

GLOBAL COMMONS AND THEIR STRATEGIC SIGNIFICANCE FOR THE EUROPEAN UNION AND NATO

Colonel PhD. Eng. Angelov I.
National Military University „Vasil Levski“ – Veliko Tarnovo, Republic of Bulgaria
ivailoaa@abv.bg

Abstract: *The increasing connectivity in the world leads to the fact that the boundaries between internal and external security are blurring. Climate change and resource shortages combined with demographic growth and weak statehood can lead to conflict and instability around the world.*

At the same time, transatlantic relations are changing. The task of improving European security lies primarily at European level, but there should be resources available. European countries together with the United States are responsible for peace and security in the world. In this regard, the two EU and NATO alliances will have to continue to carry out joint actions but should also be able to act autonomously if necessary on the use of global goods.

Keywords: *THE OPEN OCEANS, THE ATMOSPHERE, THE ANTARCTIC, THE GLOBAL AIRSPACE, OUTER SPACE AND CYBER SPACE*

1. Introduction

The emergence of complex threats is the new challenge that is becoming increasingly relevant to the present as well as to NATO's and the EU's strategic vision of the future.

In a contemporary global geopolitical environment, no single state can assume that its security depends only on its neighbors. The security of one country is closely related to the security of everyone. In this sense, national and collective defense are not only secured by border guards on a particular territory but are heavily dependent on the ability to create security about global common goods.

The so-called "global commons" are resource domains that are outside the political scope of any country. In this respect, international law defines four global commons, namely: the open oceans, the atmosphere, the Antarctic, the global airspace, outer space and cyber space (United Nations environment program)¹.

These are domains that are not under the control of any country on their own, but are open to use by states, international organizations, and even by individuals. Since they are not under the sovereignty of any country, they can be considered as connecting links in the international system and their use and regulation is achieved through international treaties and agreements. As already noted, access to these environments is both a military and an economic necessity. Therefore, they are also directly related to military capabilities to protect the national and collective interests of the free movement of goods, people, communications and data on which each country, its economy and citizens depend.

2. The use of global commons

Since the end of the Cold War and the dominant economic and political tendency for integration in Europe, the following challenges are on the agenda: unstable world; confrontation, rivalry and crises in different regions of the world; the concept of the balance of power is applied by some of the major developing countries; the principles of democracy and the rule of law are abstract for some countries, while others use them to legitimize their undemocratic goals.

Regarding these challenges and the complex nature of security and defense, a strategic vision, a flexible and pragmatic approach and resource security are needed to ensure the prosperity of states and the security of their citizens. Part of this strategic vision should be the so-called "global commons." The "global commons," along with global warming, the development of technology, the interdependence of the global economy, the increase in consumption and, respectively, competition for natural and energy resources, migration, pandemics and security challenges, is increasingly showing the vulnerability of states.

Marine, airspace, space and cyberspace are closely related, but each of them has distinctive features and should therefore be

considered both together and separately individually in order to obtain a complex picture. Most NATO and EU members have open, global economies that are heavily dependent on free access to these global common goods.

Regardless of the nature of the environment, in order to reach agreement on their international regulation, it is important that the countries are historically governed by the principle of the common heritage of the peoples, such as the doctrines of open access to the seas and the airspace, for example. Regardless of attempts by governments and individuals to create rights or other forms of ownership, global common goods remain an exception in international law. An example of this is the Montreux Convention² on the status of the Bosphorus and Dardanelles as free internationally accessible, even though they are on the territory of Turkey.

The same applies to the Suez and Panama canals. However, with regard to international legislation on space and cyberspace, it is still very scarce.

