

# **STUDY ON THE THREATS, VULNERABILITIES AND RISKS OF THE TRANSFORMATION OF THE ROMANIAN ARMY FROM THE PERSPECTIVE OF DEFENSE RESOURCE MANAGEMENT**

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**Abstract:** *States seeking strategic superiority through technological superiority must go through a substantial organizational transformation that increases adaptability. Today, states move from technological to strategic superiority by achieving organizational superiority. Organizational transformations translate superior technology into superior strategic performance because the organization is itself a form of technology. Moreover, the importance of organizational change increases during periods of technological innovation.*

*In order to face the common challenges in the Euro-Atlantic space, the Romanian Army works persistently to outline its profile in the allied plan, through increasingly active and consistent participation in NATO decisions, measures and missions, with a view to solving conflicts and crises, in different areas of the world, to the fight against international terrorism, and at the same time to the perpetuation of the military transformation process.*

**Keywords:** *threats; vulnerabilities and risks; transformation; NATO; Romanian Army.*

## **Introduction**

*"You can bring all the new technologies to you, but if you don't change how you think, you will not achieve transformation."  
General Marc Rogers (US Air Force)*

Military transformation varies from state to state. We can see, however, that modernization was typically slow, limited, and contested in Europe. This is not to say that European militaries do not like new systems, equipment and weapons. Rather, the limitations of transformation can be seen as political, economic, cultural, and sometimes operational. As history has shown us, there are various periods when changes in technology or military doctrine seem to represent nothing more than a break with the past.

### **1. The objective and research directions of the paper**

The issue of transformations in the military field has been a topic of debate since the beginning of the 2000's, when Donald Rumsfeld, the US Secretary of Defense, tried to make a distinction in the terminology up until then regarding changes and modifications in "military affairs". He specified the specific characteristics of the "transformation", which differentiated it from the revolutions in military affairs up to that time (*RMA*), in the following way: the transformation refers to the ability to project military power over distances long-range, precision-guided munitions, space, intelligence and submarine warfare capabilities; in the same context of the transformation, Rumsfeld also gives new valences to the concept of deterrence, at its base being a "new triad" consisting of reduced offensive nuclear forces, advanced conventional capabilities and a series of new defenses (defense against ballistic missiles, defense against cruise missiles, space defense and cyber defense), all underpinned by a revitalized defense infrastructure (Rumsfeld 2002, 25, 29).

The features of the contemporary security environment force the adaptation of the world's armies to deal with the most diverse risks and threats. These topical issues are topics of interest for scientific researchers, who through their contributions develop the phenomenon of knowing the actual situation and support efforts to identify and minimize existing vulnerabilities in the field of defense and security.

Next, taking into account my personal theoretical inclinations on the issue of the transformation process of the Romanian Army, we established as the main objective for this scientific approach the understanding of the current changes in the security environment and the study regarding the review and understanding of the reasons for hostile attitudes of some states in the Eurasian space, Russia and China, compared to their countermeasures by the Alliance.

The research directions for the fulfillment of the proposed goal aim at the following: defining the working concepts, identifying the current challenges of the geopolitical and geostrategic environment, analyzing the actions and measures to counter them and analyzing the situation regarding the stage of current and future transformations in the Romanian Army.

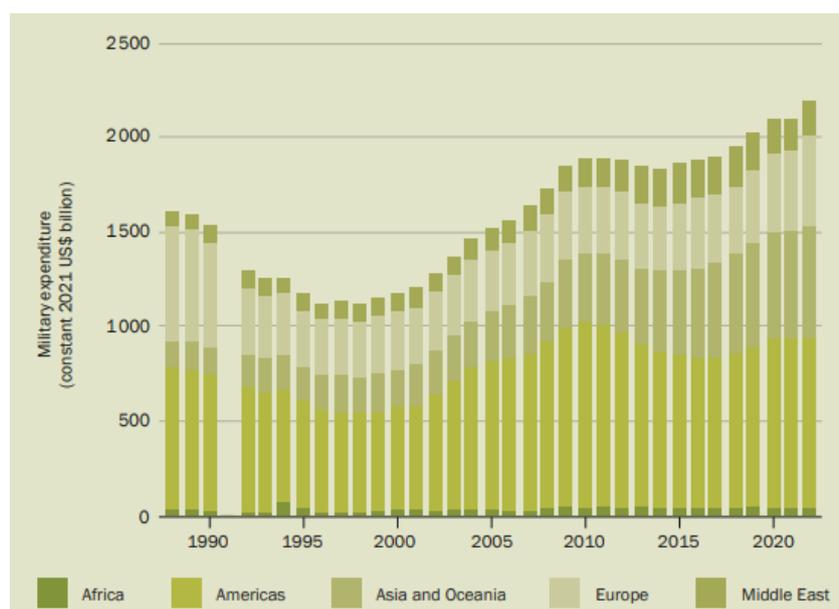
This research will be supported by up-to-date data, collected and analyzed through the online platforms of Stockholm International Peace Research Institute (SIPRI) and The International Institute for Strategic Studies (IISS), research institutes which provide valid and globally recognized information and databases and constitute benchmarks for various specialized studies in the field. but also by studying official documents and specialized literature in the field.

## 2. Financing the defense sector – a global priority

The deterioration of the geopolitical context, marked by tensions in Southeast Asia and exacerbated by Russia's military intervention in Ukraine, which has been ongoing since the Russian incursion on February 24, 2022, has reinforced the idea of modernizing and adapting to risks and threats of the world's armies, this being visible in the “explosion” of budget allocations to the defense sectors globally, even surpassing the level reached during the Cold War.

This trend is analyzed in a SIPRI report of April 24, 2023, which also states the increase of 3.7% in 2022 of the military expenditures at the world level, reaching the threshold of 2,240 billion dollars, or about 2.2% of global GDP (SIPRI 2022, 1).

For the decade 2013-2022, figure no. 1 illustrates a 19% increase in global military spending, with 2015 being their debut year. One can connect this trend with the triggering moment of Russian-Ukrainian conflict relations following the illegal annexation of the Crimean Peninsula by the Russian Federation in March 2014.



**Figure no. 1:** Global military spending, by region, in the period 1988-2022 (SIPRI 2022, 1)

Figure no. 2 illustrates the top 15 states globally that recorded the highest allocations to the defense budget. The United States of America (representing 39% of world military spending in 2022) and China (13%) remained the countries with the highest spending in the ranking of defense investments, along with Russia (3.9%), India (3.6%) and Saudi Arabia (3.3%). Together, these five countries accounted for 63% of total global military spending in 2022.

