DEFINING THE CURRENT AND FORESEEABLE OPERATING ENVIRONMENT AND THE ROLE OF THE ROMANIAN ARMED FORCES ON THE EASTERN SIDE OF THE NORTH ATLANTIC ALLIANCE

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The character of the battlefield is becoming more nuanced and even different as new emerging and disruptive technologies are discovered and developed. Defining the operating environment as an integrating term for all that is represented by armed combat has been and will remain a necessity, especially now that the international defence system and, by consequence, the military system is experiencing a flood of innovative concepts.

The operating environment cannot be sufficiently defined without reference to the actors that participate and generate its dynamics. In this regard, we consider it necessary to provide a new perspective on the main forms of threats to the security of the North Atlantic Treaty Organization, in which we will focus the attention of this study on the security environment on the eastern side of the North Atlantic Alliance, with specific focus on highlighting the place and role that Romania has in the NATO architectural framework, aiming at the geostrategic area already mentioned.

In order to meet the above-mentioned objective, we will resort to methods specific to military sciences, such as historical analysis, study of documents and comparative analysis, aiming to validate the working hypothesis that Romania is a member that contributes essentially to NATO's defence mission in the current security environment and the threats to it, at present and in the future.

Keywords: NATO; operating environment; Romanian Armed Forces; security environment; technological development;

INTRODUCTION

According to *TRADOC Pamphlet 525-92*, the United States of America postulates that on the horizon in 2025 the Operating Environment/OE will face two major dilemmas or, more accurately, there will be two major factors that will determine its shape. The two key points are determined by *"the one dealing with rapid societal change spurred by breakneck advances in science and technology and the other with the art of warfare under these conditions, which will blur the differences in the art of war with the science of war"* (TRADOC Pamphlet 525-92, 2019, p. 10).

Having as a starting point the first factor, according to the same doctrine, we can add that the operating environment will be characterized by a number of elements, such as instability, with consequences that will be seen in geopolitics, the intensification of nationalism, demographic changes or competition for resources. In this enumeration, we also add that technological development will have an important contribution to make to the intensification of these issues, with their effect on human interaction and the speed of reaction to the listed issues, as well as their impact on the economic and social spheres.

The second factor determining the future operating environment will be characterized by elements such as *multi-domain operations, the conduct of operations in a much more complex terrain (urban areas), hybrid strategies, weapons of mass destruction* and *advanced (emerging and disruptive) technologies*.

NATO's perspective, whether we refer to strategic documents such as the *NATO Doctrine* or *NATO 2030 – A Strategy for a New Era*, has common elements such as circular (360º) defence, defence of the Alliance's eastern side or the development of capabilities designed to support mobility that are powerful and long-lasting. The *NATO 2022 Strategic Concept* also emphasizes that the greatest threat to the North Atlantic Alliance is posed by the Russian Federation and its subversive actions against the Euro-Atlantic area. In the same context, China is portrayed as an agent of various threats to the security stability of the Euro-Atlantic area, through mechanisms similar to those found in the case of Russia.

To highlight its role as a regional pole of power assumed also through the issued national strategies (National Defence Strategy of the Country, Military Strategy

of Romania), Romania signed the memorandum in which Turkey and Bulgaria took part and, at the same time, it has also proposed *a safe navigation in the Black Sea* (Tîlvăr, 2024), in January 2024. This memorandum, entitled *Memorandum of Understanding on the establishment of a Task Force to Counter the Sea Mines in the Black Sea – MCM Black Sea* (Ministry of National Defence, 2024), aims, first of all, to *"demonstrate the [...] joint commitment to counter the threats of drifting mines in the Black Sea"* (Ib.), by focusing the joint effort of the three signatory parties to the memorandum.

The context presented in the introduction of this article also serves to provide an overview of the context generated by the present and future operating environment and the role that Romania plays on the eastern side of NATO, as well as to present the scientific literature that is the basis for the paper and that supports our research effort throughout the paper. In addition to the documents already listed in the previous paragraphs, there will be other works, covering the development of ideologies in the area of defence and international relations, which are meant to support our endeavour to provide a relevant and complete format to the already established research study.

Starting from the hypothesis presented in the abstract of the article, according to which "Romania is a member that is an essential contributor to NATO's defence mission in the current security environment and the existing threats to it, now and in the future", we will structure the paper in three chapters. In the first chapter, our attention will be focused on presenting the current state of the operating environment, the second chapter will be a visionary form with a focus on the operational environment of the future, and in the third chapter, we will integrate the basic ideas discussed so far to emphasize Romania's role on the eastern side of NATO in an attempt to validate the hypothesis from which we start.

