

# ROMANIAN MILITARY THINKING



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## A LEGACY SINCE 1864

The Romanian Armed Forces road to modernity started in 1859, once the United Principalities General Staff Corps, currently the Defence Staff, was established.

Soon after it, in 1864, a group of nine captains, graduates of the first series of the Officer Cadet School in Bucharest, took the initiative to develop a "military science, art and history journal" named "România Militară/Military Romania".

The initiators of the publication – **G. Slăniceanu** (Captain, Chief of the Engineer Battalion), **A. Gramont** (Staff Captain), **G. Borănescu** (Engineer Captain), **G. Anghelescu** (Staff Captain), **A. Anghelescu** (Artillery Captain), **E. Arion** (Artillery Captain), **E. Boteanu** (Staff Captain), **E. Pencovici** (Staff Captain) and **C. Barozzi** (Engineer Captain) –, educated not only in Romania but also abroad, were inspired by the necessity to develop a substantial theoretical activity in the Romanian Army too.

The journal manifesto<sup>1</sup>, included in the first issue, which appeared on 15 February 1864, contained innovative ideas and approaches that were meant to:

*"- contribute to the organisation of our military system the Legislative Chamber is about to decide upon soon;*

*- assemble and examine the Country old military institutions that had made for the glory of Romania for several centuries and ensured our existence;*

*- explore, in the absence of any military study, all the aspects related to the Army training, the most solid basis of the armed forces;*

*- get the Romanian Troops well-informed about the military events in the world;*

*- join efforts to work concertedly and whole-heartedly to develop and strengthen the edifice that is meant to ensure the future of our country"*<sup>2</sup>.

"România Militară" was an independent publication, under the aegis of the War Ministry, and it ceased to appear in 1866 as there were no sufficient funds and subscribers. The publication was resumed in 1891, about a quarter of a century later, also as the result of the initiative of a group of officers in the Great General Staff who intended to "reproduce the serious studies on the organisation, strategy and art of commanding troops under any circumstances"<sup>3</sup>. Shortly after it, by the Royal Decree no. 3663 issued on 8 December 1897, "România Militară" became the "Great General Staff official publication".



<sup>1</sup> *Din trecutul României Militare cu prilejul aniversării a 75 de ani de la apariția ei în viața armatei. 1864-1939*, București, 1939, p. 31.

<sup>2</sup> *Ibidem*, p. 32.

<sup>3</sup> *România Militară*, no. 1, 1981, p. 6.

English version by **Diana Cristiana LUPU**.



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(Engineer Captain)



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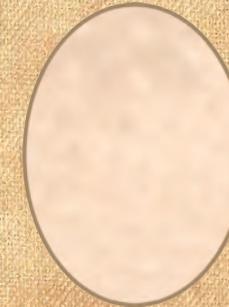
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## TO DESTROY AN URBAN AREA IN ORDER TO SAVE IT SHOULD NOT BE AN OPTION FOR ANYONE!

Major General Corneliu POSTU

Director of the Defence Staff



*Each age has its wars. War is not just a social phenomenon, but rather a result of politics. History confirms that, in general, wars have been used to correct or to impose certain political decisions.*

*Wars considered “classical” have been conducted in each important stage of human history, and the element of novelty for each of them was related to the economic development of society at that particular moment in time as well as to the application of scientific discoveries in the production of weapons with improved characteristics, which decisively influenced the fate of military confrontations.*

*War is a complex phenomenon that undergoes continuous evolution. Thus, in its both vertical and horizontal dynamics, new forms of warfare have emerged, from guerrilla warfare to information warfare, from geophysical warfare to asymmetrical or atypical warfare, from total warfare to network-centric warfare. Post-World War 2 military conflicts have shown that, regardless of possible labels such as “peripheral”, “local” or “limited” attached to them, political, economic, cultural and military interdependencies rapidly globalise both interests and consequences. Hence the dynamics of war has become extremely complex in the age of digitalisation and information, which knows no border.*

*Whatever the type of war, the mechanisms that trigger conflict situations, some hidden or disguised in realities that can be declared as such, polarise the interests of some centres of power. Their support for some of the protagonists generates imbalances/asymmetries, opening the way for interferences aimed at gaining overt or camouflaged privileges, consolidating and broadening dominant positions that, in fact, can be the real causes of either new conflicts or manifest ones’ persistence.*

*Recent history, including the current “special military operation” in Ukraine, shows that, although we are in the 21<sup>st</sup> century, any type of war, classical one included, is possible, and that urban combat will be present to some extent in a war. It is made very clear by a large number of historical, demographic, socio-political and military analyses. Therefore, armed forces must be prepared to conduct urban operations, both offensive and defensive. Starting from the opinion expressed by military theorists*



*that defence is the most effective form of combat, there are many reasons why armed forces should go into defence in a campaign – to create the necessary conditions for the offensive and regain the initiative, to destroy the enemy outright, to retain decisive terrain, or simply to slow the advance of a technologically and numerically superior force. On the other hand, a well-planned and constructed urban defence could lead to the success or failure of a strategic objective and could influence the outcome of a war.*

*The main reason why today's big cities are vulnerable to conflict is because they are key centres of society, thus having strategic value. As central landmarks of society, power, economic activity, social institutions, history and culture, and embodiment of national identities, the control of cities and their inhabitants is seen as strategically critical by the belligerents. Secondly, the rapid growth of urbanisation also strengthens the strategic value of cities. Nowadays, globally, more people live in urban areas than in rural areas. With the vertical development of cities, the population density has also increased, urban centres becoming more and more crowded, complex and interdependent. Thirdly, it may be the strategy of the belligerents to conduct fighting in an urban area. The physical terrain and the human factor of a city can offer advantages to the defender and can attenuate the technological superiority of a stronger opponent. Attackers can also try to block defenders in a city and use siege tactics to thwart their escape. Regardless of the situation, against the chaotic backdrop of cities in conflict, humanitarian, legal and military challenges as well as ways to overcome them become possible.*

*Urban warfare is, without a doubt, one of the most intense and destructive tactics of war. It is devastating for the civilian population, for the injured and sick, and for those deprived of their liberty; it is also extremely challenging for the attacker and defender. Urban combat is so dangerous that it is not surprising some military may try to avoid it. The urban battlefield is multidimensional. Unlike other environments, such as wooded or mountainous areas, urban terrain contains unique features that allow for a very strong and lethal defence to be conducted. The density, construction and complexity of man-made physical terrain in urban areas allow the military to rapidly use or shape the environment to further strengthen a defence plan. Such plans should be aimed at breaking apart an attacking formation, separating enemy forces, limiting the attacker's ability to manoeuvre, degrading military technologies such as intelligence, surveillance and reconnaissance capabilities, air strikes,*

*maximising surprise and either defeating attackers or buying time for other tactical, operational and strategic actions.*

*Urban battlefield also requires extensive resources, in terms of efforts to both defeat the enemy and meet humanitarian imperatives, such as establishing safe escape routes for civilians wishing to leave voluntarily, ensuring the needs of internally displaced civilians, providing medical care to injured civilians and combatants alike, handling human remains and clearing unexploded ordnance. These challenges result in a complex set of dilemmas for commanders, especially in terms of command, control, communication and information, surveillance and reconnaissance. For example, the terrain and the multitude of actors that conduct their activities within an urban area can make it difficult for operational commanders to directly influence the tactical battle once it has begun. Moreover, these challenges can be sometimes exacerbated in resistance or coalition operations. Because of these dilemmas, it is common for subordinates to be allowed to fight in a decentralised manner during urban operations, either alone or in small groups, and to make key decisions independently and without advice. However, the decentralisation of authority goes hand in hand with great responsibility. Therefore, among other aspects, senior commanders must ensure that their subordinate leaders and military personnel are prepared, trained and equipped to make decisions and conduct their operations in the right manner from a legal and humanitarian perspective. As a result, urban combat presents several legal, moral, and strategic challenges to the belligerents.*

*The number of injuries and deaths among civilians as well as the damages to civilian and other critical targets can grow dramatically. Far too often residents are deprived of food, water, sanitation, electricity and healthcare. Reductions in these basic needs are exacerbated when cities are besieged, when impartial humanitarian organisations are denied access to the civilian population, or when urban conflicts become protracted.*

*While some civilians may be prevented from leaving a besieged area, fighting in urban centres often leads to mass displacement, constantly changing the landscape and social fabric of many cities around the world. Civilians have no choice but to flee and often do so putting their lives in great danger. They may be targeted or even caught in a crossfire, mistreated by the parties involved in the armed conflict and separated from their family members.*



Once combat is over, unexploded ordnance and other forms of contamination resulting from the bombings, as well as the lack of essential services prevent many displaced people from returning, often for a long period of time. Many of these consequences are not unique to urban warfare, but they do occur on a significantly larger scale in urban warfare because of the sheer density of population and civilian objects, the large number of displaced people, the tactics and weapons used by the belligerents.