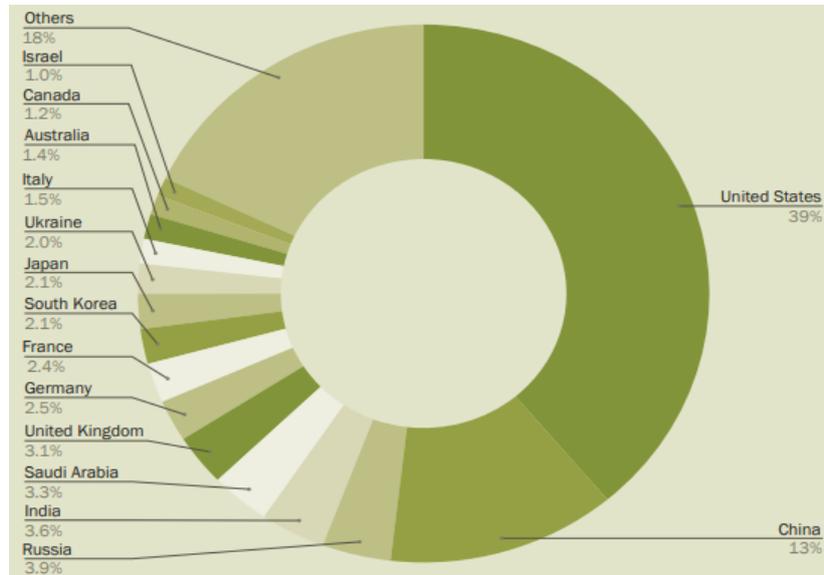


Figure no. 2: The share of world military expenditure of the 15 highest spending countries in 2022 (SIPRI 2022, 3)

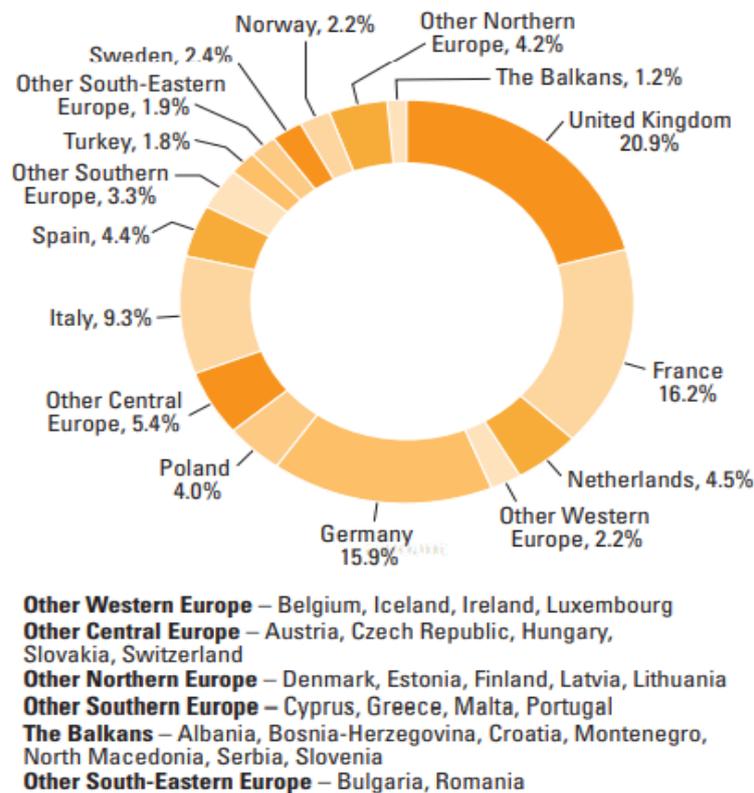


Figure no. 3: Military spending in Europe – countries and regions (The military balance 2023, 63)

In Europe, amid the conflict in Ukraine, the biggest increases in the military sector were registered by Finland (+36%), Lithuania (+27%), Sweden (+12%) and Poland (11%), according to figure no. 3. Modern military combat equipment and technology, such as the American F-35 fighter jet, are extremely expensive, and thus justify the much higher percentages than in past years (for example, the case of Finland, which acquired 64 such aircraft in 2022) (Tirpak, Finland Formalizes Deal for 64 Block 4 F-35s 2022).

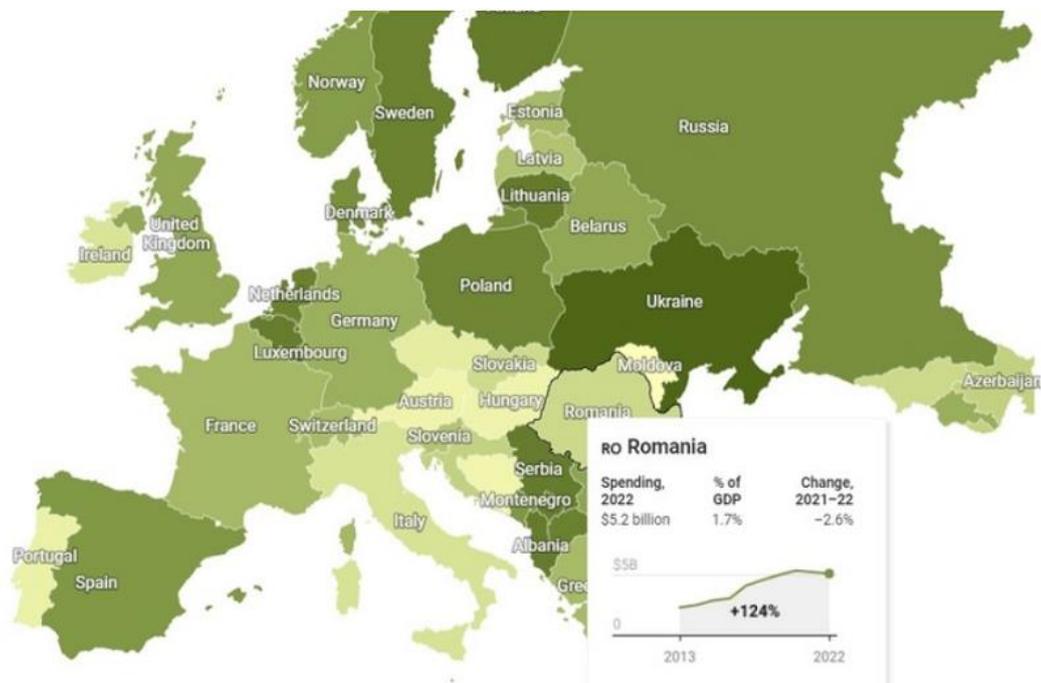
Defense funding will continue to grow, says a SIPRI researcher, Dr. Diego Lopes da Silva, because many states have already announced their decision to invest more in defense since last year.