In achieving this objective, we will employ research methods commonly used in social sciences, with a focus on historical analysis, document analysis, and comparative analysis, which will be key in producing relevant results in this field of study, where our approach will involve conducting descriptive research.

One of the aims of this article is to contribute to the current body of knowledge in the specialized scientific field by offering valid perspectives on Romania's NATO membership, particularly from a geopolitical and geostrategic standpoint, within both current and future operational environments.

The factors that motivated this research include the unprecedented advancement of technology, the various threats to Euro-Atlantic security, and Romania's growing

significance in the eastern side of Europe. In light of these aspects, we believe the current and future operational environments must be clearly defined in relation to the three issues, which are of interest not only to the military sphere but also to the broader scientific community.

Building on the existing state of knowledge, as outlined in the introduction, we will further explore these issues to offer a series of realistic and concise conclusions in line with the results we aim to achieve.

CURRENT OPERATING ENVIRONMENT

To provide a picture as broad as possible of the current operating environment, we will use a classification of the main factors influencing its dynamics. In this regard, we identify both major state actors and advanced, emerging, and disruptive technologies as factors that have the potential to shift the balance of power and influence the security environment.

We limit ourselves to presenting these two *factors* mentioned in the previous paragraph, because their volatility and dynamics can offer, either now or in the future, new courses of action with the capacity to bring about continuous and decisive changes in the operating environment.

The Influence of State Actors on the Current Operating Environment

The latest NATO Strategic Concept (NATO Strategic Concept, 2022), as well as the subsequent NATO summits (Vilnius – 2023, Washington – 2024), demonstrate, through their content, a solid and firm stance against the *"autocratic"* ideologies espoused by states such as North Korea, Iran, and China and, last but not least, the Russian Federation (NATO's Washington Summit, 2024), which continue to generate constant and unfounded threats to Euro-Atlantic security.

Russia is considered by the North Atlantic Alliance, according to the latest summits, to be the primary state actor generating actions that are contrary to the visions of Western countries. In this context, we highlight the conflict in Ukraine, where new actions to support Ukraine in the face of Russian aggression were reassessed during the last meeting of the member states (Smith, 2024). In this framework, the role Russia plays at the international level and how it can influence both the security and operational environments is underscored, given that a significant portion of the capabilities and capacities of NATO member states are impacted by the armed conflict in Ukraine. Thus, we can emphasize that there are

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long-term effects, affecting industry, the economy, technology, and other sectors, as well as society as a whole, from a psychological perspective, especially among the current population and future generations.

Regarding the war between Russia and Ukraine, an important role is attributed to China, which, as stated in the text of the Washington summit in July 2024, is one of the states that *"helps Russia wage its war on the European continent"*. To validate this statement, in May 2024, US Secretary of State, Antony Blinken, declared that *"What's not happening is the provision of actual arms by China to Russia for use in Ukraine"*, but that China is helping Russia develop the necessary technology to conduct the war waged on Ukrainian territory (Kelly Ng, Yi Ma, 2024). It is also noted that China's exports to Russia have been increasing significantly in terms of components that can be used for the construction of weapons (Sher, 2024).

The two states outlined above are joined by Iran and North Korea, as discussed at the Washington summit, which, sharing common political ideologies, are creating conditions that could destabilize the Euro-Atlantic security environment by directly or indirectly supporting the Russian-Ukrainian conflict.

Currently, the threat from the Russian Federation to the security of the North Atlantic Alliance is high, as a result of actions that produce negative effects on European states due to the fighting in Ukraine and the hybrid warfare continuously waged against Western states (Bilal, 2024). The intensification of instability is also reflected in the statements made in the public sphere by Russian officials regarding the use of nuclear weapons, along with changes in its nuclear doctrine (Richardson, 2024). Looking into the *"past"* of the war in Ukraine, specifically the fall of 2022 (Picciotto, 2024), we can see that this method of attracting the attention of the international community is repeating itself, even if it is difficult to predict how the Russian Federation will continue to pursue its interests.

The current operating environment is also characterized by the increasing number of North Atlantic Treaty Organization member states. Thus, the accession of Finland (2023) and Sweden (2024) opens new horizons for the North Atlantic Alliance. Beyond the military aspects, this territorial enlargement represents a geopolitical and geostrategic advance for NATO, while also facilitating access to the Arctic region (Gosnell, Jensen, 2024), where competition over this area is evident, with the *"bloc"* of Western and Eastern powers once again facing off against each other.