Therefore, the doctrine and preparation of urban warfare must be realistic. For example, the US Marine Corps conduct training in Military Operations In Urbanized Terrain (MOUT) and the Royal Marines Commandos conduct training according to the Fighting In Built-Up Areas (FIBUA) doctrine. Appropriate emphasis should be placed on the ways in which large-scale civilian presence has an impact on operations, target engagement or other aspects of combat, and, conversely, on how urban warfare affects cities and their populations. In particular, taking precautions to avoid or at least minimise civilian casualties and damage to civilian property must be a priority, as an integral part of any urban combat training programme. The armed forces must be able to understand, anticipate and mitigate the variety of long-term harmful effects of urban warfare on city dwellers, including relocation, lack of access to essential services or loss of livelihood, as well as the way such risks can be amplified by military tactics such as sieges.

The military must also be trained to identify risks and opportunities and to ensure better respect for human rights during associated military operations. Mention should be made that, once the action is started, if the rules, tactics and procedures that are specific to urban warfare are not very well known, and the morale/mental state of the attackers is not solid and adapted to the situation and the characteristics of urban warfare, excesses, abuses and even atrocities are likely to occur.

In order to avoid damages and tragedies among the civilian population, firstly, commanders should model the battlefield at the strategic, operational and tactical levels in a way that minimises urban combat, favouring as much as possible those strategies and tactics that entail fighting outside the cities. Secondly, recent conflicts have emphasised a resurgence of sieges and other siege tactics, which raise many legal, political and humanitarian issues. Today, sieges are legal only when they are aimed exclusively at an enemy's armed forces. The situation of civilians deprived of essential supplies

for their survival in a besieged area can no longer be used by a besieging party as a legitimate means of subduing the enemy. The implementation of several precautionary rules also requires both parties to allow civilians to leave the besieged area whenever possible. Thirdly, all belligerents that plan and decide on attacks in an urban area, whether besieged or not, must know how to anticipate the direct and indirect effects of their attacks. The mentioned aspect entails understanding the vulnerabilities, strengths and resilience of the population, based on a multidisciplinary human-centred assessment. Belligerents must pay particular attention to the specific features, vulnerabilities and interconnection of urban infrastructure and civil services that are critical to the survival of civilians (e.g., water, sewage, electricity and healthcare).

The expertise of humanitarian organisations working on the front line to respond to the consequences of urban warfare could be particularly useful in terms of information for belligerents and commanders when planning military operations, as well as when enacting standard operating guidelines and procedures, to anticipate and avoid causing such civil damage.

Last but not least, belligerents must be able to recognise when an attack in an urban area will violate the prohibitions on non-discriminatory or disproportionate attacks and must refrain from such attacks.

In conclusion, urban agglomerations benefit the belligerents in defence and/or those who have poor equipment in terms of both quality and quantity. The effects of imagological and information warfare in the urban environment will be extremely favourable.

Despite all possible efforts to avoid urban combat, we cannot ignore the fact that armed conflicts in populated areas will continue to exist in the future. For many people, the names of Grozny, Aleppo, Mosul, San'a and, more recently, Mariupol or Kharkov evoke images of the devastation and desolation of the once historic and imposing cities as well as of death, injury and suffering among the population. Such devastating humanitarian consequences should lead the belligerents to stop and consider how to ensure that the protection of civilians is at the heart of all urban operations and whether a change in mentality is needed on how to approach such operations. To destroy an urban area in order to save it should not be an option for anyone!





## CONSIDERATIONS ON THE ROLE OF STRATEGIC ANALYSIS FOR DEFENCE PLANNING IN THE CONTEXT OF THE CURRENT RISKS AND THREATS

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Lucian ISPAS

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DOI: 10.55535/RMT.2022.1.01

*Through this paper, we have tried to highlight the role of strategic analysis in the scientific approach of the issues related to the necessary correspondence between the objectives set and the resources needed to achieve these objectives, to help improve the defence planning system, in the spirit of increasing the process efficiency.*

*Given the particular complexity of the field, we focused on the importance of the relationship between military and non-military vision in the strategic analysis of defence.*

*Keywords: defence planning; strategic analysis; defence resources; capabilities for defence;*



## INTRODUCTION

The daily activity takes place in the immediate vicinity of the integrated defence planning activities, and its planning system remains compatible with similar processes in the organisations to which Romania is a party. The legal framework of defence planning involves the legislative power, the chiefs of the executive branch, the responsible defence structure, other state institutions. Moreover, Romania has found it appropriate to have a law of defence planning, so that there is security of application of the model, which is very similar to the American model, but also to many other models in the world, whether of the allies or not.

Referring strictly to strategic planning, Romania has managed to implement a defence planning system, which is appreciated by the allies and which works in good conditions. The architecture of this system is inspired by that of the system used by NATO and has been implemented since 1998, with the support of the American experts from the Institute for Defense Analysis. The implementation process lasted until 2002, when the system became fully operational.

The main objective of the Planning, Programming, Budgeting and Evaluation System is to integrate the efforts of the structures of the Ministry of Defence in using the available resources in an efficient way, in order to achieve the planned military capabilities. The system ensures both the internal management needs and the drawing up of the planning documents requested by NATO.

In the defence planning process, an important place is occupied by strategic analysis which is conditioned by the cooperation between actors, which requires the correct knowledge of the theories used to achieve it. Strategic analysis is a management activity associated with setting and implementing long-term goals between the organisation

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and its environment, while meeting the objectives set by its internal capabilities. Following such a professional analysis, decision makers will be able to set concrete, achievable objectives that can be supported with the available resources. The obligations arising from international commitments will certainly have to remain the main priorities of the transformation.

Research in the field of defence planning aims both to improve each of the stages of planning and to develop new tools that allow rapid adaptation to the dynamics of general policy and new risks and threats to humanity.

*The defence planning process is an auxiliary process that initiates the process called defence and, as a result, we can talk about a defence planning system, with inputs, outputs, own structure, elements, operations, etc. The defence planning system is, in fact, a set of specialised institutions, capable of developing planning documents that can be put into operation.*

### THEORETICAL BASIS OF THE DEFENCE PLANNING SYSTEM

By defence system we mean that multitude of operations, institutions and means that ensure the sovereignty, independence and territorial integrity of a state in case of any armed aggression of forces outside the national territory.

The defence planning process is an auxiliary process that initiates the process called defence and, as a result, we can talk about a defence planning system, with inputs, outputs, own structure, elements, operations, etc. The defence planning system is, in fact, a set of specialised institutions, capable of developing planning documents that can be put into operation. Also, it cannot be treated in its entirety as a subsystem of the defence system because it belongs to the security planning system, which is part of the state system or, in some cases, of an intermediate system of state planning. Therefore, the two processes are different, even if a large part of the defence planning system is subsequently integrated into the defence system.

Although there are many common elements contained in the structure of the two systems, there are certain differences that separate them. If the defence system “produces” military security, i.e. a series of elements (troops, equipment, alliances, etc.) that ensure fundamental values such as sovereignty or territorial integrity, the planning system transmits plans and planning documents at the entrance of the main



system. The beneficiary of the defence planning system is the defence system, more precisely, the army (or its equivalent, the Ministry of National Defence). The first level of defence planning is strategic planning, which is an attribute of politics. The outputs of the strategic defence planning system must be used by the military and not by its components, regardless of their importance in the system. The strategic documents are made for the army and not for the categories of forces, or for any other subdivision of the Ministry of National Defence.

By planning we mean the activity of choosing some objectives to be undertaken and establishing the modalities, procedures and plans necessary to achieve them, its other qualities being primarily necessary for knowledge and analysis. A particular problem is represented by the limits of planning, in the sense that the plan is a product that can help the real goal and not the factor that determines its achievement. In other words, defence cannot be achieved exclusively through the elaboration of defence plans, but only through specific actions.

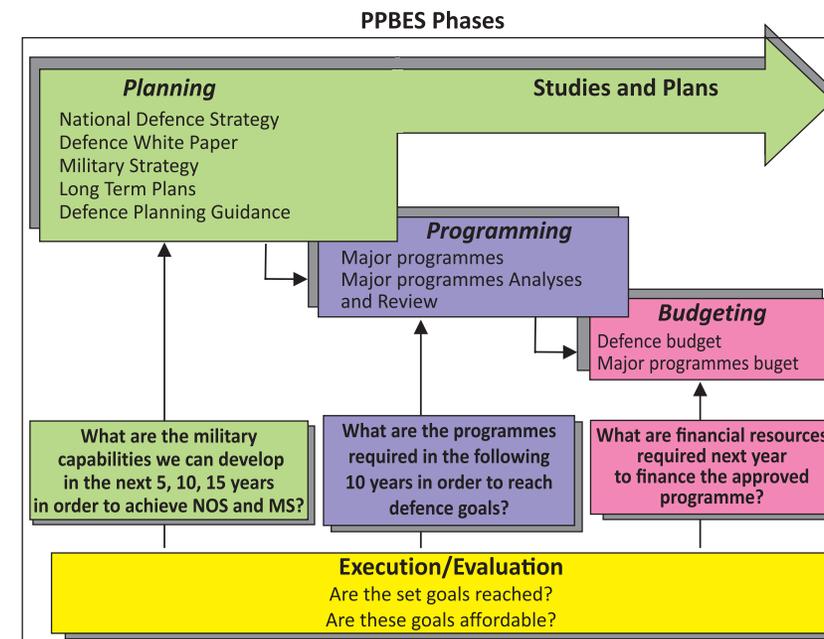


Figure no. 1: Planning, Programming, Budgeting and Evaluation System in the Ministry of National Defence (taken from <https://dpap.mapn.ro/pages/view/112>)



*The strategy is a plan designed at the highest level of the subject-system, in which the share of political objectives is higher than that of the operational objectives. Both the systemic and the procedural approach are approaches that allow the external judgment of the system, its design or redesign depending on the results obtained. At the strategic level, identifying the inputs and outputs from the system is essential, especially since a system is a set of interconnected and purposeful components.*

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The Defence Planning Directive is the document that regulates integrated defence planning at the level of the Ministry of National Defence, regarding the relationship policy-resources-capabilities and ensures a common vision regarding the objectives, priorities and opportunity of resource allocation, establishing links with the defence planning system that takes place within NATO. According to the rules in force, the Defence Planning Directive is developed by the Integrated Defence Planning Directorate (DPIA) and approved by the Minister of National Defence, with a time horizon of ten years and being reviewed annually.

