defence involves the preparation and execution of a series of activities in order to provide active defence as well as to prevent and eliminate the consequences of the attacks from the air-cosmic space (the focus of passive defence is on physical determination);

- active defence that consists of three segments: air defence, anti-ballistic and anti-satellite defence is harmonized with the use of air forces in contemporary armed conflicts (Figure 2).

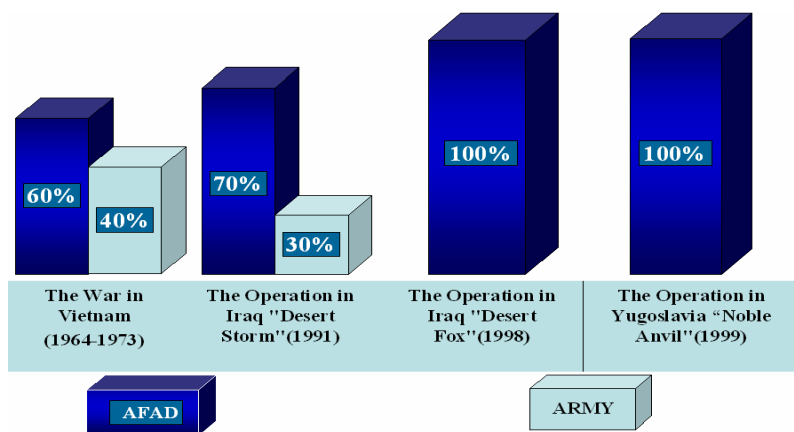


Figure 2 – *Graphic description of tendency for an increase in the influence of Air Force and Air Defence on achieving strategic aims in the armed conflict*

The network of radars for early detection, set at the borders of the Russian Federation, provides early detection of possible threats. In the operational work, there is a large number of satellites for detecting launched ballistic missiles. Air defence systems enable the destruction of warheads at very great distances, while the anti-satellite defence is being improved intensively.

Strategic aviation of the Russian Federation is developing in accordance with the protocol "START-2" and its application in the future is uncertain. The process of integrating all radar systems into a single automated radar system is in progress. Missile units for anti-aircraft defence are equipped with missile system for anti-aircraft operations C-300, whereas in several regiments of Air Defence, missile system for anti-aircraft operations FAVORIT has been introduced.

Russia is intensively developing and expanding anti-cosmic defence system and air defence on the territory of the former USSR. It has formed a unified regional system of air defence that is currently comprised of Russia, Belarus and Armenia.

On the territory of the Russian Federation, air defence system is integrated as well as the warning system of missile attack under a unified strategic command. Three zones of air defence are formed: Eastern European, Caucasian and Central-Asian and the coordination of activities of all regional systems is done as well as the drafting of rules of combat duty and exchange of information.

A new State program of arming is made (for the period up to 2020) and it envisions the modernization of strategic nuclear forces, the replacement of assets in space units, forming a single information space and moving on to an entirely new armament and military equipment (the contribution of new technique in the armed forces will be between 70% and 80%).

A new branch has been formed: Aerospace Defence (hereinafter: AD) which is a response to the European anti-missile defence and its function is to ensure safety from missile and air attacks. The formation of Aerospace Defence came from the need for unification of the management system and response forces into a unified whole.

Prospects of the Development of Air Defence System of the Republic of Serbia

An improvement in the state of air defence system of the Republic of Serbia is necessary to be realized through organizational changes, which would include: a change of the role, objectives and tasks of the air defence system of the Republic of Serbia; a change in the human factor (achieving fundamental and operational knowledge at the level necessary for transfer of knowledge in order to adopt new technologies); a change in the material-technical factor (to equip command force with modern command-information system; forces in charge of the air space control with modern radar-computer equipment; forces in charge of anti-aircraft operations with modern multipurpose combat aircraft and missile system for air defence); a transfer of technology on the basis of changes in technological solutions and necessary knowledge of human factors (in order to improve not only air defence system, but also the situation in the defence industry through acquiring knowledge about new technological solutions and the acceptance of modern technology); a change of the organizational structure.