According to an article published by *Reuters* in 2022, Russia and China's interest in the Arctic region is growing, and military activity is high, with military bases deployed in the area and military exercises conducted, even surpassing NATO's efforts (Gronholt-Pedersen, Fouche, 2022). A transposition of this framework to the main topic of this chapter suggests that, regarding the Arctic Ocean, at the time of the article's publication, NATO needed to act accordingly to keep pace with the two states involved in this region. The North Atlantic Alliance, according to the same publication, *"would need 10 years to match Russia's military presence in the Arctic"*.

When we refer to the Arctic, we must also highlight the interests of the People's Republic of China (PRC) in the Arctic. Although the United States of America does not recognize China's status as *a "Near Arctic State"* (Millard, Lackenbauer, 2021), the fact that China conducts economic activities in this region and, even in isolation, military exercises, requires that NATO's interest should be heightened. Likewise, the PRC's strategic initiative – *"One Belt, One Road"* (Department of Defense, 2019) connects China's interests with the Arctic and, at the same time, reinforces its presence in Arctic Ocean waters.

In examining the current operating environment, it is evident that, akin to the dynamics observed during the Cold War, the concept of *"state individualism"*, defined here as the capacity to act independently in domestic and foreign policy, is often *"overshadowed"* by notions of *alliance* and *partnership*. Although the dissolution of the USSR in 1991, preceded by the termination of the Warsaw Pact in the spring of the same year (Jaitner et al., 2018, p. 17), marked the conclusion of a significant chapter in human history, paving the way for new changes on the international political stage, state actors continue to identify common interests and ambitions that facilitate the formation of alliances and partnerships.

Furthermore, focusing on the eastern part of the Alliance, with Romania as a focal point, it is necessary to highlight some of the partnerships and alliances currently existing at the interstate level. The North Atlantic Treaty Organization (NATO) is regarded as the most successful military alliance (NATO, 2024) and has continued to expand its structural framework by accepting additional states, including Sweden in 2024. Moreover, the emergence of partnerships such as AUKUS (Australia, the United Kingdom, and the United States of America) and QUAD (The Quadrilateral Security Dialogue) (Panda, 2022, p. 1) indicates that states, depending on their spheres of influence and areas of interest, are forming international communities grounded in shared economic or politico-military objectives. Completing the antithetical framework between East and West, there are formalized relations such as the *"Treaty of Cooperation and Good-Neighbourliness"* between China

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and Russia, as well as the *"Shanghai Cooperation Organization"*, in which Belarus, the newest member, participated in the meeting held in Kazakhstan in July 2024.

The final paragraph provides an overview of the most significant interstate relations that currently exist and contribute to the prevailing security environment. Essentially, the confrontation between states has taken on new dimensions, and, in addition to the interests dictated by military influence, the economic and political spheres are contributing to the emergence of new poles of power in the form of state organizations, as previously mentioned.

From a state-centric perspective, the current operating environment can be characterized by a condition similar to that of the post-World War II historical context, where the polarity of powers is evident, thereby generating the environment described earlier, and where its very definition can be articulated through the struggle for supremacy.

The Role of Technology in Defining the Current Operating Environment

In the publication edited by Ausubel and Sladovich – *"Technology and Environment"*, a perspective on technological rediscovery and its potential impacts on the environment is presented. Fundamentally, the end of the 1980s marks a pivotal moment in the approach of technology toward addressing environmental challenges, whether concerning coal cleaning plants or the increasing reliance on gas as a fuel source (Ausubel, Sladovich, 1989, p. 10). The growing significance of technology and technological advancements has implicitly contributed to the definition of the societal environment, which, in turn, has influenced the current security environment and the operational landscape in its present form.

A group of authors, including Elihu Zimet and Robert E. Armstrong, in a 2003 publication, offer a categorization of technological impact that encompasses five domains: informational, material, power and energy, human performance, and biological (Zimet et al., 2003, p. 2). We contend that, in reference to the current international economic, political, and military context, these elements are relevant for describing the operating environment in terms of technological evolution and its ramifications on the battlespace.

A primary area that the authors of the aforementioned study identified as crucial is information technologies. Information is indispensable in armed conflict, as in any other domain, and its impact is contingent upon factors such as *timing* and *accuracy*, which can alter the course of action at any given moment.

The National Defense Research Institute has developed a methodology aimed at ensuring the quality of information. In their work, the authors specify that through C4ISR (command, control, communications, computers, intelligence, surveillance, reconnaissance) capabilities, information will confer supremacy in military operations. Simultaneously, a rapid and high-quality flow of information is anticipated to revolutionize command and control (C2) in future battles (Ib., p. XIII). The key elements in this context are C4ISR operating systems designed for the collection and processing of data and information, enabling continuous updates on the battlefield situation. The extensive technologization to which both military and non-military spheres are currently subjected affords more advantageous levers for operationalizing the concept of *Multi-Domain Operations*.