In a globalizing world, NATO and the EU face the challenges of security in the functioning of the global economic system. To create capabilities to act globally, in its Strategic Concept from 2010, NATO notes: „All countries are increasingly relying on the vital communication, transit and transit routes on which international trade, energy security and prosperity depend. Greater efforts by the international community are needed to ensure the sustainability of these lines against attack or interruption. Some NATO Member States will depend more on external energy suppliers and, in some cases, on energy supply and networks from outside sources to meet their energy needs. With the increase in the share of world consumption transported through the globe, energy supplies are at increasing risk of interruption.“³

It is important to note that, despite the obvious justice of the ideas of peace and security in the use of global common goods, it can not be claimed that they are universally accepted by all players on the international scene, and especially by the global and regional terrorist networks, organized crime groups for smuggling people, drugs, weapons. Many nations have not yet researched and defined their interest in the free access to this global resource. The situation is aggravated by the fact of global warming, which has a serious impact on the state of the seas and oceans, respectively fishing in international waters and the extraction of natural and energy resources leading to environmental problems.

The strategy paper, "Maintaining Global Leadership of the United States: Priorities for the 21st Century" serving as a guide for the future development of US military forces, states that: „Global security and prosperity are heavily dependent on the free movement of goods by air and sea while at the same time observing non-compliant norms and posing potential threats to global common goods by state and non-state actors who also have capabilities and intentions for cyber-spyware and attacks, and whose actions can have serious consequences on both US military operations and the

country as a whole. In this regard, the US aims to make global efforts with capable allies and partners to provide access to global common goods by strengthening international norms and by maintaining adequate and interoperable military capabilities"⁴.

Over the last few decades, the US military has been having a technological and resource advantage that gives the opportunity to access global goods⁵. In recent years, the situation has changed, the benefits of the United States have diminished, their positioning is different and reflected in their foreign policy. Concentration of power is distributed in a multipolar world where countries like China, Russia, India, Brazil and others also interfere with the management of global common goods. For these reasons, the US is also initiating the process of assessing NATO's role, missions and tasks in the future on these issues.

By addressing the four global commons individually and defining the challenges, threats and recommendations for free access to them, the role and responsibilities of NATO and the EU can be more precisely defined in the context and the need to change the European Security Strategy, view of new realities.

3. Use of global sea spaces

Surprisingly to military strategists at the beginning of the 21st century have increased the threats and real attacks of piracy in the world ocean. There is an old challenge for commercial and passenger sea transport. This requires the EU and NATO to launch and conduct counter-piracy operations off the coast of Somalia, including countries such as Russia, China, India and others.

The development and deployment of military technology to hinder or end the access to the sea in a large number of countries places a dilemma on either NATO or EU leaders to increase their naval capabilities or to resign to the access restrictions that will inevitably be imposed by hostile states.

The ability of NATO and the EU to engage in global ocean security is the only guarantee that the seas and oceans will remain open. The proliferation of modern anti-missile wing missiles and precision-controlled weapons on silent underwater boats, for example, enables countries with small naval forces to cause serious problems. An example of this is the strong development of Iran's naval capabilities. There are also naval capabilities in countries such as China, India, Russia, Japan, South Korea and others, which is also creating new potential sea conflicts.

The NATO and EU naval strategies underline that it is unrealistic to assume that future peacekeeping operations can be carried out successfully without a significant military-maritime dimension. Given the nature of the global economy, it is likely that the challenges of protecting the interests and security of Member States in remote maritime regions outside the Euro-Atlantic area will directly affect the strategic interests of the two unions.

Considering the fact that 80% of the world's population lives in regions up to 60 miles from sea and ocean shores, the NATO and EU naval forces are also a successful tool for providing humanitarian aid to natural disasters. Examples include the Navy's involvement in: assisting the United States to deal with the effects of Hurricane Katrina in 2005, the tsunami waves in Indonesia in 2004; and Japan 2011, as well as the 2010 earthquake in Haiti.

The Alliance's strategic concept and the new naval plan focus on a strategy that goes beyond nuclear deterrence, in which nuclear power plays a key role. An example is NATO's Operation in the Indian Ocean against the Somali Pirates, the "Ocean Shield", the EU operation in the same area of Atalanta and NATO's Operation in the Mediterranean Sea "Active Force". These operations are increasingly involving partner countries.