Bearing in mind that the air defence system is an organizational system, it also achieves its own social role. In accordance with the tendencies of the development of air defence systems in the world, after organizational changes were made, the basic role of modeled future air defence system is to manage air traffic and regulate air traffic over the territory of the Republic of Serbia, as well as to control and protect the air space, territory and facilities of strategic importance on the territory of the Republic of Serbia from any form of threat to aviation. Basic tasks of modeled air defence system come from the social role of air defence system, [4]:

- deterring the enemy from endangering the security of the Republic of Serbia from air space;
- air traffic control over the territory of the Republic of Serbia, as well as over the territory of other countries in accordance with international and interstate agreements;
- air surveillance and reporting on the situation in the air space;
- protection and prevention of violations of the air space of the Republic of Serbia, as well as the air space of other countries in accordance with international and interstate agreements;
- protection of the territory, population, material goods and natural resources of the Republic of Serbia from aviation threats;
- taking anti-aircraft protection measures and procedures for the reduction and elimination of consequences of operations from the air space and
- participation in regional systems for keeping the air space security in accordance with international agreements.

The aim of the improvement in the organizational structures of air defence system of the Republic of Serbia is to optimize the implementation of tasks in order to conduct the activities of the air defence system (Figure 3). The changes in the organizational structure of the air defence system are significantly smaller than in the case of organizational structures of the command force and forces in charge of anti-aircraft operations.

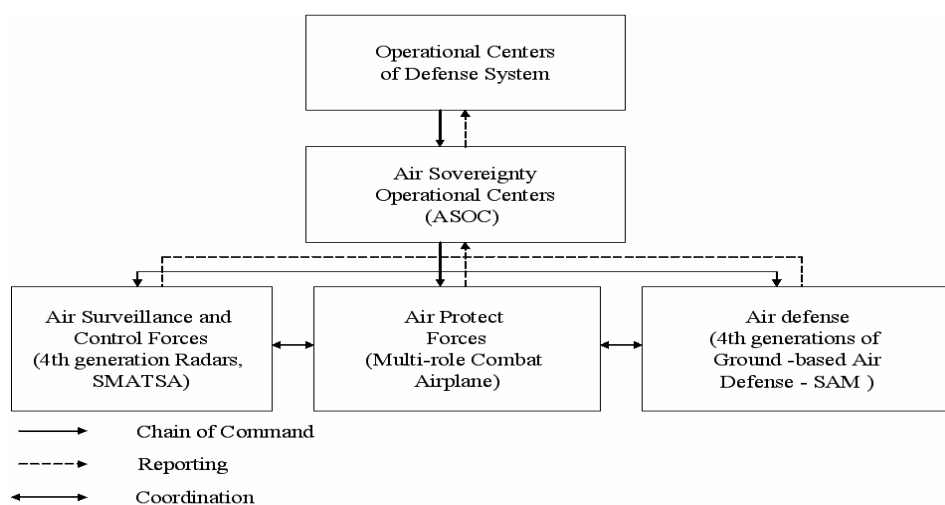


Figure 3 – Organizational structure of modeled air defence system of the Republic of Serbia

Objectives of the Development of the Air Defence System of the Republic of Serbia

The overall objective of the organizational changes in the air defence system of the Republic of Serbia is to improve its capabilities to ensure the rational use of resources and to achieve effects that are consistent with its social role, which is manifested through air traffic management, control and protection of the air space and territory against all forms of threats to aviation. Specific objectives come from the overall objective and their implementation is a prerequisite for the implementation of the overall objective. The specific objectives of the development of the air defence system are: improving effectiveness and efficiency, long-term financial sustainability, improving flexibility, shortening response time and ensuring interoperability.

Improving effectiveness and efficiency can't be easily determined. Bearing in mind the specific organisation and functioning of the air defence system, the acceptable definition of effectiveness is that it is the degree of capability to accomplish defined objectives and tasks at a given time and under concrete conditions of the operational environment [6]. The effectiveness is directly related to the function of the objective, i.e., achieving an optimal end state in accordance with the specified criteria.

Qualitative changes in the organizational system, such as the air defence system, increase the effectiveness based on a change of the role, objective and activities of the air defence system, while an improvement in the capability to perform the role of the air defence system also enhances effectiveness.

Changing the role and activities is determined by changes in the organisational structure, structural-functional integration of the Air Traffic Control of Serbia and Montenegro SMATSA Ltd. (hereinafter: Air Traffic Control) into the air defence system. Through the integration of air traffic control, modeled air defence system consolidates activities related to the air space control and air traffic management and thus its social, institutional role changes qualitatively in the security system of the Republic of Serbia.

Improving effectiveness, from the standpoint of enhancing air defence system capabilities, has been achieved by qualitative organizational changes in human and material-technical factor (equipping forces of the air defence system with technological solutions of defence industry of fourth generation) and optimization of functional structure of air defence system in accordance with functions and capabilities of modeled forces.

In the broadest sense, improved effectiveness of the modeled air defence system is the result of an increase in its capabilities to conduct the activities (surveillance of the air space; regulation of air traffic; prevention of air space violations, neutralizing, disabling or obstructing reconnaissance and operations of enemy aircraft from the air space, etc) which enables for the role and functions of the air defence system to be fulfilled.