In furtherance of the idea presented at the conclusion of the previous paragraph, we wish to draw attention to the Joint All-Domain Command and Control (JADC2, 2022) strategy of the United States of America. For this strategy to achieve its intended efficacy, ISR (intelligence, surveillance, and reconnaissance) capabilities are deemed essential, as it aims to accelerate decision-making, provide real-time battlefield situational awareness, and enhance the probability of mission success (C4ISR Through Next Generation Artificial Intelligence).

Material technologies constitute the second technological category that exerts a significant impact on the operating environment. The classification provided in the study by Elihu Zimet and Robert E. Armstrong regarding the importance of technologies identifies two types of material technologies: *functional* and *structural*. In this context, the category of functional materials encompasses electronic products, transistors, resistors, and similar items, whereas the category of structural materials includes materials characterized by properties such as corrosion resistance, strength, density, and other mechanical characteristics (Biswas, Visell, 2019).

We consider it essential to highlight this technological category in the present work because the current objective is to develop the most reliable devices for use on the battlefield. In this regard, it is pertinent to note that the drones currently being developed and deployed in the ongoing conflict in Ukraine fall within the realm of material technologies. Specifically, we will examine the latest technological innovations utilized in this conflict, without undermining the rationale of conventional warfare in this context, namely: the *"dragon drones"* (Al Jazeera Staff, 2024) and *"land-based drones"* (Robertson, 2024). The fabrication of these

technologies underscores the importance of material technologies, as well as the advanced state of current technologization. Consequently, we identify a *"volatile"* operating environment characterized by innovation and flexibility of combat assets. Furthermore, adaptation to *terrain* or *weather conditions*, and of course, in relation to the enemy's intentions and actions, occurs in near real-time through the integration of emerging and high-performance technologies.

The third category that complements the framework established by the role of technology in shaping the current operating environment encompasses the power and energy factors associated with the technical means employed by military forces. This category encompasses a range of devices that can be utilized in armed conflict situations through the enhancement of existing energy systems. Specifically, it highlights capabilities that leverage *compact, lightweight,* and *long-lasting energy sources* (Zimet et al., p. 4). In this regard, the North Atlantic Treaty Organization (NATO) issued a document in 2015, *"NATO Smart Energy"*, which aimed to improve the efficiency of military structures by focusing particularly on replacing fossil fuels with renewable energy sources (NATO, 2015). Following this initiative, during the 2021 summit in Vilnius, the NATO Energy Security Centre of Excellence for Energy Security released a strategy addressing energy efficiency and *renewable energy solutions* designed to ensure the operational effectiveness of military forces during logistical operations, where energy dependence – defined in terms of fuel requirements – is dictated by geographical considerations, climate, intensity of military actions, and other factors (NATOESCE, 2021, p. 6). Thus, it is evident that the North Atlantic Alliance is actively pursuing measures to align itself, firstly, with global climate change imperatives and, secondly, to keep pace with technological advancements in the domain of independent energy sources.

In this category, we also seek to include *advanced propulsion systems for aircraft, missiles, and access to space*, the latter being recognized as one of the five accepted domains of military operations. To achieve efficiency and effectiveness with these capabilities, hypersonic propulsion for both hypersonic aircraft and hypersonic missiles is sought. In pursuit of this objective, the United States of America has initiated the development of the world's fastest airplane, the SR-72 (Gladwell, 2021). Key aspects that merit emphasis include the speed this aircraft can attain, specifically Mach 6 (equivalent to six times the speed of sound) (Moskvitch, 2010), and its operational capacity in the battlespace without the physical involvement of human personnel, as it is remotely controlled.

The topic of supplementing and securing energy needs for military operations has been examined in various scientific studies. For instance, the implementation of photovoltaic systems or hybrid solutions utilizing both solar and wind energy among NATO member states is detailed in a collective work by Mariusz Fraczek, Krzysztof Górski, and Leszek Wolaniuk (Fraczek et al., 2024). They underscore the significance of these renewable energy sources, identifying countries such as Greece, Germany, the United States of America, the United Kingdom, and the Netherlands as having initiated extensive research efforts following the *NATO Intelligent Energy* programme. It can be concluded that energy represents one of the critical factors in military operations, as evidenced by both historical and ongoing conflicts, such as the war in Ukraine. Consequently, the integration of renewable energy sources is poised to alter the landscape of the battlespace, creating new opportunities for combatants.