**Table no. 1:** Decisions regarding changes in the defense budget in 2022 – Europe  
(The military balance 2023, 64)

The country	Decision on the 2022 defense budget
<b>Denmark</b>	\$5.1 billion / 1.3% GDP March 6, 2022 – Prime Minister Mette Frederiksen: Defense budget to reach 2% of GDP by 2033.
<b>Latvia</b>	\$0.9 billion / 2.1% GDP March 1, 2022 - Cabinet approves defense increase from 2.2% to 2.5% of GDP by 2025.
<b>Norway</b>	USD 7.4 billion / 1.5% GDP March 18, 2022 – NOK 3 billion (\$313 million) added to the 2022 defense budget for border protection. Long-term defense plan (April 2020) to reach 2% of GDP by 2028.
<b>Lithuania</b>	USD 1.6 billion / 2.3% GDP March 14, 2022 – State budget amendment to add €298 million to the 2022 defense budget; aims to increase the defense budget to 2.5% of GDP by the end of 2022.
<b>Germany</b>	\$53.4 billion / 1.3% GDP February 27, 2022 – Chancellor Olaf Scholz: €100 billion special defense fund, budget rising to 2% of GDP.
<b>Finland</b>	\$5.8 billion / 2.1% GDP April 5, 2022 – €2.2 billion additional defense funding in the 2023-2026 scale plan. EUR 700 million more for 2022.
<b>Estonia</b>	\$0.8bn / 2.1% GDP 25Mar22 – Government approves €476m boost to defense 2022–26 to boost air defense capabilities. This aims to increase the budget to over 2.5% of GDP. €15.7 million added to the 2022 budget.
<b>Slovenia</b>	USD 0.9 billion / 1.4% GDP March 16, 2022 – Defense Minister Matej Tonin: Defense budget to reach 2% of GDP by 2030.
<b>Luxembourg</b>	\$0.4 billion / 0.5% GDP June 24, 2022 – Defense Minister François Bausch: Budget to rise to 1% of GDP by 2028.
<b>UK</b>	\$70bn / 2.2% GDP 30 June 2022 – Then Prime Minister Boris Johnson: Defense budget to rise to 2.5% of GDP by 2030. Liz Truss pledges to reach 3% of GDP, while the prime minister was not recently reiterated by her replacement, Rishi Sunak.
<b>Lower Countries</b>	USD 15.2 billion / 1.5% GDP March 7, 2022 – Prime Minister Mark Rutte: The Netherlands is already working towards a target of 2% of GDP and will now consider implementing further increases for defense.
<b>Slovakia</b>	USD 2.0 billion / 1.8% GDP July 12, 2022 - Defense Minister Jaroslav Nad: First draft budget 2023 increases defense budget to 2% of GDP
<b>Italy</b>	\$31.1 billion / 1.6% GDP March 31, 2022 – The government is considering increasing the defense budget for 2022 by €1.5 billion. The long-term objective of reaching 2% of GDP by 2028.
<b>Sweden</b>	\$8.1 billion / 1.3% GDP March 10, 2022 – Prime Minister Eva Magdalena Andersson: Defense budget to rise to 2% of GDP November 1, 2022: Supreme Commander Micael Byden: 2% of GDP target reached by 2026.
<b>France</b>	\$54.4 billion / 2.0% GDP March 2, 2022 – President Emmanuel Macron: France to increase defense investment from MFP 2019–25.
<b>Belgium</b>	\$5.7 billion / 1.0% GDP January 21, 2022 (pre-invasion) – Defense Minister Ludivine Dedonder: Strategic Defense Vision 2030 update; the defense budget will be increased to 1.54% of GDP by 2030.
<b>Austria</b>	\$3.6 billion / 0.8% GDP March 7, 2022 – Chancellor Karl Nehammer: Need to increase defense budget from 0.7% to 1% of GDP.

The country	Decision on the 2022 defense budget
<b>Poland</b>	\$13.4 billion / 1.9% GDP March 3, 2022 – Minister of National Defense Mariusz Błaszczak: The defense budget should increase from 2% to 3% of GDP in 2023. An increase was then adopted in the 2023 budget.
<b>Romania</b>	USD 5.2 billion / 1.7% GDP March 1, 2022 – President Klaus Iohannis: Romania should increase the budget from 2% to 2.5% of GDP.
<b>Czech Republic</b>	\$3.8 billion / 1.3% GDP April 6, 2022 – Government approves plans to accelerate procurement in 2022-2024. Defense Minister Jana Černočková aims to advance the 2 percent of GDP target by one year from 2024 to 2025.

Despite these announcements in 2022, European defense spending has remained effectively flat in real terms due to rising inflation rates. Spending growth will continue in current years and will be more effective as inflation subsides. However, defense financing will be tempered by other public spending constraints, not least high debt service costs as interest rates rise.

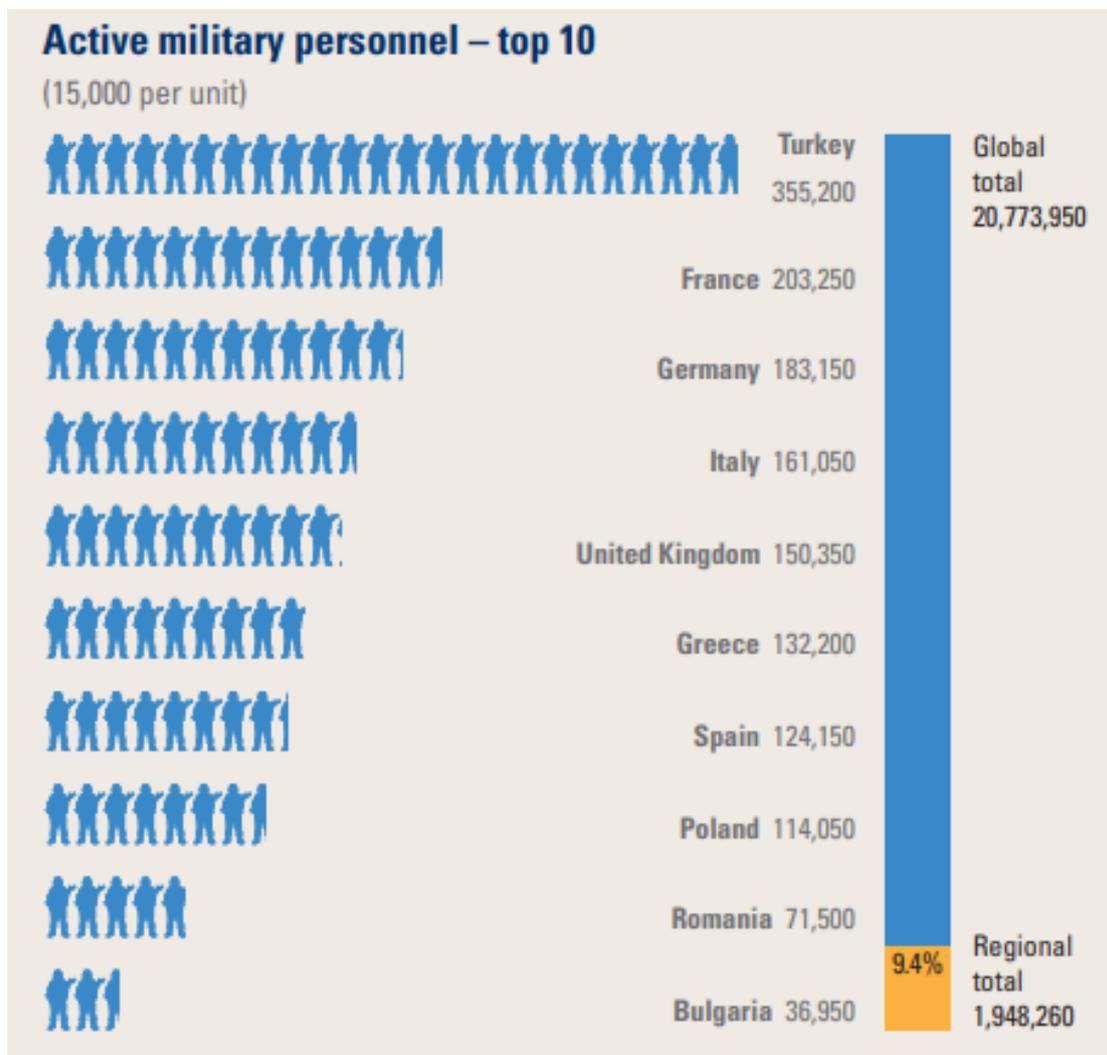


**Figure no. 4:** Interactive map (SIPRI 2022, 1)

Another report relevant to the topic of the article is that of the IISS, *The military balance 2023*. Against the background of the war in Ukraine and the threats, risks and vulnerabilities arising from it, the report justifies the response of states to reassess their defense priorities and effectively move of Europe's strategic center of gravity to the north and east. Underlying this statement is the acceleration of the project to recapitalize and expand the armor and artillery capabilities of the Polish land forces and the rapid increase in defense spending, setting a new spending level of 3% of GDP starting in 2023 (International trade administration 2022). At the same time, as part of efforts to close Germany's long-standing gap in defense capabilities, German Chancellor Olaf Scholz announced the creation of a special €100 billion (\$106 billion) fund to finance investment projects and equipment of the Bundeswehr (Heiming 2024).