The ratio between the efficiency and effectiveness of the air defence system can be seen in Figure 4 [6]. A significant contribution to understanding the difference between the concepts of organizational efficiency and effectiveness was given by Drucker's interpretation [6]. In his opinion, efficiency means "to do things right" and it is measured by the ratio between effects and costs (spent resources) required to achieve them, whereas effectiveness means "to do right things" and it is expressed by the degree of fulfilled objectives.

| | | EFFICIENCY | |
|---------------|------|---|--|
| | | Low | High |
| EFFECTIVENESS | High | <p>Low efficiency/ High effectiveness</p> <p>Objectives and tasks of air defence system are properly defined and implemented, but resources are not used well. Result: Air defence system fulfills its role, but the functioning is expensive.</p> | <p>High efficiency/ High effectiveness</p> <p>Objectives and tasks of air defence system are properly defined and implemented and resources are adequately used. Result: Air defence system fulfills its role and the price of functioning is acceptable.</p> |
| | Low | <p>Low efficiency/ Low effectiveness</p> <p>Objectives and tasks of air defence system are not properly defined or they are not implemented and resources are not used well. Result: Air defence system does not fulfill its role and maintenance is very expensive.</p> | <p>High efficiency/ Low effectiveness</p> <p>Objectives and tasks of air defence system are not properly defined or they are not implemented and resources are adequately used. Result: Air defence system does not fulfill its role. Resources are properly used, but the achieved effects are not adequate.</p> |

Figure 4 – The ratio between efficiency and effectiveness of air defence system

Taking into consideration that air defence system is specific as an organizational system, the working definition of efficiency that defines it as the coefficient of ratio between achieved results (achieved effects) and spent resources is acceptable [6].

Efficiency is determined by the state of all components of organizational systems. A change in the role, the advancement of knowledge and technology, and the improvement of organizational and functional structures of all forces, as well as air defence system as a whole, had a significant impact on the improvement of its organizational efficiency.

In the broadest sense, the improvement of organizational efficiency of the air defence system is in proportion to the improvement of capabilities in the implementation of activities that begin with detecting the aircraft - security threats in the air space and end with their neutralization or disabling of reconnaissance and activities from the air space. The more successful the implementation of these activities is, regardless of the conditions, the higher organizational efficiency of the air defence system is.

Long-term financial sustainability of the defence system is the possibility of executing constitutional role with available financial resources within a specified period of time that is not shorter than 20 years [5]. Long-term financial sustainability of air defence system is reflected in the ratio between costs generated by the use of resources of the air defence system and income from the reimbursement of the provision of the air navigation services (enabled by the air defence system).

The costs generated by the use of resources of air defence system may relate to the use of movable property and facilities (operational costs) and the acquisition of movable property and construction of facilities (investment costs), while income from the reimbursement of air navigation services provision is realized by air traffic control.

In order to determine the ratio between costs and income, the cost analysis of the air defence system and the projection of income from the reimbursement of long-term air navigation services provision are conducted. In the Ministry of Defence and the Serbian Armed Forces, software KOSTMOD 4.0 is used (hereinafter: software) for conducting cost analyses. Conducting cost analyses depends on the reliability of input data: the data on salaries and other personal income of members of the air defence system, the data on costs of utilization and occupancy of movable assets and facilities, the data on procurement prices of movable assets, etc. Based on the input data and the structure of the air defence system, the software enables the implementation of simulation for the projected period and creation of reports on the costs of the planned structure of air defence system. The income from the reimbursement of providing services is projected on the basis of historical data on actual income determining the trend and calculating the expected income in the projected period based on a specific trend.

A comparison of overall costs and projected income enables peak periods to be detected (periods when costs exceed income, figure 5), and the results of cost analysis show the reasons for exceeding the income. The results of cost analysis and income projection enable timely measures for the removal of disharmony to be taken (financing projected structures of the air defence system, correction of the structure of the air defence system, etc) i.e. long-term financial sustainability of the air defence system to be provided.