Today's operating environment is defined by the management of the most important *"component"* of the battlespace, *the human*, or, according to the categorization we detail in this paper, the human resource. The performance of the human factor is enhanced by technological assistance; thus, the success rate of human action in the workplace increases significantly (Bondarouk et al., 2017). In other words, in light of technological developments, individuals benefit from training through immersive *virtual training programmes* and *distributed distance learning*. For military personnel, war gaming facilitated by advanced technologies, which translates physical reality into virtual reality, helps cultivate experiences aimed at enhancing learning and/or improving skills (such as leadership and decision-making) (Checa, Bustillo, 2019, p. 12), with the objective of applying these skills in real-life situations. At the same time, this approach can also contribute to the morale of the individuals involved in the learning process. The study by David Checa and Andres Bustillo demonstrates that learning through virtual reality exposure is more effective than learning through traditional methods (Ib., p. 14).

Another aspect concerning *the individual* as a human resource is represented by the enhancement of this performance through technology. In this regard, both the level of physical resilience to various situations and the improvement of mental abilities are sought. A study conducted by James C. Spohrer and Douglas C. Engelbart analyses the influence that technologies can have on human performance. To achieve this objective, they focused on two areas – *science* and *business* – and ultimately concluded that, from a scientific perspective, technological evolution

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exerts influences on five systems: *physical (atoms and molecules), biological (DNA), cognitive (the human brain), social (organizations), and technical (computers)* (Spohrer, Engelbart, 2004, p. 72). In relation to the military sphere, the current training methods, which are largely assisted by technology (GPS, virtual reality, UAS/UAV etc.), combined with the availability of various dietary supplements intended to enhance human abilities, underscore that technology finds its applicability across the five levels described by the aforementioned authors. A more extensive study in this regard could serve as the theme for a future paper analysing human performance strictly from the perspective of technological evolution, both for the present and the future.

At the end of this overview of the current operating environment, we aim to correlate with the final element of Zimet and Armstrong's classification – *biotechnologies* – a decisive component for the preparation and execution of military operations, specifically *military medicine*. It is likely that medicine will continue to be the primary application of biotechnologies for military purposes. A conclusive example in this regard is the treatment of wounds using light-emitting diodes (LEDs), which can lead to a reduction in recovery time of up to 50%, as well as the disinfection of water by destroying harmful bacteria, as demonstrated in a study published in the journal *Water Research* (Song et al., 2016). The role of biotechnology in enhancing soldiers' capabilities on the battlefield through new protective and weaponry systems is further explored in Andrew Bickford's study published in *Current Anthropology*. Here, the concept of utilizing biotechnologies to develop protective equipment capable of transmitting real-time health status information to both the individual soldier and their commander is presented (Bickford, 2019). Notably, the contribution of biotechnologies to the military sphere is much broader; however, the salient point underscores a dynamic and constantly evolving operational environment, shaped by technological advancements that reach new heights daily.

PREDICTABLE OPERATING ENVIRONMENT

In the first chapter of this article, we analysed the physiognomy of the current operating environment through a number of factors that we deemed relevant. We found that geographical location, state actors, and technological implications shape the environment in which we conduct our daily lives. One outcome of effective planning is the translation of human actions into future scenarios, whether they pertain to short-, medium-, or long-term periods. To elucidate this preamble, we will subsequently examine scientific and specialized documents that aim to define the future operating environment and are accessible in the public domain.

To make a highly reliable forecast, it is essential to refer to the most recent events. A new outlook for the period 2024-2030, published by the US Army Training and Doctrine Command, *The Operational Environment 2024-2034*, is particularly conclusive in this regard. The report revisits the document issued in 2021, *The Operational Environment 2021-2030: Great Power Competition, Crisis, and Conflict,* which focuses on the competition with the Russian Federation and the People's Republic of China, as well as the strategies for managing the impacts of the COVID-19 pandemic.

The transformations that have occurred within the operating environment have necessitated the development of a strategy commencing in 2024. The significant issues highlighted by the United States of America include the ongoing competition with the People's Republic of China, the threats emanating from Russia's military campaign in Ukraine, as well as the challenges posed by other *"hostile"* states that jeopardize the security environment, specifically Iran, North Korea, and various extremist groups.