### MILITARY SECURITY RISKS AND THREATS WITH AN IMPACT ON DEFENCE PLANNING

The security environment in which Romania defends its interests and promotes its national security objectives is characterised by the geopolitical competition between actors with global or regional interests, high dynamism, volatility/instability, unpredictability, as well as the unprecedented impact of the COVID-19 pandemic, with cascading effects on all levels of social, economic and political life. Romania's Military Strategy formulates rather confusingly the risks and threats facing Romania: *"the main risks and threats of a military nature to national security are determined by the continuation of consolidating the military potential in the vicinity of Romania (the militarization of Crimea and the Black Sea basin by the Russian Federation), the conduct of military exercises (especially those at short notice) and the development of offensive and defensive capabilities on NATO's eastern flank"* (Strategia Militară a României, 2021, p. 7).



*Although they are at a minimum level, the risks associated with a conventional aggression on the national territory should not be neglected or excluded, considering Romania's geographical position, in the vicinity of areas with high security risks, as well as the Romanian state taking an active role in securing NATO's eastern flank and maintaining a regional strategic balance.*

Although they are at a minimum level, the risks associated with a conventional aggression on the national territory should not be neglected or excluded, considering Romania's geographical position, in the vicinity of areas with high security risks, as well as the Romanian state taking an active role in securing NATO's eastern flank and maintaining a regional strategic balance.

Thus, there are two types of defence planning: collective defence planning and national defence planning, processes that differ significantly but have large areas of intersection. The combination of the two types of planning can produce synergistic effects that increase the efficiency of the main process (defence - military security), but make the auxiliary process (defence planning) more difficult, forcing planners to a much more laborious substantiation of defence plans. Eliminating unnecessary redundancies, ensuring complementarity, provoking a division of specialisation into distinct fields, all these must simultaneously take into account the common and national interests.

We note that the most significant threats to the security environment are: the economic crisis caused by the Covid-19 pandemic, the consolidation of the military potential in the vicinity of Romania, including on the eastern flank and on the NATO border, the offensive/aggressive behaviour, in economic terms of state entities included, timing of the Alliance's adaptation processes to threats in the eastern and southern neighbourhoods, security volatility in the Western Balkans, instability in the Middle East and North Africa, terrorist threat, hostile intelligence actions, hostile actions of influence carried out in public, cyberattacks, proliferation of weapons of mass destruction and carriers, the phenomenon of organised crime, cybercrime, distortions in the energy markets, unwanted interference and hostile foreign takeovers of economic operators (Strategia Națională de Apărare a Țării, 2020-2024, pp. 24-25).

Logically, defence is to be planned for such threats, being obvious that the chances of a position of our country as a consumer of defence are extremely small in the foreseeable future, remaining with the roles of beneficiary and security provider and with that of defence provider to ensure international security. Thus, the planning assumptions



will have to diminish the nation's efforts to increase its defence capacity on its own territory and for any type of conflict in our geographical region and to amplify the efforts to meet the commitments to allies, including effective and efficient participation in theatres of operations.

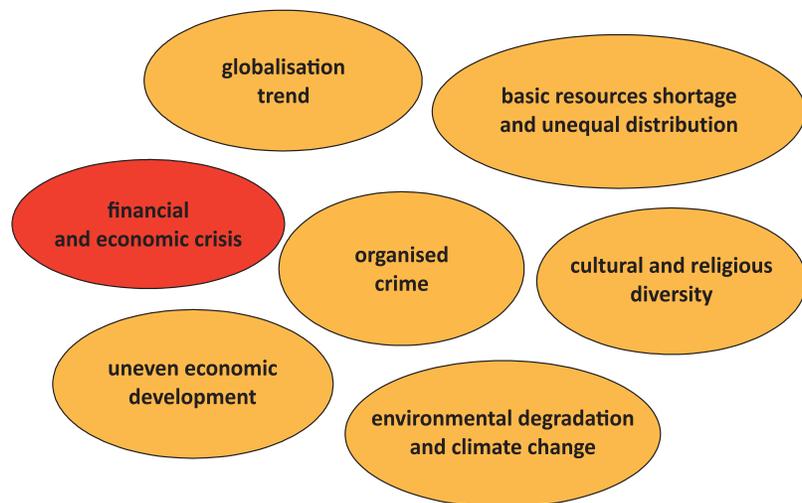


Figure no. 2: The picture of current challenges

*Thus, the planning assumptions will have to diminish the nation's efforts to increase its defence capacity on its own territory and for any type of conflict in our geographical region and to amplify the efforts to meet the commitments to allies, including effective and efficient participation in theatres of operations.*

Collective defence differs significantly from national defence planning, especially due to the differences in the allocation of resources, the main inputs to the system. On the other hand, the omission of the advantages offered by collective defence systems leads to a waste of resources, affecting the very security of the states that do so.

### THE NEED FOR STRATEGIC DEFENCE ANALYSIS IN SUBSTANTIATING DEFENCE PLANNING

Without intentional processes, we find that, too often, a lack of resources makes us unnecessarily plan for intangible results, as we set goals that have no basis for utility. That is why the planning process begins with a very serious strategic analysis. As we will see, there are a multitude of recipes for performing this analysis, from which we will try to choose the best one.

Some of the shortcomings that cause a questionable quality of the results of the planning process and, downstream, of the defence process are due to an insufficient substantiation of the planning,



in the sense that the objectives are often set on the basis of opinions and not on knowledge. Before setting the objectives, the organisation must carefully analyse its current situation and compare it with the desired situation, so that the transformation can be supported by the available resources.

Strategic analysis is a means of transforming the data obtained in the process of environmental analysis into the strategy plan of an organization. Its tools are quantitative methods, formal models and the study of the specifics of a given organization. The main purpose of the strategic analysis is taken into account in order to assess the greatest impacts on the current and future position of the analysed organisation. It is equally important to determine the specific impact on the strategic choices. Based on the identified objectives of the organization, the main tasks faced by the organisation are determined, which will help to present the indicators for strategic planning (Strategic Analysis, 2021).

Whenever a goal is pursued, there must be certainty that it is tangible, so as not to waste the available resources. In order to do this, the costs of achieving the goal must be assessed as accurately as possible and measures must be taken to be able to pay those costs. The rather tight limits of planning indicate to us that it can support the process, but that it can by no means replace it. On the other hand, good quality planning can help the process itself in being more effective and efficient.

Good quality planning must be well-founded, rigorously executed and sufficiently flexible to allow for the necessary corrections following the regular evaluation of the results obtained. Strategic defence analysis is the most used method for this first condition that ensures the usefulness of planning: substantiation. It refers to the evaluation of possible inputs and outputs from the system itself, so that the plan is feasible and realistic. Today's economic and social context, marked by the severe economic crisis at international and national level, requires that our short- and medium-term plans be strictly framed and reasonable.

*Good quality planning must be well-founded, rigorously executed and sufficiently flexible to allow for the necessary corrections following the regular evaluation of the results obtained. Strategic defence analysis is the most used method for this first condition that ensures the usefulness of planning: substantiation.*



In most cases, the argumentation of the decision is as clear as the argumentation of any of the variants in question, which deepens the presumption of arbitrariness in the decision-making process. A serious analysis must allow the elaboration of good decisions and, from our point of view, the solution is nuanced in:

- a) the substantiation of the planning is obligatory (the strategic analysis of the defence is desirable);
- b) the model of such a tool for substantiating the planning is at hand (strategic analysis of the defence can be applied);
- c) the effect of such an analysis is not guaranteed, if it is not accepted by all the actors involved (all interested parties must participate in the analysis);
- d) the costs of the analysis become pure waste if the decision-making bodies do not trust the process (decision-makers must be constantly informed of the results of the analysis and intervene directly when they do not agree with the effects).