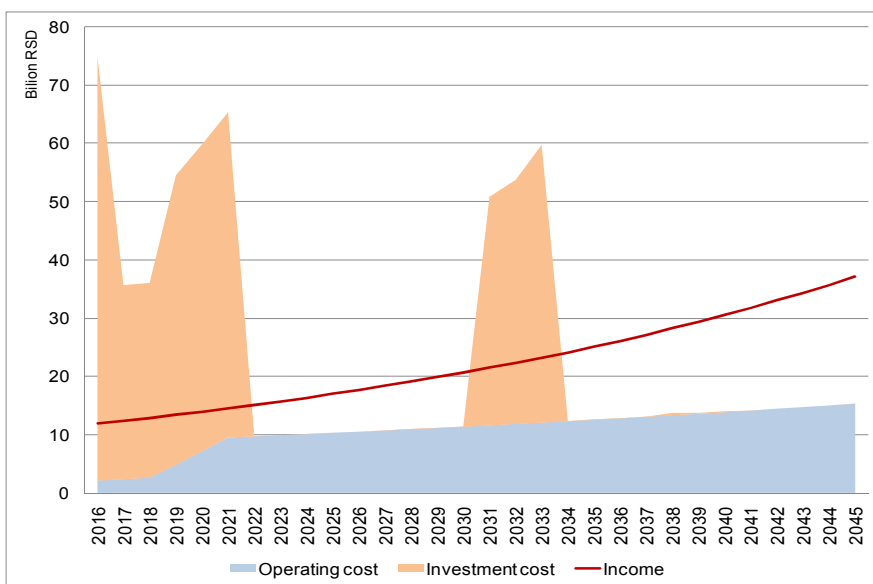


Figure 5 – A comparison of projected costs and income

Improving flexibility is the result of the fact that air defence system operates in extremely dynamic and changeable conditions of the operational environment. Flexibility is the capability of the air defence system of the Republic of Serbia to timely seize new opportunities for success, i.e. to avoid or minimize to the maximum the impact of unexpected adverse circumstances using as little resources as possible (in order to adapt). Improving flexibility is achieved through the improvement of internal and external flexibility by the modeled air defence system [6].

Improving external flexibility is achieved by increasing interoperability and adopting international obligations in air traffic management, control and protection of the air space (either independently or in coordination with the task force of the air defence in the region) in accordance with interstate and international agreements.

Through qualitative, proactive, organizational changes in technology of forces and organizational structure of the air defence system, the internal flexibility of the air defence system has been significantly improved.

Shortening response time is necessary due to the dynamic of conducted contemporary air and air defence operations. The term response time means the required time interval necessary for establishing the readiness of the air defence system forces to launch operations and implement tasks in the concrete conditions of the operational environment.

Shortening response time in the modeled air defence system can be achieved by: timely processing and distribution of data on the situation in the air space to interested users; situation analysis, operational decision-making and implementation of activities related to the process of executive command and fire control in real time; minimizing the response time (transferring into the highest level of preparedness) of forces in charge of anti-aircraft operations.

Equipping and arming with modern technological solutions, optimization of functional structures, as well as improvement of the process of education and training among forces of air defence system have created the conditions for achieving a specific goal of shortening response time of the modeled air defence system forces.

Ensuring interoperability is the result of the following tasks: air traffic management, control and protection of the air space of neighbouring countries, as well as participation in regional systems for keeping the air space security in accordance with international agreements. Interoperability means the capability of the air defence system to participate with relevant task forces of neighbouring countries in the realization of joint activities in accordance with international agreements. Interoperability is expressed through: compatibility, interchangeability and commonality [6].

Organizational changes and the establishment of the new air defence system have ensured the interoperability in the following areas: operational standardization – through development and establishment of standards related to future actions and procedures in air traffic management, control and protection of the air space of neighbouring countries and participation in regional systems for keeping the air space security in compliance with international agreements; material standardization – provided by the implementation of the characteristics of material technical factors among forces of the modeled air defence system, which is essentially fully compatible with the means and weapons systems in the region; administrative standardization – through development and establishment of standards related to terminology that is applied to the material plan, which is achieved through the acquisition of the necessary fundamental and operational knowledge by the human factor in the modeled air defence system [6].

Conclusion

The development of science and technology influences the changes in all spheres of social life. It has also left an undoubted impact on the defence system, as well as its organizational units including the air defence system. With the exponential development of civil aviation, the air defence system of the country has turned into a crucial component of everyday social life, whereas the way of performing tasks of the air space control and protection significantly affects the security of the country. In addition to that, the main role of the Air Force and the Air Defence in contemporary armed conflicts determines the critical importance of the air defence system in the initial stage of the armed conflict.

Based on the aforementioned, it can be concluded that it is necessary, in the future long-term period, to pay special attention to organizational changes in the air defence system, especially in the domain of material resources, i.e. weapons and equipment systems in accordance with modern air and air defence technological solutions. Such organizational changes need to be clearly defined with precise content and aim, as well as harmonized with security and economic needs and financial capacities of the country.

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