In other words, Russia's February 2022 invasion of Ukraine reinvigorated NATO.

At its summit in Madrid in June 2022, NATO agreed on a new force model to increase the size and readiness of the force and to replace the NATO Response Force. The assumption under the new three-tiered model is that the new force would be able to deploy at least 300,000 troops in no more than 30 days (*The military balance 2023*, 50). But as before, a key challenge will be turning member commitments into capability.



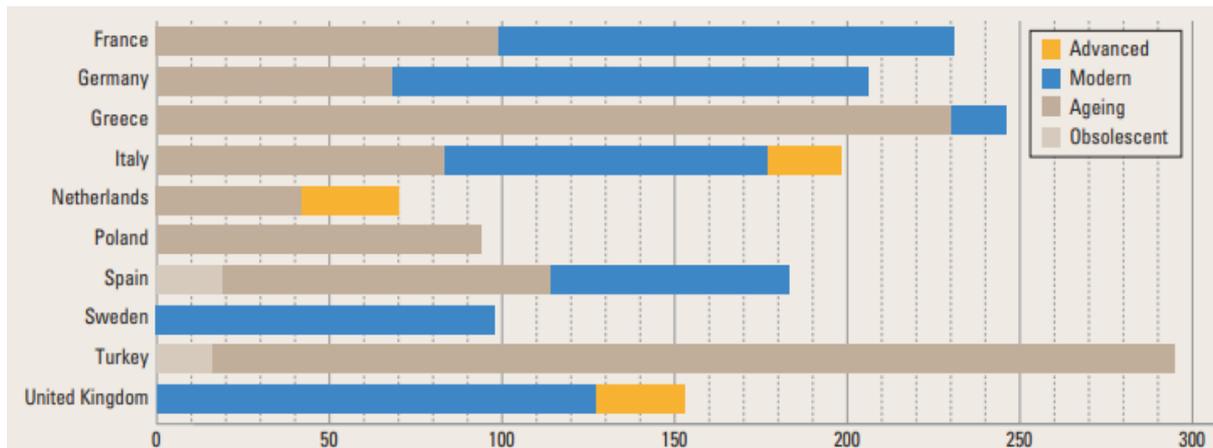
**Figure no. 5:** Active military personnel at the level of NATO member states – top 10  
 (The military balance 2023, 50)

At the time of the IISS report, Finland<sup>1</sup> and Sweden were on track to join NATO in 2023. For NATO, their membership entails an extended collective defense obligation. However, NATO will benefit from Northern Europe becoming a more integrated space in terms of deterrence and defence. This means that the shores of the Baltic Sea will be controlled by NATO members, with the exception of the Russian coasts in the Gulf of Finland and in Kaliningrad.

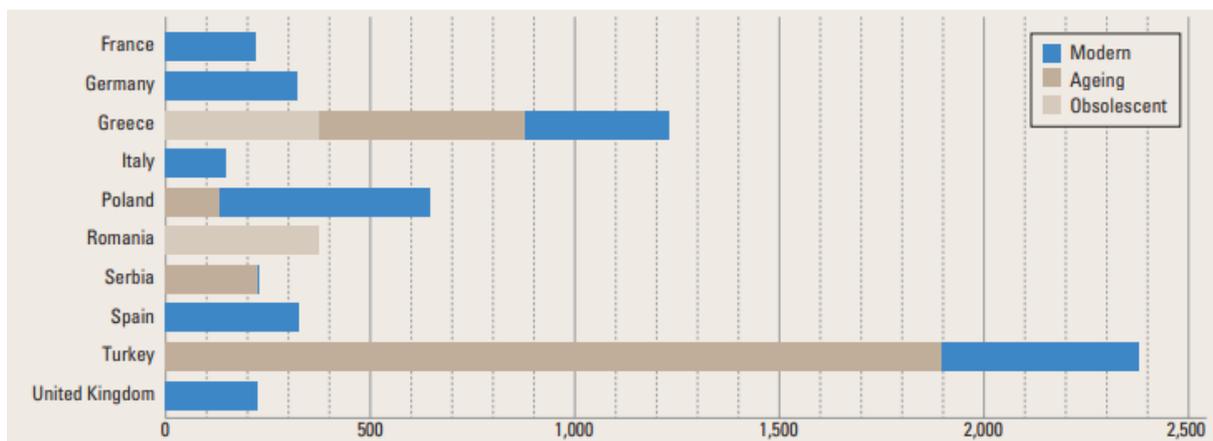
Finland's accession to NATO includes protecting its 1,340 kilometer land border with Russia. In addition, NATO will benefit from Northern Europe becoming a more integrated space in terms of deterrence and defence. At the same time, Finland, but also Sweden, must consider how they would allow the influx of large numbers of NATO forces in the event of a collective defense situation on NATO's eastern flank.

One result of efforts to provide security assistance to Ukraine is that old equipment and ammunition are being removed from European stockpiles (see figures no. 6-8). This will be more visible in the countries of Central and Eastern Europe, where many states have kept in their inventories equipment inherited from the Soviet era. Equally, this creates an opportunity to accelerate military modernization and consider expanding the equipment community.

<sup>1</sup> On April 4, 2023, Finland officially became the 31st member of NATO.



**Figure no. 6:** Europe: selection of tactical combat aircraft, 2022<sup>2</sup>  
 (The military balance 2023, 50)



**Figure no. 7:** Europe: selection of main tactical combat fleets, 2022  
 (The military balance 2023, 51)

Operator	Equipment	Total	Operator	Equipment	Total
Austria	C-130K <i>Hercules</i>	3	Norway	C-130J-30 <i>Hercules</i>	4
Bulgaria	C-27J <i>Spartan</i>	3	Poland	C-130H/C-130E <i>Hercules</i>	7
Denmark	C-130J-30 <i>Hercules</i>	4	Portugal	C-130H/C-130H-30 <i>Hercules</i>	5
France	C-130H/C-130H-30/C-130J-30 <i>Hercules</i>	16	Romania	C-130B/C-130H <i>Hercules</i> /C-27J <i>Spartan</i>	12
Germany	C-130J-30 <i>Hercules</i>	3	Slovakia	C-27J <i>Spartan</i>	2
Greece	C-130B/C-130H <i>Hercules</i> /C-27J <i>Spartan</i>	23	Sweden	C-130H <i>Hercules</i>	5
Italy	C-130J/C-130J-30 <i>Hercules</i> /C-27J <i>Spartan</i>	33	Turkey	C-130B/C-130E <i>Hercules</i> /C-160D <i>Transall</i>	24
Lithuania	C-27J <i>Spartan</i>	3	United Kingdom	C-130J/C-130J-30 <i>Hercules</i>	14
Netherlands	C-130H/C-130H-30 <i>Hercules</i>	4			

**Figure no. 8:** Europe: selection of medium transport aircraft, 2022  
 (The military balance 2023, 51)

Finally, reiterating the conclusions of the two reports, SIPRI and IISS, it is required that the NATO member states reconsider the commitments assumed within NATO and allocate the appropriate percentage to the defense sector, and at the same time, the allied armies carry out a judicious management of the funding.