Building on the observations and assessments conducted by experts from *TRADOC G-2*, the USA has identified twelve conditions that possess the potential to influence military readiness and operational capability in the execution of large-scale combat operations (LSCOs) (EO 2024-2034, 2024), specifically:

- *Competition and conflict across all domains;*
- *Clustering and precision* – referring to the tendency in contemporary conflicts to prioritize mass destruction over the targeting of pre-determined objectives;
- *Proliferation of unmanned systems;*
- *Stockpiling of ammunition and weapons;*
- *Transparency on the battlefield* – attributed to the deployment of advanced technologies;
- *Increased lethality* – resulting from the use of high-precision weapons and weapons of mass destruction;
- *Anti-access and area denial (A2/AD) strategy* – a concept thoroughly examined in an article by Commander (ret.) Ion Chiorcea in *Romanian Military Thinking* (Chiorcea, 2024);

- *Logistics;*
- *Defence of national territory;*
- *Waging war in densely populated urban environments* – it is projected that by 2050, urban areas will be home to 68% of the global population (UN, 2018);
- *Information advantage;*
- *Weapons of mass destruction* – the United States of America and Ukraine assert that Russia has deployed chemical agents during military operations on Ukrainian soil (Murphy, 2024).

These *"attributes"* will guide potential military actions over the next decade, as indicated in the document published by the USA. This perspective is generally applicable to both the US military and NATO member states. Considering all the aforementioned aspects, we can anticipate a significant impact on military affairs, leading to transformations in the meaning of *military art and science, the rapid annihilation of adversaries, the dynamics of attrition warfare*, and *alterations in maneuver, fire, and defense strategies*. Furthermore, the *human resource* will increasingly be prepared to engage in combat and to lead military operations.

In contrast to the United States of America, the United Kingdom, through its *Strategic Trends Programme – Future Operating Environment 2035*, characterizes the operational environment with a slightly different emphasis while retaining the same foundational principles. Elements such as technologization, proliferation, adaptation, and nuclear weapons will play a significant role in shaping the future of military operations.

Beyond these predominantly military considerations, factors such as climate change, demographics, urbanization, and resource scarcity will also be defining for the battlespace. The balance of power is another key point for the future; although the likelihood that the United States of America will remain the largest military force by 2035 (Ministry of Defence, 2015) is substantial, the People's Republic of China is engaged in a modernization race that could elevate it to the top military position by 2050 (Hu et al., 2021). The entire described framework can be characterized as complex, dynamic, and uncertain, reflecting the *"narrow border"* that separates superpowers in their competition for economic or politico-military supremacy.

By presenting the perspectives of two key members of the North Atlantic Treaty Organization, we aim to create a general understanding of how NATO member states foresee the coming years regarding international security. To further elaborate

on the adaptability and readiness that state actors will need to demonstrate in the future, we will analyse NATO's perspective for the upcoming period. In this regard, we will substantiate the continuation of this work by outlining the notions we consider essential in the document *NATO 2030: United for a New Era*.

The North Atlantic Alliance reiterates, through this document, the importance of strengthening dialogue with China and Russia, as well as outlining methods to counter potential threats from these nations (NATO, 2022, p. 12). The perception of the risk that Russia poses to Euro-Atlantic security is also reflected in NATO doctrine (AJP-01). Practices such as *disinformation campaigns*, *cyber-attacks*, and *interference in the electoral* processes of certain states (AJP-01, 2022, p. 18) provide allies with reasons to enhance their levels of protection against such threats. Although the two superpowers mentioned above have the potential to jeopardize the security environment and may lead to new developments in the characteristics of the operating environment (political-military decisions, economic events etc.), other actors also possess the capability to create similar situations. Thus, terrorism continues to be one of the greatest destabilizers of the security environment, and its effects have not diminished within the time frame envisioned by *NATO 2030: United for a New Era*.

According to experts Pál Dunay and Matthew Rhodes, *terrorism* is identified as the most asymmetric threat to the security of citizens and to international peace and prosperity (Dunay, Rhodes, 2022, p. 9). Consequently, the threats both at present and for the foreseeable future are generated by two types of actors: state actors and non-state actors. In this respect, it is difficult to ascertain which of the two entities poses a greater degree of threat, as it depends on their methods of action. However, it can be concluded that the interests of the international community are best served by defensive measures against situations that threaten safety and security.

In NATO's vision for defining the operating environment of the future, factors such as global warming, nuclear weapons, political cohesion, and the expansion of international relations with states or organizations located south of the Tropic of Cancer are critical considerations. These potential future approaches indicate a high level of ambition on the part of the Alliance and its members to support state entities that share a common ideology, whether political, military, or economic.