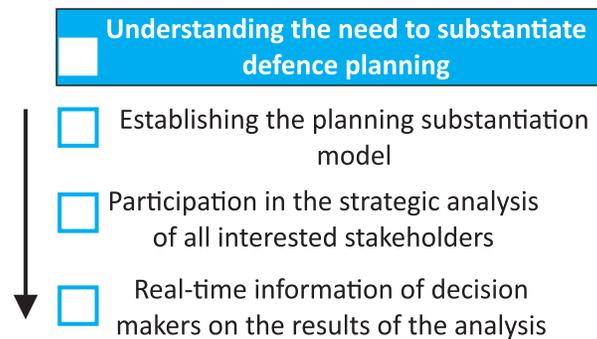


Figure no. 3: The conditions of the effectiveness of the strategic analysis

We are convinced that the call for strategic analysis was determined by the urgent need to understand how to substantiate planning or, perhaps, even by the need to scientifically substantiate it. However, the intention to give even greater importance to the analysis has led to the use of reference documents that are being developed in the United States of America, respectively the United Kingdom of Great Britain and Northern Ireland. A careful, acceptable and, subsequently, accepted by the stakeholders of the system, provides results



that make up, at a certain moment, a document adopted by the entitled institutions. Discussions on conducting a strategic defence analysis focused on several content options. We will further present a variant that we will briefly characterise:

1. Premises (Security environment; Financial resources; Commitments; Missions);
2. Military requirements (Operational requirements; Capability requirements; Other requirements derived from the other missions included in the politico-military Directive);
3. Functionality of the national security system (Institutional consultation, Decision making, Implementation and Periodic evaluation);
4. Human resources (Categories and personnel flow – commissioned officers, non-commissioned officers, warrant officers, volunteers and civilian personnel, Correspondence between personnel flows and the future force structure; Attractiveness of the military career; Optimising the use of human resources);
5. Endowment programs (Prioritisation criteria);
6. Logistics (Consumer logistics; Production logistics; Medical insurance for expeditionary forces; Proposals for the elimination of surplus goods);
7. Infrastructure (Critical infrastructure; Measures for surplus infrastructure);
8. Structure of forces (Forces; Command and management structures; Administrative and support structures);
9. Efficiency of the management/command act (Improving defence planning; Public policy planning system);
10. New directions and priorities in the process of transforming defence.

The essential stages of the strategic analysis represent the chronological order of some activities that make up the analysis.

The first stage is the analysis of the defence policy framework, emphasising the fact that there must be taken into account: the threat and risk assessment, the economic and financial projections,



as well as the demographic analysis. The idea is that these areas of analysis are considered mandatory, but the object of the analysis can be extended. We consider that the first stage should focus on the following components:

- the legislative framework in the field of defence;
- the institutional framework for the field;
- the strategic planning system and the main documents;
- the main risks and threats related to national defence;
- economic-financial projections;
- the demographic analysis.

The complexity of such an analysis lies precisely in the obvious interdependence between components, an interdependence that leads to the need to coordinate the stage at a very high level.

The second stage consists in establishing the planning hypotheses, i.e. the establishment of some constants of the defence system, such as (in our opinion): membership in international organisations, targets and objectives specified by the strategic documents, the applied principles, the decision system. These assumptions generally come from the existing regulatory framework.

The third stage is particularly important for the success of the analysis and consists in the elaboration of plausible scenarios, derived from the system of risks and threats to which Romania is exposed from a military point of view. This stage can allow the analysis to continue only in the case of full coverage of the picture of risks and threats, which is difficult to achieve when those threats do not become concrete. For example, one of the most important current threats is the proliferation of weapons of mass destruction and of carrier vectors. How can Romania counter such a threat? Obviously, the general threat must be materialized in types of possible actions, from the nuclear attack by the aggressor on some objectives located on the national territory and to the effective participation in arms control actions or military actions against states that evade international control.

Based on these scenarios, the military body decides on the missions and tasks it assumes, taking permanently into account the

opportunities offered by membership in the organizations to which it belongs and minimising possible redundancies between the national and the Alliance military capabilities. The logical approach of this stage allows in the first phase the missions and tasks that must be fulfilled by the armed forces in order to reach the proposed targets, following that those components that belong to the national armed forces to be specified later. However, the basic idea is that it is absolutely unlikely that the national armed forces will carry out missions outside of collective defence.

The next stage identifies those military capabilities that are necessary to accomplish the missions and tasks described in the previous stage. These capabilities are one of the main outputs of the analysis process.

The development of a credible and accurate cost catalogue is a seemingly ancillary step, but it is a problem very present in the national space. The catalogue must take NATO standards into account, in order to ensure interoperability and to take into account the fact that most missions take place within the Alliance or along with Alliance member states. Options should include the development of alternative force structures, the identification of capability deficiencies and the development of options to cover these deficiencies (material and non-material). Priorities should be set because, even when all options are needed, it is obvious that they cannot be covered instantly, especially because of the scarcity of resources.

The final stage consists in allocating resources and finalising the implementation plan. Beyond this stage, the process of achieving the proposed objectives begins, in a certain order, with established characteristics and responsibilities.

The most important result of the analysis is the military capabilities. The concept of capability has evolved and become more and more used in various environments, especially in the field of defence, being the basis of true new sciences. Thus, capability “is the heart of systems engineering, although, unfortunately, it is rarely specified as such in science-based approaches” (Neaga, Henshaw, Yue, 2009, p. 3). Based



*The final stage consists in allocating resources and finalising the implementation plan. Beyond this stage, the process of achieving the proposed objectives begins, in a certain order, with established characteristics and responsibilities.*



on this concept, the capabilities-based planning system was created, which means “to plan, in conditions of uncertainty, the realization of capabilities that respond to wide areas of challenges and circumstances specific to our days, within an economic framework that often requires you to make a choice” (Davis, 2002, p. 18). A military capability consists of the following components: Instruction, Equipment, Personnel, Intelligence, Doctrine and Concepts, Organisation, Logistic Infrastructure. Modification of one component determines the corresponding modification of the others, which means that the effects of seemingly local decisions are found in all the components of capability.

Therefore, based on the study of the various requirements that the defence system has to face, a list of capabilities can be drawn up that will allow the achievement of the established objectives. Each of these capabilities is a sum of components that are organically linked when they actually work.

From now on, each component must be planned to correspond, each of them to the operability of the whole. For the whole and for each component, implementation plans can be drawn up, which are, in fact, outputs of the strategic analysis process. Reducing admissibly to the above example, the combat missions will be described, the necessary equipment and acquisitions will be specified, the personnel training will be completed, the field of the mission will be studied and the new infrastructure needs will be specified, etc.

The implementation plans at the strategic level certainly have a very high complexity and a degree of detail that allowing them flexibility, based on which the final documentation is developed. And this time, as we have done before, we draw attention to the provision of the stages of verification of the results, so as not to fall into the traditional trap of planning and not to exhaust the available resources before ensuring the functionality of the capability.

Romania’s current military strategy is part of a broader planning effort, taking place at a time when security and defence challenges are taking on new dimensions, while the COVID-19 pandemic continues to

have its influence not only on the medical front, but also on the social, economic, diplomatic and security front. It provides the necessary directions until 2024, and lays, at the same time, the foundations for the sustainable transformation of the Army until 2040 (Strategia militară a României, 2021, p. 3).

In our opinion, the new Military Strategy is vague, optimistic and full of unclear promises. The strategy emphasizes that the risks to Romania may be exacerbated by vulnerabilities with a military effect (poor railway and road infrastructure and the maladaptation of the defence industry to the needs of the army), as well as by some legislative gaps in the field of national security, which it does not name. The government appears not to have understood these shortcomings for 2021-2024 before the adoption of this document and that it would have any plan to remedy them, because in the previous Strategies they were listed, but they remained only on paper. There is no explanation for the issues related to planning the comprehensive response to hybrid threats, how to ensure the necessary resources for the modernization of the armed forces, what dual-use capabilities are being developed, in a national context and jointly with the allied and partner states.

Critical thinking is reflective thinking generated by the need to react to environmental factors, in order to establish their authenticity and optimal response modalities, while clarifying the objectives. In addition, creative thinking generates new ideas, and combines them with the old ones in order to obtain innovative solutions. However, an optimal affective climate, a certain level of acceptance of change and more flexible perspectives are needed, and that is a challenge for the military organisation.

In conclusion, the general objective of integrated defence planning is to optimise the process of allocating and using resources for the army in order to obtain and maintain the capabilities needed to meet Romania’s commitments to NATO and the EU, thus becoming an important element in increasing the level of effectiveness.



*Critical thinking is reflective thinking generated by the need to react to environmental factors, in order to establish their authenticity and optimal response modalities, while clarifying the objectives. In addition, creative thinking generates new ideas, and combines them with the old ones in order to obtain innovative solutions.*



## CONCLUSIONS

The fast pace of transformation of the regional and international security environment, the forecast of the security environment, the technological evolutions and their influence on the military field highlight the special role of the process of elaborating the Strategic Analysis of Romania's Defence. This analysis represents a political, military, interinstitutional and social process that establishes the interests and objectives of the state in the field of defence and security, starting from the security developments at regional and international level. The strategic analysis can provide a response to the questions related to the military strategic objectives that Romania can fulfil and about the contribution of our country to the missions of the international organisations of which it is part, in order to promote and maintain a climate of regional and international security.

In general, any analysis is formalised through a series of documents that prove the rationality of the decisions to be taken to achieve the objectives. Most of them are uninteresting to third parties, and in some cases, including our case, the information contained in the documents must be very confidential. On the other hand, most large-scale analyses also produce a public document, whether it is subject to the knowledge of the whole society or only of an interested party.

In this case, the strategic analysis of the defence must attach a public document, which can convince the various segments of society of the need to ensure significant funds for military security, even if Romania has been protected from military aggression in the last seven decades.

One of the atypical problems faced by the construction of the national defence system is the improbability of testing in real conditions. This can lead to incorrect assessments of its usefulness and effectiveness in both directions. It is possible, in such conditions, to underestimate or overestimate the capability to defend.