The usability of the world's maritime space does not depend solely on the capabilities of warships and ports. For the effective

protection of marine areas, NATO and the EU are developing and creating complex systems for maritime surveillance both on shore, underwater and satellite based. The exchange of information between member states, between military and commercial vessels and organizations is important, norther to overcome the challenges and eliminate threats. NATO relies on its naval forces for both rapid and long-term deployment, and for presence in the world's maritime spaces. By combining and managing different naval forces, NATO is capable of deploying a naval power without resistance in these spaces. Therefore, for now, loss of access can be hypothetical. However, the rapid development and distribution of new missile systems, seagoing mines, submarines allowing hostile countries to hinder free access to the world's maritime spaces should not be underestimated.

NATO's new naval strategy includes four priority roles of the Navy in maritime spaces:

- Defensive and collective defense;
- Crisis Management;
- Cooperative security through dialogue, partnership and cooperation;
- Naval security⁶.

These are principles reflecting the role and strength of NATO as well as its approach to the world's maritime areas, where a large number of populations, strategically important raw materials and energy resources, maritime roads, streams and canals are of the utmost importance. The new strategic context requires a thorough reassessment of the role and contribution of the Alliance's naval force to protect its interests over the next 10 years. The naval forces play an important role both for the conduct of joint operations of a different nature and for purely naval operations.

As a military-political alliance with a long naval history, NATO should play an important role in free access to the world's maritime spaces. Part of the NATO member states are some of the oldest nations with traditions in maritime shipping. In this regard, NATO should continue to contribute to the practical implementation of the 1982 United Nations Convention on the Law of the Sea Area. Despite its weaknesses, this convention plays a stabilizing role as an international law giving free access to the seas and oceans of all countries.

4. Using the Arctic

Four of the five countries that have territories claiming to acquire parts in the Arctic region - Canada, the United States, Norway and Denmark - are members of NATO. The fifth is Russia, which has established a special partnership with NATO since 2002. This, in turn, would be an additional opportunity for NATO to help solve existing claims by providing a forum for discussing the interests and concerns about the future of the North Pole.

The growing need for resources reduces opportunities for cooperation while increasing both competition and the access of new competitors to them. Asian, European and North American north-continental shelves are becoming more desirable for access due to changes due to global warming and the rising value of mineral resources.

The situation in the Arctic reveals the link between climate change, resource shortage, technology development and NATO security.

In the context of the need to modernize the European Security Strategy, account should be taken of the fact that the North Pole is a potential conflict zone that can be neutralized through the principles of cooperation, joint resolution of problems and respect for international law.

5. *Airspace use*

In the sphere of the air, NATO and the EU have world domination, a situation that has not changed since the end of the Cold War. This superiority is based on strong civilian and military cooperation, coordinated use of state-of-the-art technology and precision-controlled weapons. At the same time, asymmetric threats allow non-state actors to disregard this superiority. These can occur both during military operations and commercial flights.

In recent years, the EU has been stepping up its Open Skies Initiative, based on the so-called "Functional Air Blocks". These blocks divide European Airspace into functional sectors according to Union operational requirements and not national ones. The aim is to rationalize and integrate airspace, to improve air control and safety, and to eliminate inefficiency⁷.

In the near and medium term, there are at least three challenges for NATO and the EU to access international airspace:

- The continued proliferation of "land-air" missiles with a long range of defeat and ultra-modern fourth-generation air-to-air missiles;
- The continued disruption of the aviation and air defense command and control system (AOS) through space and cyber attacks has yet to exert an increasing impact on civilian and military air operations;
- Increased impact and easy access to unmanned airborne systems and systems fundamentally alter the nature of air operations and gradually reduce the benefits of NATO.

Decreased military budgets in the Member States are increasingly affecting both the technological level and the size of the air operations capabilities. For this, the Intelligent Defense Initiative of NATO, also includes aviation, anti-aircraft and anti-missile capabilities⁸.