<sup>2</sup> “Combat aircraft” includes fighter, ground attack and attack aircraft.

### 3. A Romanian overview regarding the threats-vulnerabilities-risks triad

The number of threats and vulnerabilities of a military nature determines the risks that must be identified and capabilities developed to prevent the likelihood that national security interests, values and objectives will be significantly affected. As the Army is responsible for national resilience and is “subordinated exclusively to the will of the people” (Strategia militară a României 2021, 10), it uses all the resources it has at its disposal, but also constantly develops new capabilities, with the aim of fulfilling its constitutional role of defending territorial integrity, sovereignty, unity state, national independence and democracy (Constituția României 1991, art. 118).

Based on this idea, the starting point for the study on the threats, vulnerabilities and risks that interfere with the transformation process of the Romanian Army is represented by the following formula:

$T+V=R-C$  where, T = threats, V = vulnerabilities, R = risks, C = capabilities.

To explain the terms in the formula above, we consider relevant the definitions approached by a member of the Academy of National Security Sciences, Ion Mitulețu, and the consultation of the *National Defense Strategy for 2020-2024 (NDS)* and the *Defense White Paper of Romania from 2021 (DWP)*.

Therefore, in what follows, we reproduce the meaning of the notions of interest for this study, as follows:

a) potential threats to national security can be traditional, asymmetric and emerging: traditional threats refer to the revival of the balance of power between competitors with opposing strategic interests as well as strategic reassessments; asymmetric threats are related to the terrorist phenomenon, insurgency, the expansion of weapons of mass destruction; emerging threats are cyber-attacks, propaganda and disinformation, hybrid actions, illegal migration, climate change and pandemics (Strategia națională de apărare a țării pentru perioada 2020-2024 2020, 19);

b) vulnerabilities represent functional, systemic and structural deficiencies that can produce serious imbalances on state institutions with implications on the integrity of citizens and local communities (Mitulețu 2020, 31);

c) risks are probable events that affect the normal functioning of state institutions, the integrity and safety of communities and citizens (Mitulețu 2020, 31);

d) the capability represents “the ability to perform actions in order to achieve some objectives” (Carta Albă a Apărării 2021, 38).

At the national level, we can consider that our country is facing external threats arising from the growing trend of competitiveness and conflict in the Euro-Atlantic space. In addition to the internal vulnerabilities of the national defense system, we can also take into account two other aspects that compete for a vulnerable position of our territory on the “grand chessboard” of the world (Brzezinski 1997).

The first aspect refers to the dual quality of the Romanian state, being part of two powerful organizations at the global level, NATO and the EU. This double security privilege<sup>3</sup>, however, comes with the assumption of certain commitments that all members must meet. The second aspect is related to the geographical location of Romania, in the vicinity of the Russian Federation and of territories widely disputed over time (the area of Kosovo, the Crimean Peninsula, the conflicting Middle East).

Thus, within the limits of what was discussed above, we can affirm that in the triad of threats-vulnerabilities-risks, the transformation process of the Romanian Army represents an important vector in ensuring and maintaining a national, regional and international climate of stability.

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<sup>3</sup> With reference to this idea, security communities are defined in the specialized literature as a transnational region, composed of sovereign states, whose populations maintain well-founded expectations of peaceful change and can only exist where the states of the community no longer envisage war as a foreseeable possibility (Emanuel Adler 1998, 30).

The institutions and instruments designated to prevent and counteract the collapse of the security system must act in a coordinated, coherent, credible and competitive manner to fulfill Romania's strategic objectives. One of these institutions is the Ministry of National Defense (*MND*), which, through a modern military instrument, the Army, is responsible for ensuring the coherence and synergy of measures and actions with those of the Alliance, the EU, strategic partnerships and regional initiatives.

The level of preparation, training and willingness of the Romanian citizen to participate in the defense of the national territory, i.e. the development of a security culture and a new mentality, on the one hand, and technological developments and their engagement in military capabilities, on the other hand, combined with the resources necessary to equip the Army to NATO standards, constitute the basic pillars that can support the current challenges in the international security environment.

One of the objectives of the *Military Strategy* of Romania is the Reform of the personnel management system – "The fighter at the center of any strategy", which involves a qualitative and quantitative framing of the positions of interest both at the national and Euro-Atlantic level, in the structures of command and forces of the EU and NATO (*Strategia militară a României 2021*, 13-14).

As a representative of the Academy of Scientists from Romania, brigadier general (retired) Gheorghe Văduva, recently stated, 'military strategy is not just a document (classified or not) that is drawn up periodically... [but] presents the way by which the leadership of the army means to structure, modernize, equip and prepare the army, obviously, within the limits of the allocated resources, for the war' (Văduva 2021, 26). In other words, a professional Army, properly equipped, compatible with Alliance requirements, capable of facing a wide range of contemporary security risks and threats and reducing vulnerabilities, cannot exist without adequate resources.

In the case of Romania, all major decisions of the defense policy must be harmonized with the decisions taken at the level of the Euro-Atlantic organizations of which it is a part.

The defense resources qualitatively define Romania's defense policy, highlighting the level of ambition that was the basis of the political objectives and the military strategy and the imperatives of efficiency that must be taken into account in the implementation of these objectives. Romania's level of strategic ambition must aim both at protecting and defending fundamental national interests (sovereignty, independence, unity and territorial integrity), as well as at participating in the fulfillment of commitments assumed within NATO and the EU.

Achieving the level of ambition requires considerable financial resources, which is why one of the NATO commitments undertaken by Romania since the beginning of 2015 is to ensure a percentage of at least 2% of the Gross Domestic Product (GDP), in the period 2017-2027, for financing the field of defense, from which a percentage of 20% should be allocated for the procurement of military equipment, and at least 2% should be reserved for the research, development and innovation sector (*Acord politic național privind creșterea finanțării pentru Apărare 2015*).

There is thus an indissoluble link between the national economy and the military power in terms of training and equipping the armed forces, which are determined by the level of funding allocated from the state budget, but also by a good management of defense expenses.

#### **4. Concrete measures in the direction of the transformation through modernization of the Romanian Army in order to counter the current emerging threats, vulnerabilities and risks**

Significant changes in the regional security situation, caused by the aggressive attitude of the Russian Federation, required an exhaustive review, reprioritization and reconfiguration of military endowment programs. These changes were aimed at equipping and developing the military capabilities necessary to counter the new threats, including by intensifying ammunition purchases and the progressive establishment of adequate stocks. Despite maintaining budgetary

allocations for Defense at the level of 2.5% of GDP, the Romanian Army directed strategic efforts towards strengthening the defensive capacity at the national level and within alliances, with the aim of effectively deterring and combating a wide range of threats, either classic, asymmetric, hybrid or other types.

The national inventory is mainly composed of Soviet-era equipment, which is seen as a capability-limiting factor. As we could see in figure no. 4, The SIPRI data indicate through the interactive map, that between 2013 and 2022, Romania's military expenditures increased by 124%. Paradoxically, the SIPRI report indicates a decrease in the percentage allocated to defense in 2022, with our country registering only 1.7% of GDP. In the 2021-2022 period, Romania is among the states with a fairly modest defense budget in Europe.

In 2022, the MND tried to organize a tender for the purchase of 231 portable anti-aircraft missile systems, with a very short range, valued at 680 million euros. However, the tender was canceled due to the fact that the tenders submitted did not comply with the requirements.