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*The strategic analysis of the defence must attach a public document, which can convince the various segments of society of the need to ensure significant funds for military security, even if Romania has been protected from military aggression in the last seven decades.*



## LAND TASK FORCE'S COMMAND AND CONTROL

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*Command-and-control is not only a combat function, but also a system that encompasses personnel, processes, communication and information system/ CIS, as well as command posts/CPs, used to lead the tactical activities of the Land Task Force/LTF, in particular, and of any force structure, in general. Command-and-control, more than any of the combat functions, will decisively influence the outcome of military action.*

*In order to develop the present article, we have used a series of analysis and scientific research methods specific to sociology, but with applicability in the field of military science. For the analysis of command-and-control as a combat function, we have used the data collection method as well as the historical method to show what the roots of the mission command in military art history are. Subsequently, using the analysis method, we have managed to present the most important aspects regarding the organisation of the command-and-control system of the LTFs as well as a "code of good practices" regarding the organisation of the Battle Rhythm/BR and the decision-making during the execution of military activities.*

*An efficient command-and-control of the LTFs during military activities is the result of the compliance with the principles of command and control and the harmonisation of the staff processes carried out within the CPs deployed during military actions, in order to optimise the understanding – analysis – planning/ synchronisation – decision – dissemination decision-making cycle.*

*Keywords: command; control; command post; decision; integrated cells; functional cells;*



## COMMAND AND CONTROL IN TACTICAL ACTIVITIES

Command-and-control is not only a combat function, as it is stated within the national doctrine specific to Land Forces/LFs as well as to NATO and US Army doctrine. It is also a system that encompasses all other combat functions, present in each of them, decisive for the outcome of any military activity. However, according to the doctrine specific to the United States Armed Forces, command-and-control is also part of the military structures combat power, along with leadership, data and intelligence, manoeuvre and mobility, fire support, sustainment, and protection (F.M. 3-0, Operations, 2017, pp. 2-21).

According to *F.T.-2, Manual of the Staff Activity within LFs Headquarters during Operations*, "command is the authority invested in a person, for directing, coordinating, and controlling military forces. The command is based on the interaction between the commander and the subordinates". (2019, p. 13). Moreover, in accordance with the same doctrinal publication, "control is the continuous supervision, direction, and coordination of forces according to the commander's plan and intent". (Ib., p. 14).

There are two types of command-and-control manifestation within LFs as well as within any NATO military structure: *mission command* and *detailed command*.

*Mission command/MC* is specific to NATO military structures and it is recommended that military leaders should use this way of exercising command and control. In this way, the subordinate commanders' freedom of action is ensured as they receive only the higher echelon commander's intent and the mission in order to let them choose how they will accomplish it, by planning and executing the tasks that will lead to the achievement of the military objectives.

*Mission command* traces its roots back to the German concept of *Auftragstaktik*, which is a form of military tactics in which the main effort is represented by the outcome of the fight and not by the specific

*"Command is the authority invested in a person, for directing, coordinating, and controlling military forces. The command is based on the interaction between the commander and the subordinates".*

*"Control is the continuous supervision, direction, and coordination of forces according to the commander's plan and intent".*



way it is conducted. Mission command was a result of the Prussian military reforms following the defeat of the Prussian Armed Forces by the French in the Battle of Jena in 1809. Under the command and coordination of Helmuth von Moltke, the military strategists in charge of issuing and implementing the reform within the Prussian Armed Forces thought of a different approach for the planning of military campaigns and commanding large armies in overextended theatres of operations. Thus, the main issue of the debate before the implementation of the *mission command* concept is represented by the fact that subordinate commanders to high-level military structures (army corps, LTF, Joint Task Force/JTF etc.) have a better understanding of the local operational environment than the staff of the higher echelon, which is an important prerequisite for being able to respond adequately, quickly, and effectively to threats or opportunities encountered on the battlefield. In other words, subordinate commanders (division, brigade commanders) must have the authority to make decisions in favour of the outcome of military operation, within the limitations imposed by the higher echelon commander's intent and the mission received. After this concept was experimentally applied in the Danish-Prussian conflicts of 1864, the Austro-Prussian conflicts of 1866, and the Franco-Prussian conflicts of 1870, *Auftragstaktik* was codified in the 1888 German Drill Regulation. Since that time, in military history, there have been numerous examples of the successful use of mission command. Among them, a benchmark is the general plan issued by the Allied General Staff in 1944 for the invasion of Europe and the defeat of the German Armed Forces. Thus, using this concept, the Allied Forces' fight was guided and directed from the beaches of Normandy to the west banks of the Rhine and beyond. Coalition Forces also used this concept in the confrontations with Iraqi Forces during the Gulf War to defeat them and occupy Baghdad.

*Detailed command/DC*, in fact, a Russian concept, is a way of exercising command and control that limits or even inhibits the freedom of action of subordinate commanders to whom very in-depth orders and coordinating instructions are specified, to fully synchronise the military activity. Nowadays, when the operational environment is characterised by volatility, uncertainty, complexity, and ambiguity,

*the detailed command* might be the guarantee of failure during military activity. The rapid changing of the conditions within the current operational environment does not help at all the LTF commander to get positive results on the battlefield using the detailed command.

### TYPES OF LTF COMMAND POSTS DURING MILITARY OPERATIONS

In order to successfully exercise command and control, the LTF commander needs a command-and-control system consisting of personnel, processes, communication and information system/CIS, as well as command posts/CPs. The work carried out by the staff, under the command of the LTF commander, within the CPs, allows to carry out all staff processes in order to facilitate the decision-making cycle to plan, prepare, execute and assess the military operation.

Although there are several ways regarding the composition of a CP, we would like to remember the following five parts: staff personnel, workspaces, CIS, sustainment, and force protection within the CP.

To exercise the command and control of a military activity, the LTF will deploy several types of CPs, according to the specific doctrinal documents. Thus, four types of CPs could be deployed during a military activity: Main Command Post/MAIN CP, Alternate Command Post/ALT CP, Forward Command Post/FWD CP, and Assistance Command Post/ASISST CP (Ib., p. 27).

In addition to these CPs, we would like to mention two more types of CPs that could help the LTF commander in exercising command and control: Tactical Command Post/TAC CP and Rear Area Command Post/REAR CP.

TAC CP is the smallest CP that the LTF can organise, having very high mobility, allowing the commander:

- to move across the area of operations/AOO;
- to get intelligence in a timely manner in order to complete the commander's understanding of the operational situation;
- to get in touch with key leaders within the AOO, but also with the subordinate commanders;
- to influence the morale of subordinate forces through his presence.



*The work carried out by the staff, under the command of the LTF commander, within the CPs, allows to carry out all staff processes in order to facilitate the decision-making cycle to plan, prepare, execute and assess the military operation.*



In order to be able to perform these functions, TAC CP must have high mobility, an adequate level of protection, minimal functionality of the CIS, and also specialised staff officers to help the commander to understand the situation, command the military action and engage the targets on the battlefield.

REAR CP can be organised to control the combat activities in the rear area of the LTF AOO. To solve the problem of controlling the tactical activities in the rear area, the commander has two options: to hand over the control to REAR CP commanded by his deputy or to maintain the control by setting up a Rear Operations Coordinate Centre/ROCC within MAIN CP – under the command of Deputy Chief of Staff for Support/DCOS SPT. In case the LTF commander chooses the first option, then REAR CP will be a self-sustained CP, deployed to a different location than MAIN CP.

Regardless of the number of CPs organised by LTF, their existence and deployment must comply with several principles, as follows:

❖ *mobility* – the ability of any type of CP to deny the enemy's attempts to find, fix, and engage it with indirect and direct fire. The smaller the CP's physical, thermal, and electromagnetic footprint is, the harder it will be for the enemy's Intelligence, Surveillance and Reconnaissance/ISR assets to find it. Also, the small size of a CP reduces the time to install and uninstall it;

❖ *dispersal* – a CP should be set up in a sufficiently large space so that if one of its parts has been destroyed by the enemy's fires/attacks, another part should be able to take over its tasks in order to continue to perform the functions of that CP;

❖ *redundancy* – the operational need to always have a backup option if one of the CPs can no longer perform its functions because of different causes. Thus, at the level of LTFs, it is mandatory to have an ALT CP, deployed in a location difficult to detect by the enemy ISR assets. It must be adequately equipped so that the personnel can be aware of the operational situation within AOO, so, at any time, they are able to take over not only the MAIN CP functions but also those of another CP that cannot efficiently operate;

❖ *distributed command and control* – the ability to use the CIS to carry out the *reach-back* and *reach-forward* processes. Through them, one of the CPs carries out processes and develops products

to support the other CPs. For instance, only one CP will be responsible for creating, maintaining, and distributing the Recognised Ground Picture/RGP to the other CPs through *reach-back* or *reach-forward* processes;

❖ *dispersed command and control* – the deployment of personnel and CIS applications in order to perform their functional tasks in all CPs organised by the LTF within AOO;

❖ *force protection* – the ability of any CP deployed in the LTF AOO to have a certain form of protection to deny the enemy's ISR assets detection, enemy's ground attacks, including those carried out by special operations forces/SOF, and by the enemy's artillery assets and air platforms. Active and passive air defence measures and CBRN defence measures must also be put in place.