The territorial scope of the North Atlantic Alliance is *"limited"* on the eastern side by states such as Poland, Romania, Bulgaria, and Turkey. Given that the most

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prominent threats originate beyond the Alliance's eastern borders (notably from Russia, Iran, and China), the aforementioned states will, in practice, represent a geostrategic and geopolitical centre of gravity for the future of the Alliance. The validation or invalidation of this assumption will be addressed in the next, and final, chapter of this paper, where we will endeavour to identify Romania's role on NATO's eastern side. This analysis will be based on national and international documents, considering the current and future security context in accordance with the information presented thus far.

THE ROLE OF THE ROMANIAN ARMED FORCES
ON THE EASTERN SIDE OF THE NORTH ATLANTIC ALLIANCE

Romania's position as a member state of the North Atlantic Treaty Organization provides the advantage of being part of the most effective alliance in history (Dunay, Rhodes, 2022, p. 7). This fact can be considered a significant gain, particularly in light of the interests of major international players. However, beyond this asset, Romania faces challenges dictated, on the one hand, by its geostrategic positioning and, on the other hand, by the threats to the Euro-Atlantic space that emanate from the eastern side of the Alliance. Consequently, the Romanian state serves as the primary area of contact for many of these threats.

The role that Romania has assumed as a NATO member state will be analysed, as specified in the previous chapter, toward the end of this article, drawing on documents present in both the national and international scientific literature. In doing so, we aim to highlight key elements that will outline a framework of interest for the academic community.

According to *Romania's Military Strategy – 2021*, Romania assumes the mission of being a regional security pole and a centre of regional stability (Ministry of National Defence, 2021, pp. 10-13). This position was reiterated in 2021, particularly in relation to the characteristics of the security environment at that time. Furthermore, this assertion remains unchanged and is reinforced by the steps taken in the politico-military and economic spheres through the procurement of military technology in accordance with established programmes (Tudosia, 2024).

The war in Ukraine appears to have intensified Romania's interest in strengthening its strategic position on the eastern side of the North Atlantic Alliance. In this context, the acquisitions of various military technical items, such as PATRIOT batteries (Allied Air Command, 2024), PIRANHA V armoured vehicles

(Heiming, 2020) – in accordance with the contract for the acquisition of PIRANHA V armoured vehicles signed on 12 January 2018 (Ministry of National Defence, 2018) – and HIMARS capabilities (Defence Security Cooperation Agency, 2017), further reinforce this notion.

In the same framework, given Romania's position on the eastern side of the Alliance and within the European Union, it assumes, according to the Defence White Paper issued in 2021, the role of *a security pillar*. It is further reinforced by the fact that the Romanian Armed Forces are engaged in an extensive modernization process through the acquisition of military technology and equipment, as described in the previous paragraphs, which will have the capacity to be operational across all five operational environments. Additionally, the presence of multinational commands on Romanian territory (Headquarters Multinational Corps Southeast/HQ MNC-SE, Headquarters Multinational Division Southeast/HQ MND-SE, Headquarters Multinational Brigade Southeast/HQ MN BDE-SE, NATO Force Integration Unit/ NFIU) once again provides a picture that confirms the deterrent posture in the face of possible threats.

NATO is demonstrating its firmness in the face of the threat from Russia with *battlegroups* deployed in eight of its thirty-two member states, including Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Romania. In order to achieve unified force management to ensure promptness and effectiveness, Romania, through the Headquarters Multinational Division Southeast (HQ MND-SE), ensures the operational capability of the four battlegroups present in Romania, Hungary, Bulgaria, and Slovakia (NATO, 2024).