The previous year, in 2023, the MND focused particularly on the continuation of efforts to develop military capabilities by implementing the Romanian Army 2040 Program and the multiannual Endowment Plan of the Romanian Army. The strategic priority was represented by the modernization and adaptation of the Romanian Army to the specific risks and challenges of the current geopolitical context, as well as the consolidation of Romania's status as a relevant strategic partner within NATO, the EU and the strategic partnership with the USA.

In an article published nationally, the author analyzes a recent decision of the Supreme Council of National Defense (SCND) from October 2023. According to it, the budget for 2023 provides 2.5% of GDP for the defense sector, i.e. 35.3 billion lei, 52.3% more than in the previous year. At the same time, "the commitment credits provided for in the MND budget amount to 68.2 billion lei, with about 30% more than in 2022" (Mailat 2022).

Therefore, the author observes that the main the SCND decided to revise "The Army 2040" program, with the following lines of action: budgeting the necessary personnel of the army (increasing the number of forces with rapid reaction capacity to more than 300,000 in all environments – land, sea, air), updating and increasing endowment programs and stockpiles of equipment and ammunition, modernizing the defense industry, and adopting measures to better retain qualified military personnel.

Also, the Romanian analyst, Mailat, noticed that the SCND document provides the main security and defense issues that need to be funded, such as:

- modernization of the infrastructure to respond to the conditions and needs of military interventions at the allied level;
- updating the defense plans, by explicitly appointing allied support forces;
- developing interoperability by executing joint exercises between allies;
- increasing the capacity to carry out specific activities in the cyber and space fields;
- promoting and supporting technological superiority and investments in emerging and disruptive technologies;
- increasing national and allied resilience (Mailat 2022).

More precisely, concrete measures for transforming through modernization the Romanian Army in order to counter the current emerging threats, vulnerabilities and risks, started from March 2023, when the MND requested the prior approval of the Parliament to start the procedures for awarding contracts related to the endowment programs called "Integrated Weapon System SHORAD - VSHORAD", "Fighting Machine of infantry, tracked - MLI", "Battalion level 155 mm howitzer system", "AIM-120 AMRAAM medium-range radar-guided air-to-air missile" and "AIM -9X *Sidewinder* short-range infrared air-to-air guided missile" (Ministerul Apărării Naționale 2023).

Therefore, in April, the MND awarded the contract to the Turkish defense industry company Baykar for the purchase of 18 Bayraktar TB2 unmanned aerial vehicles. The drones will enter the

equipment of the Romanian Land Forces, one of the three national strategic directions, along with the Naval and Air Forces. In December 2022, the MND and Elbit Systems concluded a contract for the purchase of Watchkeeper X type drones for the Romanian Army. Romania will acquire 7 Watchkeeper X systems, each system being composed of a command and control center on the ground and three drones, similar to the acquisition of TB2. Thus, the Romanian Army will have a total of 21 Watchkeeper X drones. The number of command centers is crucial for the management of UAVs and for covering the entire national territory. In contrast to the Bayraktar TB2, the Watchkeeper drones will be manufactured with the direct involvement of the Romanian defense industry, the contract being awarded to the Elbit company following a tender (Defense Romania 2023). Also, during spring 2023, the procurement procedures were approved for 54 modernized Abrams tanks, from the stock of the United States Army, intended for the Romanian Land Forces, together with ammunition and training simulators. These combat vehicles, which will be part of the equipment of the Romanian Land Forces, will be delivered in the most modern version of this model, which is already in the equipment of the US Army (Bâtcă 2023). In addition, a contract was concluded for the purchase of 150 more Piranha 5 armored personnel carriers, which complements the first 227 carriers. Also important is the acquisition of 298 complete MLI combat armored vehicles, which will equip the mechanized infantry structures of the Land Forces. Another crucial acquisition concerns the HIMARS long-range surface-to-surface multiple launcher systems, purchased directly from the United States Government. Also worth noting is the purchase of seven Patriot surface-to-air missile defense systems, also from the United States Government, of which four have already been received (Ședința Camerei Deputaților 2023).

Also, at the end of July, the MND launched the tender for the purchase of three battalion-level 155 mm howitzer systems, each equipped with 17,352 explosive projectiles, 324 smoke projectiles, 324 illumination projectiles and 720 projectiles inert. Each howitzer system is composed of 18 self-propelled howitzers of 155 mm caliber, on tracks, nine spare tubes, 12 specialized vehicles for transporting and loading ammunition, nine self-propelled artillery observation posts, an automotive meteorological station, three means of evacuation of damaged equipment and three acoustic research systems. At the beginning of August, MND announced the organization of two tenders for the purchase of drones. These include 22 fixed-wing Class I Mini UAS systems and 11 multicopter Class I Mini UAS systems (Bâtcă 2023).

The second strategic direction, the Romanian Naval Forces, are also included in this transformation and modernization process. In May 2023, Parliament gave the green light to endowment programs called "Mine Hunter", "Surface and Underwater Threat Submarine" and "Missile Carrier Modernization" (Parlamentul României 2023). Unfortunately, according to a MND press release, the procedure for the acquisition of multifunctional corvettes, started five years ago, was canceled in August 2023, as the bidder declared the winner did not sign the framework agreement within the terms requested by the contracting authority and there were no identified the funds necessary to declare the economic operator in the next place as the winner (Bâtcă 2023).

The third strategic direction is represented by the Romanian Air Force. In a special ceremony held in May 2023, the last MIG LanceR aircraft in the army's equipment were taken out of service, according to the decision made by the SCND, following which modern aircraft and flight equipment will be purchased (Ardelean 2023). In 2022, Romania signed a contract for the purchase of 32 F-16 aircraft from the Government of the Kingdom of Norway. Also, in the same month, the first 33 JLTV (Joint Light Tactical Vehicles) type armored vehicles, intended for the Special Operations Forces, arrived in Romania. However, the modernization process does not stop here. The SCND has expressed its intention to also acquire the F-35 fighter jet, characterized by the ability to avoid radar detection and reach flight speeds of up to 2,000 kilometers per hour. Following this, in October 2023, Parliament approved the MND's request for the purchase of 32 F-35 aircraft, including spare engines, initial logistics support, training services, flight simulators and air-to-air

and air-to-ground munitions. In November 2023, the first three F-16 Fighting Falcon aircraft, bought by Romania from Norway, landed at the 86th Air Force Base Lieutenant Aviator Gheorghe Mociorniță, located in Borcea (Cozmei 2023).

In the next three years, between 2024 and 2026, the MND will start nine military endowment programs, six of which have already received the prior approval of the Parliament:

- C4I systems with ISTAR integration capabilities;
- The infantry fighting vehicle, on tracks – MLI;
- Tactical UAS systems – class I;
- Integrated SHORAD/VSHORAD weapons system;
- NATO type individual weapon system;
- Optical and optoelectronic equipment (Stage I) (Umbrela Strategică 2023).

The other three programs to begin implementation include the modernization of T22R frigates, the purchase of a fifth-generation F35 multi-role aircraft, and the construction of a European patrol corvette (Umbrela Strategică 2023).

Another concrete measures that Romania took lately in the direction of the transformation through modernization of the Romanian Army in order to counter the current emerging threats, vulnerabilities and risks is strengthening cooperative relations with its allies and strategic partners.