Any option regarding the LTF command-and-control system organisation as well as its deployment within AOO must consider the principles mentioned above. If the operational situation does not provide the conditions for compliance with those principles, the commander will have to assume certain risks regarding the command-and-control system organisation for a given military operation.

### LTF COMMAND-AND-CONTROL SYSTEM ORGANISATION

An appropriate organisation of the command-and-control system with respect to the existence and type of CPs must come from an effective and critical analysis carried out by the staff. To provide an optimised LTF command-and-control system during operations, which has to effectively respond not only to the challenges of the current operational environment, but also to the needs of such types of forces, we will carry out a deductive analysis. When we talk about the LTF military activities, the command-and-control system (i.e., command posts) must perform a number of decisive functions to optimise the decision-making cycle, as follows:

- understanding the operational situation within the LTF AOO;
- long-term planning of military activities or the next phases/stages of an ongoing action;
- synchronisation of LTF activities within the medium-term planning horizon (24-96 hours);



*Dispersed command and control – the deployment of personnel and CIS applications in order to perform their functional tasks in all CPs organised by the LTF within AOO.*

*Force protection – the ability of any CP deployed in the LTF AOO to have a certain form of protection to deny the enemy's ISR assets detection, enemy's ground attacks, including those carried out by special operations forces/SOF, and by the enemy's artillery assets and air platforms.*

*TAC CP must have high mobility, an adequate level of protection, minimal functionality of the CIS, and also specialised staff officers to help the commander to understand the situation, command the military action and engage the targets on the battlefield.*



*With regard to the command posts-specific planning function, there shall be a long-term planning module within the MAIN CP, responsible for planning the next military activity or phase/stage of the ongoing military action. This long-term planning module – Future Plans/FUPLANS will be set up having G5-Plans as the main branch and will include all functional areas subject matter experts – command and control, intelligence, manoeuvre, fire support, sustainment, protection, and information activities.*

- conducting the targeting process;
- allocation of resources to sustain the military activities of the LTF;
- control and coordination of current activities in the operation horizon of up to 24 hours;
- assessment of the LTF military activities.

In order to perform the first function, LTF should organise an analysis centre of the collected data within the AOO to issue the specific G2-Intelligence products (intelligence estimates, intelligence summaries etc.). The level of understanding of the operational situation within the headquarters must be better using these products so that the planning and synchronisation of the LTF activities are conducted in accordance with the best/updated available intelligence. Given the consistency and size of such an intelligence analysis centre (it includes all intelligence disciplines' analysts), we support the idea that it should be part of the MAIN CP.

With regard to the command posts-specific planning function, there shall be a long-term planning module within the MAIN CP, responsible for planning the next military activity or phase/stage of the ongoing military action. This long-term planning module – Future Plans/FUPLANS will be set up having G5-Plans as the main branch and will include all functional areas subject matter experts – command and control, intelligence, manoeuvre, fire support, sustainment, protection, and information activities.

Synchronisation of the LTF activities in the medium-term planning horizon will be carried out by the special module organised within the MAIN CP, which is based on the G35-Future Operations/FUOPS structure. By augmenting the G35 with all functional areas subject matter experts, a capable integrating module will be created in order to meet the challenges of the synchronisation and medium-term planning processes for military activity, in the time frame of next 24 and 96 hours. In fact, the organisation of the FUOPS module must be a faithful replica of the FUPLANS module, with a plus in what means the targeting and intelligence structures within it that should be more numerous, given that the effort of the LTF during the execution of the military activity is represented by the medium-term planning in order

to create the favourable conditions for the subordinated combat force structures (divisions or army corps) to engage the fight with an enemy having a decreased combat power so that success is guaranteed.

The targeting process specific to the fourth function has two components: planned and dynamic targeting. For the planned targeting, the LTF fire support coordinating structure will augment the FUOPS and FUPLANS modules to pre-plan the targets for the fire support structures within the LTF. For dynamic targeting, a Fire Support Centre/FSC will be set up within the Current Operations Centre/COC. If the LTF will integrate joint level capabilities (ISR, air force/fixed wings etc.) within its military activities, for a limited period, then a Joint Air-Ground Integration Centre/JAGIC must be set up within the COC.

In order to allocate the necessary resources for the conduct of a military action by LTF, a resource module should be set up, either within the MAIN CP or REAR CP, which has to be responsible for generating material and human resources and conducting re-supplying activities in order to successfully execute the military activity. Of course, subject matter experts within the logistic structure will augment FUPLANS and FUOPS modules, as well as COC in order to provide the necessary experience for the planning, synchronisation, and controlling of military activities regarding resource allocation. For instance, within COC it is mandatory to have specialists from Movement and Transportation/M&T branch so that the personnel within COC can be aware of the flow and rate of movements in the LTF rear area. There should also be a Medical Operations Cell/MEDOPS Cell responsible for the control and coordination of medical evacuations within LTF AOO.

The control and coordination of current activities within the operations horizon of up to 24 hours must be carried out by the Current Operations Centre/COC. This centre should be part of FWD CP, so the commander will have the necessary tool to conduct military activities from a different location than MAIN CP when the situation requires:

- for conducting an action that demands a high degree of coordination in the LTF close area, such as a river crossing operation with two combat forces (divisions or army corps) in the first echelon at the same time;



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*Assessment of military activities has two components: the current operations assessment and the general assessment of the LTF military activities. The current operations assessment is carried out within COC and is based on: assessment of losses caused to the enemy by friendly fire support assets; assessment of the conditions established to be met within the operations horizon of up to 24 hours within the LTF AOO.*

- for conducting a Forward Passage of Lines/FPOL with at least two divisions or army corps in the first echelon.

Also, there should be a Current Operation Planning Team/COPT within FWD CP, in order to be responsible for planning military actions with effects up to 24 hours operation horizon, such as the situation that requires the use of LTF reserve in the battle and, subsequently, its regeneration.

Assessment of military activities, just like the targeting process, has two components: the current operations assessment and the general assessment of the LTF military activities. The current operations assessment is carried out within COC and is based on:

- assessment of losses caused to the enemy by friendly fire support assets – Battle Damage Assessment/BDA;
- assessment of the conditions established to be met within the operations horizon of up to 24 hours within the LTF AOO (they can be divided into conditions for the DEEP, CLOSE, and REAR areas, depending on the operational framework used by LTF).

The overall assessment of the operation is based on Measures of Performance/MoP and Measure of Effectiveness/MoE indicators used by the G5-Plans to determine the current state of the military action at a given time.

As we can see, there should be deployed several CPs during a LTF operation to support the commander in exercising command and control of military activities. Thus, in order to command and control the subordinate forces, a LTF should deploy MAIN CP, ALT CP, FWD CP, TAC CP, and REAR CP. The specific functions of the Assistance Command Post/ASISST CP, as described in the Romanian Army doctrine, can be fulfilled by TAC CP. (Ib., p. 29)

In turn, these CPs should be set up on both functional and integrated modules. In our opinion, the organisation using integrated modules, having one of the functional modules as a leader, around which the integrated module will be set up, is optimal. In this way, the integrated modules will be responsible for the LTF military activities in all-time horizons (current, medium, and long), with no possibility of remaining any uncovered part of the operation.

## DECISION-MAKING CYCLE DURING THE EXECUTION OF LTF MILITARY ACTIVITIES

In addition to the organisation of the command-and-control system in such a way that the LTF commander is assisted in exercising it over subordinate units, it is necessary that the activity of the personnel, regardless of the CP where they perform their duties, should be regulated by a staff document that puts in order the sequence of carrying out the staff processes. The staff document regulating the activity of the headquarters is the Battle Rhythm/BR that aims to standardise the activities so that they are carried out in support of the LTF commander decision-making cycle – understanding, analysis, planning/synchronisation, decision, dissemination.

When we talk about BR, we must bear in mind two aspects. The first is that it must be organised in such a way that there is a logical sequencing of activities so that during decision-making meetings – *Board* (e.g.: Assessment Board, Targeting Board etc.), the staff is able to provide to LTF commander the best information to support his decision. Furthermore, the products issued following the meetings, working groups, and decision-making boards should provide useful information for the activities within the higher echelon BR. The second aspect is related to the speed of carrying out activities in BR. It is known that, within the current operational environment, the military structure that manages to impose the tempo of combat activities is the one that will win the initiative, further on the freedom of action, and will force the enemy to have a reactive attitude on the battlefield. Therefore, the tempo of activities in BR must be adjusted so that the LTF commander's decision-making cycle is shorter than that of the enemy. In this way, the decision of the LTF commander is made faster than that of the enemy commander, forcing him to be constantly reactive. Of course, the speed of decision-making would not help much, if the staff were not able to analyse the situation correctly and as thoroughly as possible in order to offer the LTF commander as many options as possible, trying to problematise the fight, to find and provide the answer to as many "What if?" questions as possible in the time available.



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The BR-specific staff activities and processes must be closely related to the LTF decision-making cycle, during the military action. Thus, as a rule, the BR cycle is triggered by an information meeting regarding the understanding of the current operational situation – Situational Awareness Briefing/SAB. During the SAB, the staff shall present to the commander the updated situation within the AOO and the main issues that may influence the LTF military activities for the coming period are identified. These problems can be of a smaller or larger scale and can be specific to any functional area. For instance, if the LTF is involved in a river crossing operation, over which it has set up several pontoon bridges, and the meteorological forecast announces large quantities of precipitation, with possible flooding of the riverbanks, a problem that will move further on throughout the decision-making cycle is related to the readiness state of the pontoon bridges over the river.