In this regards, it is essential to continue the modernization of the command and management system covering all Member States. The modernization of the air defense system and the development of the missile defense system is NATO's guarantor of keeping the countries with a hostile policy towards the Alliance.

Access to common airspace is of utmost importance for NATO's and the EU's ability to achieve their ambition level and to be able to secure their citizens. The better the Allies co-ordinate their efforts to control and manage air traffic, the better they will also provide access to international airspace. The important question is to what extent NATO can and should help Member States for this coordination and how to ensure air traffic security in international airspace.

The lessons of the recent crises, conflicts and wars, the proliferation of missile weapons and the realities of limited military budgets force the air force to abandon the development of small-range weapons and to focus on those with a long range of action and a long time to stay in the air.

But despite all the challenges, terrorism remains the main threat to the use of airspace.

This in turn implies strengthening intelligence, surveillance, and understanding capabilities that are more dependent on access to space and cyberspace. The violation of the management of NATO air defense and air defense systems through impact in these areas would have a strong negative effect on the possibilities of using airspace.

6. *Use of space*

There are currently more than 18,000 space objects in space, including about 1300 satellites, operated by around 40 countries. All of them continuously transmit information and data for the

needs of telecommunications, meteorological imagery, surveillance, global positioning, and defense and security needs.

Unlike international regulations on maritime and airspace, no part of space is under the sovereignty of any country. Provided access and use of space are regulated in the so-called Outer Space Treaty (1967) and its subsequent agreements, which serve as a legal structure establishing space as a global common good and defining the right of States to access and use space for peaceful purposes⁹.

In order to cope with the increased technological capabilities of some countries to influence NATO-EU-based systems and NATO-based systems, it is necessary to invest in the development and deployment of effective remedies. It should be noted that satellites have a huge share in providing information exchange, land-based management and observing the atmosphere with a huge economic contribution. Military Command and Governance, Precision Weapons Management Systems, Missile Management, Early Warning Systems and the Movement of Military Forces are highly dependent on space-based systems¹⁰.

The current information war differs in that it can target information systems controlling military operations and civilian activities. Entering military computers or breaking down the systems that control bank transfers, air traffic control, and nuclear power plants could cause huge damage. Technological innovations lead to asymmetries. The problem for advanced countries is that they have far more objects vulnerable to similar attacks than their less developed enemies¹¹.

That is why, from a military point of view, NATO is giving priority to the cosmos. There are at least five areas of concern and NATO's challenges for space:

- Assessment, identification and disclosure of NATO's needs in space;
- Planning and training in case of refusal of access and degraded operations;
- Improving information on the situation in space and information exchange protocols;
- Development of a coordinated NATO policy for the use of national funds in space;
- Preparation of space experts and establishment of NATO space command.

Similar to defensive capability planning for other areas, it is important for NATO to develop and analyze various scenarios of discarded or difficult access to space in order to develop requirements in strategic and operational phases. Only in this way it will realistically determine the critical situations and plan their reception. It is also important to take measures to protect ground-based systems for the management of space systems and devices, both from physical attacks of destruction and from cyber attacks to disrupt the management by them.

The NATO-deployed space systems and the EU-built systems require enhanced cooperation. France has set up a system for improving the EU-wide information on space. Germany, the Netherlands and Spain intend to build several space observation centers. In parallel, private commercial organizations are working to improve the surveillance of their systems and devices.

The growing problems require NATO and the EU to develop and implement a coordinated policy to ensure free access to space. The security of space can be sustained by attracting all the parties involved, the business and the military in the course of its peaceful use.

7. *Using cyber space*

Compared to the other global domains, cyberspace is not a natural resource, it is a human environment based on the development of information and communication technologies.