In light of tensions in the Black Sea region, amplified by Russia's aggression against Ukraine, and in the context of allied efforts to strengthen NATO's deterrence and defense posture, particularly in the Black Sea region, as well as in the context of bilateral relations, with an emphasis on updating the legal framework of defense cooperation, Romania signed an agreement with Portugal in May 2022. This new agreement aims to expand and deepen bilateral defense cooperation and strengthen collaboration within NATO and the EU. Therefore, it creates the premises for the consolidation of Romanian-Portuguese relations, based on convergent objectives both at the European and allied levels (Economica 2022). Also, in the midst of Russian-Ukrainian tensions, a defense cooperation agreement was agreed between Romania and Ukraine, which strengthens Romania's status as a promoter of regional stability within the broader context of security in the region. This is part of our country's objective of defense and development of cooperative relations both bilaterally and regionally, considering Romania's interest in supporting the course and Euro-Atlantic integration of Ukraine through the development of a functional partnership (Pascu 2021). Another important defense cooperation agreement was ratified in March 2023 with Poland and it establishes the basis for military cooperation between the two countries, including not only the exchange of information, but also the possibility of mutual sales of military equipment or the provision of maintenance services (Benea 2023).

Moreover, Bucharest signed the defense cooperation agreements with regional allies such as Georgia (Guvernul României 2022), Moldova and Turkey (Ministerul Apărării Naționale 2023). The agreements express the desire of the parties to modernize the legal framework of collaboration, thus facilitating the expansion and deepening of defense relations, taking into account the dynamic growth of bilateral activities and recent changes in the security environment.

Others recent important defense cooperation agreements include also the international partners such as Saudi Arabia, covering, among others, training, exchange of expertise, technologies, development of communication systems, medical services, military history, archives, publications and museums (Lupițu 2022). Also, India and Romania have taken a historic step towards strengthening relations between their armed forces by signing a Defense Cooperation Agreement in March 2023. This agreement, which covers various fields such as military training, defense equipment, technical assistance, military medicine, science, technology, research and development, marks the first document of its kind signed between the two nations (Șteț 2023).

In conclusion, the transformation measures through modernization of the Romanian Army in order to counter the current emerging threats, vulnerabilities and risks requires adaptation to the international security environment, but especially alignment with the requirements of the international organizations of which our state is a part.

With the allies' decision to increase the percentage allocated to the defense budget to 2.5% of GDP, starting in 2023, SCND officials believe that our country has all the prerequisites for the creation of an armed forces structure with high combat capacity, equipped with modern equipment, interoperable with those of NATO member states, capable of being deployed quickly on national territory or to support other allies, self-sustainable and with multidimensional protection means, and provided with a flexible and efficient command and control system.

### **Conclusions**

As we have shown above, the war in Ukraine has caused many states to reassess their defense priorities and begin to increase spending in these directions.

Therefore, we found that Russia's large-scale invasion of Ukraine reinvigorated NATO. Moreover, Russia's actions have strengthened unity among Alliance members in terms of perceptions of threats, risks and vulnerabilities, sharpened the focus on deterrence and defense (supported by a new force model), and triggered applications for NATO membership from Finland and Sweden.

On the national level, we could see that MND is working on a new long-term development plan and a new defense strategy. In addition, regarding the military transformation process, through "The Army 2040" project, the authorities seek to modernize and adapt the armed forces to NATO standards. Romania's armed forces are structured around territorial defense, supporting NATO and EU missions and strengthening strategic partnerships by contributing to regional and global stability and security.

In conclusion, the measures and actions of the Euro-Atlantic states regarding budget increases in the defense sector and the emphasis on the process of military transformation and modernization are based on the main duties of the armed forces, which include the defense of national sovereignty, democracy and territorial integrity, as well as combating terrorism and contributing to international peacekeeping missions.

## BIBLIOGRAPHY:

2015. "Acord politic național privind creșterea finanțării pentru Apărare." Accessed 11 12, 2023. <https://www.presidency.ro/ro/presedinte/documente-programatice/acord-politic-national-privind-cresterea-finantarii-pentru-aparare-13-ianuarie-2015>.
- ARDELEAN, Adrian. 2023. *Ultimele avioane MIG LanceR ale armatei au fost scoase din uz. Locul lor va fi luat de avioane de luptă F-16*. 05 15. Accessed 01 05, 2024. <https://romania.europalibera.org/a/32412360.html>.
- BÂTCĂ, Marius. 2023. *Programele de înzestrare, adaptate la riscurile și provocările actuale*. 12. Accessed 12 12, 2023. <http://presamil.ro/programele-de-inzestrare-adaptate-la-riscurile-si-provocarile-actuale/>.
- BENEA, Ionuț. 2023. *Statul român a ratificat abia după un an un acord-cheie cu Polonia, aprobat de CSAT la o zi după invadarea Ucrainei*. 03 29. Accessed 01 05, 2024. <https://romania.europalibera.org/a/acord-romania-polonia/32340204.html>.
- BRZEZINSKI, Zbigniew. 1997. *The grand chessboard*. United States. 2021. "Carta Albă a Apărării." <https://www.mapn.ro/legislatie/index.php>. 1991. *Constituția României*. [https://www.cdep.ro/pls/dic/site2015.page?den=act2\\_1&par1=3#t3c5s1sba118](https://www.cdep.ro/pls/dic/site2015.page?den=act2_1&par1=3#t3c5s1sba118).
- COZMEI, Victor. 2023. *Primele avioane F-16 cumpărate de România din Norvegia au aterizat la Baza Aeriană 86*. 11 29. Accessed 01 05, 2024. <https://www.hotnews.ro/stiri-defense-26720668-foto-primele-avioane-16-cumparate-romania-din-norvegia-aterizat-baza-aeriana-86.htm>.
- Defense Romania. 2023. *S-a semnat contractul cu Turcia pentru Bayraktar TB2: Armata va dispune de 18 UAV-uri*. 04 26. Accessed 01 05, 2024. [https://www.defenseromania.ro/drone-tb2-pentru-romania-s-a-semnat-contractul-cu-turcia-pentru-bayraktar-tb2-armata-va-dispune-de-18-uav-uri\\_622373.html](https://www.defenseromania.ro/drone-tb2-pentru-romania-s-a-semnat-contractul-cu-turcia-pentru-bayraktar-tb2-armata-va-dispune-de-18-uav-uri_622373.html).
- DUMITRACHE, Ciprian. 2023. "Simultan cu misiunea F-16 americane, România aduce apărarea aeriană mai aproape de granița cu Ucraina, din cauza incidentelor cu dronele rusești." *Defense Romania*. 09 29. [https://www.defenseromania.ro/romania-aduce-apararea-aeriana-mai-aproape-de-granita-cu-ucraina-din-cauza-incidentelor-cu-dronele-rusesti-doborate\\_624806.html](https://www.defenseromania.ro/romania-aduce-apararea-aeriana-mai-aproape-de-granita-cu-ucraina-din-cauza-incidentelor-cu-dronele-rusesti-doborate_624806.html).
- Economica. 2022. 05 19. Accessed 01 06, 2024. [https://www.economica.net/acord-intre-romania-si-portugalia-privind-cooperarea-in-domeniul-apararii-semnat-la-bucuresti\\_584911.html](https://www.economica.net/acord-intre-romania-si-portugalia-privind-cooperarea-in-domeniul-apararii-semnat-la-bucuresti_584911.html).
- EMANUEL Adler, MICHAEL Barnett. 1998. "A Framework for the Study of Security Communities." In *Security Communities*, by Michael Barnett Emanuel Adler. Cambridge: Cambridge University Press.
2022. *Europa Liberă România*. 27 06. Accesat 09 20, 2023. <https://romania.europalibera.org/a/stoltenberg-forta-de-reactie-rapid%C4%83-a-nato-300-000-militari/31917092.html>.
2022. *Guvernul României*. Accessed 01 05, 2024. [https://gov.ro/fisiere/subpagini\\_fisiere/NF\\_HG\\_120-2023.docx](https://gov.ro/fisiere/subpagini_fisiere/NF_HG_120-2023.docx).
- HEIMING, Gerhard. 2024. *The Bundeswehr special fund – a year and a half later*. 01 19. Accessed 01 20, 2024. <https://euro-sd.com/2024/01/articles/35987/the-bundeswehr-special-fund-17-months-later/>.
- International trade administration. 2022. *Poland's defense spending*. 11 07. Accessed 12 10, 2023. <https://www.trade.gov/market-intelligence/polands-defense-spending#:~:text=Poland's%20President%20signed%20into%20law,includin%2050%2C000%20in%20territorial%20forces>.