All issues identified during SAB will be the subject of deep analysis in the Daily Activities Synchronisation Working Group/DASWG. During the working group, each of the problems identified will become topics of debate, and the subject matter experts of each functional area will express their opinion regarding those issues. Normally, for the next 24-48 hours, there should not be issues that require the LTF staff intervention to fix them, but rather small synchronisations of the upcoming activities in time and space. The likely effects of the identified issues must be accurately determined/estimated so that the actions necessary to be conducted by the LTF in order to counteract these effects can be framed in time and space. To continue the issue regarding the riverbanks' flooding mentioned above, let suppose that heavy rains will fall in the next 24 hours, and flooding of the riverbanks will have effects in the next 48-72 hours. At the end of this working group, the participants must determine what are the issues that will decisively influence the LTF future activities that they must consider for later, during the planning/synchronisation step, so as to present to the commander, within the decision-making board, one or more courses of action in order to deny/limit the effects of these issues.

The identified and analysed issues that deserve to become the subject of a planning/synchronisation process will be further addressed within the FUOPS or FUPLANS modules to provide suitable solutions to solve them. Some of the problems will require simple

solutions, only for synchronisation and minimal adjustments of the Operation Plan/OPLAN in terms of the scheme of manoeuvre, tactical layout or task organisation, but others will require the activation of integrated planning/synchronisation teams to provide at least two different courses of action to the LTF commander within the decision-making board. In this case, there will be fundamental changes in the scheme of manoeuvre, tasks of subordinate units, and coordinating instructions. In the case of heavy rainfall that will affect the riverbanks in the sector where pontoon bridges are in place, for the next 48-72 hours, it will likely be necessary to activate these integrated planning/synchronisation teams to develop courses of action regarding the LTF river crossing operation because the weather conditions will influence the execution of the tasks already received by the subordinate units, the scheme of manoeuvre as well as the coordinating instructions in terms of time and space.

The solutions found by the staff within the FUOPS and FUPLANS modules will be submitted to the LTF commander during the Daily Activities Synchronisation Board/DASB. During this meeting, the identified and analysed issues are presented in chronological order, starting from the next 24 hours until the next 120 hours. It is worth mentioning that normally the staff will seek to get the commander's decision to synchronise the activities within the next 72-96 hours, given the fact that divisions or army corps are the LTF subordinate units. For less than 72 hours, it is unlikely that synchronisation of the activities can be achieved. For each of these problems, the solutions found by the staff to fix them are presented to the commander. If the staff must present two or more courses of action to solve the identified problems, there should be a complete presentation – the scheme of manoeuvre, the tasks/missions for subordinate units, the coordinating instructions, as well as the specific issues regarding each functional area. At the end of the DASB, the LTF commander must communicate his decision regarding the solutions suggested by the staff to fix the identified and analysed problems.

Further on, based on the decisions made by the commander, the LTF staff proceeds to implement them through Fragmentary Order/FRAGO, adjustments to the Scheme of Manoeuvre, Decision Support Matrix/DSM, Decision Support Overlay/DSO, and Synchronisation



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Matrix/Synch Mat. The decisions made by the LTF commander, as well as the way in which they are implemented, will be disseminated to the subordinate units during the Commander Update Brief/CUB. During this meeting, the LTF commander informs the subordinate commanders/liaison officers the decisions he has made within DASB and lets the staff present the products developed in this regard.

All other meetings, working groups, or boards within the BR should be established considering the four meetings based on which the LTF commander decides during the execution of the operation. The BR must be a logical, simple, coherent, and “*uncongested*” document. The current tendency is to overload the BR to have as many meetings and products as possible, as well as because of the lack of staff experience.

*Mission command is a key aspect of the manoeuvring approach during LTF and Land Forces operations. It gives subordinate commanders the flexibility and authority to exploit vulnerabilities in the adversary's tactical layout as they are identified.*

## CONCLUSIONS

Following the study of the literature regarding the organisation of the division, army corps, or LTF command and control system, as well as following the experience gained due to the participation in multiple national and multinational military exercises, we have identified a series of conclusions that will be presented in the following part of the article.

First, it should be taken into consideration that mission command is a key aspect of the manoeuvring approach during LTF and Land Forces operations. It gives subordinate commanders the flexibility and authority to exploit vulnerabilities in the adversary's tactical layout as they are identified (F.T.-1, Doctrina operațiilor forțelor terestre, 2017, p. 59). For this concept to become a reality within military activities, the LTF staff and commander should focus on submitting the missions to subordinate units using *mission-type orders*. In this way, the subordinate commanders will know the mission they have to accomplish and its purpose, thus maximising their freedom of action regarding how to carry out the mission received. Such operations orders/OPORD emphasise the LTF mission, commander's intent, the concept of operations, missions for subordinate units, and essential coordinating instructions for the execution of a military activity. Therefore, mission command entails a simplification of the OPORD issued by the LTF headquarters, without losing the essential details, in

the sense that, in paragraph 3 – Execution, the missions for subordinate units will have priority against a multitude of specified tasks that limit the subordinate commanders' freedom of action in time and space.

Regarding the organisation of the LTF command-and-control system, our opinion is that it must include the following types of CPs:

- ❖ MAIN CP must be responsible for understanding the situation, long-term planning, medium-term planning and synchronisation of activities, the targeting process, as well as the overall assessment of the operation;

- ❖ FWD CP must be responsible for controlling and coordinating the current operations within the horizon of up to 24 hours across the LTF AOO, as well as for their assessment. Within FWD CP, COC will be deployed, as well as a Current Operations Planning Team/COPT responsible for planning the military activities with effects of up to 24 hours;

- ❖ REAR CP must be responsible for allocating resources for the LTF military activities, for planning and coordinating operations, as well as for the security in the rear area. For the planning purpose, REAR CP should coordinate with the FUOPS and FULANS modules within MAIN CP. To control and coordinate the operations in the rear area, REAR CP will cooperate with FWD CP, through the liaison officers/teams within COC. REAR CP is a very important piece within the LTF command-and-control system because a multitude of actions will be carried out in the rear area such as re-supplying activities, medical and damaged equipment evacuations, control and security of communication lines, key leaders' engagements (within local civil and military authorities), control of prisoners of war etc. Therefore, it is recommended that this type of CP exists within the LTF command-and-control system, instead of using ROCC to coordinate activities in the rear area;

- ❖ TAC CP must be the mobile command element used by the LTF commander, for short periods of time, in which he wants to complete his situational awareness regarding the operational situation with useful and clear intelligence from the area where decisive actions are conducted on the battlefield, as well as when he wants to increase the morale of the subordinate units;

- ❖ ALT CP is responsible for keeping up to date the current operational situation within LTF AOO so that if one of the aforementioned



*MAIN CP must be responsible for understanding the situation, long-term planning, medium-term planning and synchronisation of activities, the targeting process, as well as the overall assessment of the operation.*

*FWD CP must be responsible for controlling and coordinating the current operations within the horizon of up to 24 hours across the LTF AOO, as well as for their assessment.*



CPs cannot effectively perform its functions because of different causes, ALT CP becomes a viable option for the LTF commander. There are two solutions regarding its organisation within LTF command-and-control system. The first is the one in which REAR CP also performs the role of ALT CP, given that it is aware of the current situation in the entire AOO because of the liaison with FWD CP, but also with MAIN CP regarding the medium and long-term planning activities. Another solution for organising ALT CP is represented by splitting MAIN CP into two identical CPs so that in case either of them cannot properly work the other can perform the specific functions of MAIN CP.

To manage the activities within the five types of CPs proposed to be organised within the LTF command-and-control system, clear responsibilities must be established. Thus, we support the idea that the LTF commander should be in charge of FWD CP when he is not deployed with TAC CP. Also, running the activities within FWD CP should be the responsibility of the Deputy Chief of Staff for Operations/DCOS OPS. The commander of MAIN CP should be the LTF Chief of Staff/COS supported by his deputy for plans – Deputy Chief of Staff for Plans/DCOS PLANS to coordinate the medium and long-term planning processes carried out within it, as well as the targeting process. If the decision to split the MAIN CP into two identical structures is made in order to also set up an ALT CP, then the responsibility for running the activities within these CPs will be taken by each of the two decision-makers. The LTF deputy commander will be in charge of REAR CP, being supported by the Deputy Chief of Staff for Support/DCOS SPT.

A conclusion that we want to bring to the readers' attention is related to BR. The responsibility for directing the development of the LTF BR lies with the COS. He will establish the working groups, meetings, and decision boards to be carried out taking into consideration two aspects: the LTF decision cycle and the higher echelon and subordinate units BR. The structure responsible for the information management and staff processes within LTF headquarters is in lead for the activities' synchronisation within BR according to the time and place of the working groups, meetings, or decision boards. Each functional module is responsible for leading and organising its part within BR – for instance, the Assessment Working Group/AWG is the responsibility of G-5 Plans. As a rule, at this level, the BR cycle

is 96 hours, being synchronised with the release of the Air Tasking Order/ATO cycle. During multinational exercises, when military structures are trained for *high-intensity peer-to-peer conflict*, there is a tendency to reduce the BR cycle, sometimes reaching up to 24 hours. This happens because of the intention to train the staff in rapid-changing conditions specific to the current operational environment as well as to reduce the necessary time of the LTF decision-making cycle below that required by the enemy commander to make a decision so that he is reactive on the battlefield.