The Madrid Summit in 2022, beyond highlighting the threats to global and Euro-Atlantic security, provided an opportunity for member states to endorse a new NATO Force Model (NATO, 2022). Essentially, this system is intended to replace the NATO Response Force, being a variant characterized by greater efficiency by providing a response on a larger scale and with greater intensity. Thus, this new model, according to the NATO Defence College/NDC, will comprise a NATO Allied Reaction Force/ARF (NDC, 2024) and will have a three-tiered structure. The first level of forces is intended to train one hundred thousand troops within zero to ten days once the crisis erupts; the second level of forces will train two hundred thousand troops within ten to thirty days with more complex capabilities than the troops in the first level, including for multi-domain operations; and the third level will comprise five hundred thousand troops trained within thirty to one hundred eighty days. *Figure 1* illustrates this structure.
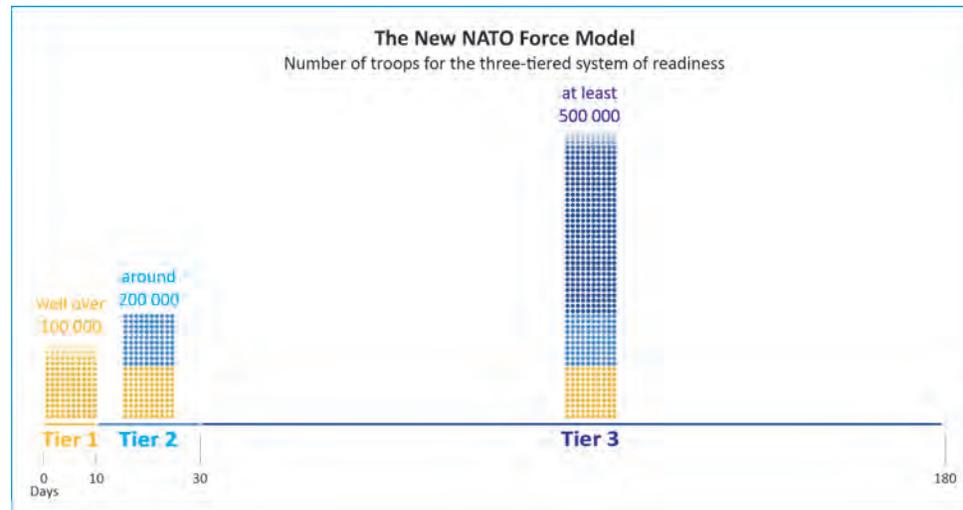
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Figure 1: NATO's New Force Model (Deni, 2024, p. 3)

As the main threat is expected to come from Russia, we believe that Romania has a significant role to play, given the fact that one of the eleven army corps responsible for operationalizing the Alliance's plans and leading the allied divisions and brigades is located on its territory.

As mentioned in the introductory part of this article, Romania's position on the eastern side of the Alliance is also reinforced by the new partnership signed with Turkey and Bulgaria concerning the establishment of a naval group in the Black Sea (Mine Counter-Measures Task Group Black Sea/MCM BLACK SEA) (President of Romania, 2024, p. 2). The establishment of this group is considered a historic milestone for this region, having strategic importance at both the regional and Euro-Atlantic levels, and it embodies the responsibility assumed by Romania and Bulgaria, given the low level of capabilities to combat sea mines compared to Turkey, which possesses superior resources in this respect.

The outbreak of the war in Ukraine has brought Romania to the forefront by activating advanced defence plans and deploying the *Very High Readiness Joint Task Force* (VJTF) within the *NATO Response Force* to the country, followed, as mentioned earlier, by the establishment of a French-led battle group (Iacob, 2024, p. 12).

The time period covered by the new strategies on security and defence, present at the national level, will reach its limit toward the end of this year. It will entail new documents that will be adapted to the physiognomy of the current operating environment and will have to respond to new threats to national security.

Most likely, Romania will pursue its interests as a member of the North Atlantic Alliance, reiterating the objectives and missions set out in the current strategies and, at the same time, engaging in the fulfilment of missions to defend the common interests of the 32 NATO member states.

CONCLUSIONS

The dynamism of the security environment requires state actors to ensure that they take measures to increase their degree of safety against possible threats to their security. The transition from the Cold War bipolarity to today's multipolarity reflects both the military and economic development of some states and an unpredictable struggle for supremacy.

We believe that, by analysing the themes we set ourselves at the beginning of this article, we have validated the main hypothesis, namely that Romania is an essential member of the North Atlantic Alliance in the eastern part of the European continent. Romania's position as a pole of regional security and power is confirmed by the acquisition of military technology with high operational capabilities for the current and future operating environment. Also, the conclusion of new strategic-level partnerships with applicability, in particular, in the Black Sea region and the eastern region of the Alliance further reinforces the hypothesis from which we started.

In terms of the approach we have taken with regard to providing an outlook on the future operating environment, we can only assess it as a realistic one, as we have tried to follow the views from the perspective of key actors in the international security environment, as well as from the perspective of the North Atlantic Alliance. The conclusion on this issue is rendered by the instability of the security environment, with the future outlook being one that entails a high degree of uncertainty, mainly considering the massive technologization as well as the changes brought about by natural causes (climate change, demographic change etc.). To this end, states will certainly take the necessary measures to prepare themselves; thus, the desire to replace, as much as possible, human resources with artificial intelligence represents a turning point in the war of the future.

Also, through the research effort of this paper, we have aimed to highlight some of the factors that define the current operating environment. Thus, after analysing specialized and scholarly documents, we have concluded that the major state actors, as well as the fulminant evolution of technologies with emerging and disruptive qualities, are determining the current structure of society and, implicitly, of the battlespace.

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