- LUPIȚU, Robert. 2022. *Arabia Saudită și România au semnat un acord de cooperare în domeniul apărării*. 01 25. Accessed 01 05, 2024. <https://www.caleaeuropeana.ro/arabia-saudita-si-romania-au-semnat-un-acord-de-cooperare-in-domeniul-apararii/>.
- MAILAT, Ciprian. 2022. *Pe ce cheltuie Ministerul Apărării 2,5% din PIB: Programele și măsurile concrete pentru Armată*. 12 11. Accessed 12 12, 2023. <https://cursdeguvernare.ro/pe-ce-cheltuie-ministerul-apararii-25-din-pib-pragramele-si-masurile-concrete-pentru-armata.html>.
- Ministerul Apărării Naționale. 2023. 10 06. Accessed 01 05, 2024. [https://www.mapn.ro/cpresa/18156\\_semnarea-acordului-cadru-intre-guvernul-romaniei-%C8%99i-guvernul-republicii-turcia-pentru-cooperarea-in-domeniul-militar](https://www.mapn.ro/cpresa/18156_semnarea-acordului-cadru-intre-guvernul-romaniei-%C8%99i-guvernul-republicii-turcia-pentru-cooperarea-in-domeniul-militar).
- Ministerul Apărării Naționale, Ministerul Apărării. 2023. *Camera Deputaților*. 03. Accessed 01 05, 2024. [https://www.cdep.ro/bp/docs/F-1415248030/img03242023\\_0005.pdf](https://www.cdep.ro/bp/docs/F-1415248030/img03242023_0005.pdf).
- MITULEȚU, Ion. 2020. "Tripticul securitate, apărare și managementul crizelor." *Revista Academiei de Științe ale Securității Naționale*, nr. 2, 28-44.
2022. *Opening speech by NATO Secretary General Jens Stoltenberg at the Aspen - GMF Bucharest Forum*. 11 29. [https://www.nato.int/cps/en/natohq/opinions\\_209375.htm](https://www.nato.int/cps/en/natohq/opinions_209375.htm).
2023. *Parlamentul României*. 05. Accessed 01 05, 2024. <https://cdep.ro/bp/docs/F252365936/3.pdf>.
- PASCU, Eduard. 2021. *Acordul de cooperare dintre România și Ucraina a fost adoptat. Proiectul vizează inclusiv achiziția de armament și tehnică militară*. 06 22. Accessed 01 05, 2024. [https://www.defenseromania.ro/acordul-de-cooperare-dintre-romania-si-ucraina-a-fost-adoptat-proiectul-vizeaza-inclusiv-achizitia-de-armament-si-tehnica-militara\\_611345.html](https://www.defenseromania.ro/acordul-de-cooperare-dintre-romania-si-ucraina-a-fost-adoptat-proiectul-vizeaza-inclusiv-achizitia-de-armament-si-tehnica-militara_611345.html).
- RUMSFELD, Donald. 2002. "Transforming the Military." *Foreign Affairs*. doi:10.2307/20033160.
2023. *Russia launches big wave of drone strikes on Ukraine*. 09 29. <https://www.reuters.com/world/europe/ukraine-says-it-destroyed-34-44-drones-launched-by-russia-2023-09-28/>.
2023. *Ședința Camerei Deputaților*. 05 23. Accessed 01 05, 2024. <https://www.cdep.ro/pls/steno/steno2015.stenograma?ids=8563&idm=1&idl=14>.
- SIPRI. 2022. "Trends in world military expenditure." *SIPRI*. <https://www.sipri.org/publications/2023/sipri-fact-sheets/trends-world-military-expenditure-2022>.
- SOARE, Simona. 2023. "Digitalisation of Defence in NATO and the EU: Making European Defence Fit for the Digital Age." *The International Institute for Strategic Studies*. 09 21. <https://www.iiss.org/globalassets/media-library---content--migration/files/research-papers/2023/08/digitalisation-of-defence-in-nato-and-the-eu-making-european-defence-fit-for-the-digital-age.pdf>.
- ȘTEȚ, Sergiu. 2023. *România și India au semnat primul Acord de cooperare în domeniul apărării*. 04 06. Accessed 01 05, 2024. <https://www.romania-actualitati.ro/stiri/in-lume/romania-si-india-au-semnat-primul-acord-de-cooperare-in-domeniul-apararii-id176011.html>.
- STOLTENBERG, Jens. 2023. *NATO Secretary General welcomes contracts worth 2.4 billion euros to strengthen ammunition stockpiles*. 09 26. [https://www.nato.int/cps/en/natohq/news\\_218735.htm](https://www.nato.int/cps/en/natohq/news_218735.htm).
2023. *Stoltenberg: Șapte state membre NATO au alocat cel puțin 2% din PIB pentru apărare în 2022*. 03 21. Accessed 09 21, 2023. <https://www.agerpres.ro/politica-externa/2023/03/21/stoltenberg-sapte-state-membre-nato-au-alocat-cel-putin-2-din-pib-pentru-aparare-in-2022--1079355>.
2021. *Strategia militară a României*. București. <https://sgg.gov.ro/1/wp-content/uploads/2021/08/STRATEGIA-MILITARA-A-ROMANIEI-1.pdf>.

2020. *Strategia națională de apărare a țării pentru perioada 2020-2024*. [https://www.presidency.ro/files/userfiles/Documente/Strategia\\_Nationala\\_de\\_Aparare\\_a\\_Tarii\\_2020\\_2024.pdf](https://www.presidency.ro/files/userfiles/Documente/Strategia_Nationala_de_Aparare_a_Tarii_2020_2024.pdf). 2023. *The military balance*. Routledge.
- TIRPAK, John A. 2022. "Finland Formalizes Deal for 64 Block 4 F-35s." *Air and Space Forces Magazine*. 02 11. Accessed 01 07, 2023. <https://www.airandspaceforces.com/finland-formalizes-deal-for-64-block-4-f-35s/>.
- . 2022. "Finland Formalizes Deal for 64 Block 4 F-35s." *Air&Space Forces Magazine*. 02 11. Accessed 12 12, 2023. <https://www.airandspaceforces.com/finland-formalizes-deal-for-64-block-4-f-35s/>.
2023. *Umbrela Strategică*. 12 29. Accessed 01 05, 2024. <https://umbrela-strategica.ro/mapn-incepe-noua-programe-de-inzestrare-a-armatei-in-perioada-2024-2026/#>.
- VĂDUVA, Gheorghe. 2021. "Strategia militară, azi." *Revista de științe militare*, 17-29.