In the era of globalization for which information technology plays a key role, the created cyber space should also remain open for use by people, governments, businesses and all other public systems. The uniqueness of this space is due to the fact that it in itself does not occupy a particular physical environment as the other three global common goods. The very notion of "cyber space" appeared in 1982 when access to this new environment began to embody the modern way of life. There is no universally accepted definition for cyberspace. In a broader sense, this environment includes the communication and information infrastructure that allows digital data to be processed, stored, transmitted and depicted for the needs of the Internet and global information networks¹². The Internet is essentially an international network of services that allows the exchange of information between billions of users. Since its inception, the network does not provide for operational control of consumers.

For military and civil needs, the network is vital. Without it, it is impossible to manage the global banking environment, e-commerce, demand for travel with all modes of transport and many other purely economic activities. Without access to cyberspace, the global economy is facing a collapse. From a military point of view, one of the complex features of this space is that most of it (over 90%) is occupied by private networks that do not depend on governments.

From 2003 to 2009 Internet usage increased by 290%. Now over 2 billion, more than a quarter of the world's population have access to the network. The potential for subscriber growth is enormous. The content of the information is privately owned and subject to national and international privacy law²³.

The protection of the information infrastructure is a priority of NATO, the EU and the member states. For a short historical period, national and Union policies, cyber defense strategies and plans have already been developed. Regardless of the security measures undertaken and implemented, the number of attacks against information systems is increasing annually. Although the methods and tools are being improved, hackers remain invisible, putting a negative effect on both the economy and the security. In addition to anonymous hackers, there is also evidence that state-level capabilities are being created in individual countries to attack the cyber space of potential enemies. Incorporating cyberspace as a potential military combat environment requires that its protection be given high priority.

At this stage, it remains the challenge of creating a sector, an international law for the protection of cyberspace. That is why joint alliances continue to be the most effective response to this challenge. Cyber space is a reality in which national interests - military, diplomatic, economic and social - are vulnerable to attacks and are at risk.

As integration structures whose member states are among the most advanced in the use of cyberspace, the EU and NATO are also some of the most vulnerable units to cyber-attacks. In this regard, they should take active steps to prioritize their Armed Forces for action in a complex cyber environment. Planning, education and training can only be a result of good policy and collaboration. Progress in these areas should be constant and at high speed to follow the changes in the cyber environment. Requiring NATO's concept of cyber defense is the so-called "Deep Defense"²⁵. Such a strategy should cover all levels of cyberspace, international organizations such as NATO, the EU, the United Nations, the states and the private sector.

NATO and the EU should step up their efforts to respond to the dangers of cyber attacks by protecting their communication and command and management systems, helping Member States to improve their national capabilities to prevent and recover from cyber attacks, and creating a series of cyber abilities to be able to detect and prevent such attacks.

8. Conclusion

The free access of NATO and the EU to the global commons (ocean, atmosphere, air, space and cyberspace) extends the capacity of both allies to achieve their strategic goals and ambitions that guarantee the security of the citizens of the member states and the stability of their economies.

On the other hand, Russia is increasingly emerging as a self-sufficient challenge, from the point of view of its access to and pursuit of key energy resources and strategic infrastructure.

The EU and NATO need to pay more attention to cybersecurity by providing more opportunities and helping Member States to protect themselves against cyber threats while keeping cyberspace open, free and safe. This implies strengthening technological capabilities to reduce threats and resilience of critical infrastructures, networks and services, and reducing cybercrime. This means fostering innovative ICT systems that guarantee the availability and integrity of data while ensuring digital security through appropriate storage and digital certification services. This requires cyber issues to be present in all policy areas and to continue developing cooperation platforms.

It is obvious that in the global world there are risks and threats that go beyond Europe's and individual countries' ability to act. In this respect, the existence of NATO and the improvement of the capabilities of the EU, as well as the constructive participation of Moscow in global security and the use of global common goods, are the key to the sustainable stability of the world. In order to apply the bargaining method for benefits, Russia should also recognize the need for cooperation with the EU and a strategic partnership with NATO, as there is no longer an "optimal alternative to the solution sought" in the long run. Practice shows that denial of compliance with reality leads to lagging behind everyone in the global race.

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