Command-and-control is a decisive element of the combat power that LTF can use against the enemy in the operational environment. It is a combat function, but also a system at the same time, being present in any of the combat functions and in the staff processes of the LTF headquarters. Adaptability, creativity, and ensuring freedom of action are the keys to success in applying this combat function, as well as in organising the LTF command-and-control system taking into consideration confrontation with an agile, rapid, and adaptable enemy.

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## MILITARY MOBILITY – A PRESENT-DAY REQUIREMENT –

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*The current security threats identified in the vicinity of the European Union Member States generate new approaches in the field of collective defence, in close connection to the reanalysis of practical ways to implement mutual support and increase the military mobility of the allied countries, taking into account the multiple legislative and procedural implications, the need for well-founded analyses of the transit areas and the efficient use of the available transport infrastructure. Referring to the national approach, analysed from the perspective of the mobility-force protection binomial, the military mobility highlights the need to identify relevant solutions for approaching various obstacles, manoeuvring in the tactical field, ensuring the viability of roads and identifying routes to bypass inaccessible areas. Also, knowing the existing limitations in transport infrastructure and identifying the solutions to eliminate them are priorities for all the European states. In order to substantiate the decisions to increase military mobility, viewed from both a national and a multinational perspective, the military planners can use the mathematical models for the decision-making process under certainty conditions, which leads to viable well-founded solutions that can underlie the success of the military operations involving different structures of military forces.*

*Keywords: security; military mobility; European Union; NATO; mathematical models;*

## INTRODUCTION

The beginning of the 21<sup>st</sup> century, marked by numerous military conflicts and more or less extensive political crises in different geographical areas of the world, brings to the fore the need for most countries in the world to take new security measures to counterbalance the current threats. Making a direct reference to our country, Romania cannot stand aside in the field of security, especially since we are in a “hot” area, on the border between NATO and Russia, marked by numerous incidents in the Black Sea region and in the vicinity of the smouldering conflicts in Transnistria and Ukraine. At the same time, various European countries are living under constant security threats, referring here to Poland and the Baltic countries.

The problems of security uncertainty also lie in the recent events related to the incidents on the Polish border with Belarus or the scale of the *Zapad-2021* exercise (Rumer, 2021), which was attended by significant military forces from Russia and Belarus. Specifically, given that Belarus encourages and facilitates the passage of migrants towards Poland, we are witnessing the construction of a barbed wire fence along its 418-kilometer border with this country in order to reduce illegal migrant crossings. As the incidents on the Polish border are on the rise, we need to analyse these security issues from a European perspective and see what steps are required to take in order to maintain security on the old continent. We must not omit the fact that there are already armed forces belonging to several states, Romania included, in Poland, our country participating with a subunit of air and missile defence.

Secondly, the *Zapad-2021* exercise conducted at the NATO border is characterised as a real show of strength, with the estimated participation of about 200,000 soldiers, over 290 tanks, over 240 multiple launch rocket systems and mortars, about 80 fixed and rotary-wing aircraft and 15 warships, simulating a battle with none other than the North Atlantic Alliance forces. This kind of military manoeuvre always



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raises suspicions, especially given that the recent history has shown that the 2008 invasion of Georgia was preceded by the *Caucasus Frontier* military manoeuvres carried out between 2006 and 2008, and in the case of the annexation of the Crimean Peninsula, the troop manoeuvres were also disguised under the pretext of similar military exercises. However, apart from its magnitude (the number of troops being far superior to *Zapad-2013* or *Zapad-2017* exercises), one of the strangest aspects of *Zapad-2021* is the stated purpose of the exercise: the Red Army is training for the event of a conventional, large-scale war with NATO.

In the current context, in which Europe is going through a period of security uncertainty, NATO's partnerships with the European Union can ensure cooperation on common interest issues and help counter threats and challenges to the international security in general and the European security in particular. The role of NATO and the agreements established at the level of the European Union become defining, and Romania cannot miss from this equation due to its membership of NATO and of the European Union. It is also necessary to admit the importance of the military exercises in which our country participates and especially the multinational ones carried out on the national territory, thus proving a firm reaction to the previously mentioned threats.

One of the real problems that the military planners of these exercises must solve is to ensure adequate mobility of the forces participating in the exercises, in the context in which they must be redeployed from certain regions, requiring crossing different countries, and must act as a unitary force in the areas established for the conduct of the exercises. Actual examples in this regard are the *Saber Guardian* (MND, 2020) or *Noble Jump* (NATO, 2021) exercises carried out in our country, which involved large-scale military manoeuvres of several NATO military structures, which transited several land, air or sea routes, so that the mentioned military exercises may proceed in the prescribed time frames, in the areas assigned to each formation, according to a well-established schedule.

In another vein, the increase in the security or terrorist threats require that the European states should reanalyse the practical ways

to ensure regional security in terms of collective defence. It is a reality the fact that we are witnessing a globalisation of security, seen as a counterweight to the unpredictable development of another current phenomenon located *“on the other side of the barricade”*, namely the globalisation of insecurity. In these circumstances, the European states have adopted new security priorities, in which regional security becomes paramount over their own security.

The idea of collective defence is not new, being the result of the missions identified in terms of the increase in threats and the vulnerability of different states. Therefore, article IV of the Brussels Treaty (2018) and Article 5 of the Washington Treaty (1949) expressly provide that the signatory States have an obligation to assist each other in the event of aggression in order to restore security. The implementation of mutual support involves the mobility of the military structures of the partner countries, with multiple legislative and procedural implications as well as the need to perform well-founded analyses of the transit areas and the efficient use of the transport infrastructure. All these are important issues on the European agendas, and the ultimate goals tend to a unitary outcome: ensuring European security.

### MILITARY MOBILITY FROM A EUROPEAN AND NATO PERSPECTIVE

We consider mobility as an indispensable asset in the military field, which can make a difference on the modern battlefield that is continuously changing, with unprecedented technological developments. Also, in our approach to the military mobility and its importance, we consider it appropriate to highlight this aspect by referring directly to the mobility of the German armed forces in the two world wars, especially the mobility of the submarines in the First World War and the mobility of the land forces of the same country during the *“Lightning War”*, specific to the Second World War, with the examples of the land operations for the conquest of Poland or the crossing of the Ardennes.

Taking a leap in time, at the beginning of the 21<sup>st</sup> century, we note that the military mobility is a major area of interest for the modern



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armed forces, which try to approach new ways to improve this capability, in order to increase the manoeuvrability of all services, given the increasingly varied threats. NATO and the EU cannot avoid these threats and make sustained efforts to achieve and maintain adequate military mobility, so that military structures belonging to different Member States could redeploy in a short time to new assigned areas of operations, providing adequate protection to the forces during the execution of specific manoeuvres.

The year 2017 is an important milestone in the effort to create a common defence of the European Union, with the promulgation within the European Commission of a report outlining the importance and the need for future measures to this purpose, with a view to 2025. At the same time, this report sets out the steps needed to build a more united, more efficient and effective European Union capable of defending the common interests and priorities of its members in promoting peace and guaranteeing the security of its citizens and territory, as set out in the EU Strategy on foreign and security policy. In this respect, some relevant aspects of joint defence and possible ways of putting this project into practice, which could be feasible in all Member States, are also tackled. As a result, twenty-five EU Member States have decided to include military mobility among the commitments made in the Permanent Structured Cooperation Plan launched on 11 December 2017 (The Council of Europe, 2021). The Council of Europe of December 2017 promoted European military mobility both in the framework of the permanent structured cooperation and in the context of the EU-NATO cooperation. The new approach admits the idea that better mobility of forces inside and outside the EU will increase European security to the point of allowing EU Member States to act more quickly, in line with their defence needs and responsibilities, both in the context of the joint security missions and the national and multinational defence policies.

Within this project, an important role is given to improving military mobility in all EU Member States, a mobility that ensures, where necessary, the implementation of the common defence measures and the effective mutual support when the situation requires it. Thus, the facilitation of the movement of troops and military means is considered

to be essential for the security of the European citizens and a sine-qua-non condition for building an efficient more integrated European Union with a better capability to respond to security threats. This issue was identified in the report on improving military mobility in the EU in November 2017 and has become a desideratum of the EU's Global Strategy on Foreign and Security Policy. The action plan presented in this regard identifies a number of operational measures to remove the physical, procedural or regulatory barriers that impede military mobility. In our opinion, the close cooperation with the EU Member States and all the relevant actors is a priority for the implementation of this action plan.

The action plan on military mobility was developed within the European Defence Agency, suggesting practical actions in the following key areas: military requirements, transport infrastructure and regulatory and procedural issues.

The first area, of military requirements, is the starting point for a coordinated and effective approach to military mobility across the EU. The European External Action Service (EEAS) and the EU Military Staff are the structures designated to develop these military requirements, reflecting the needs of the EU and its Member States, including the infrastructure needed for military mobility. Identifying and reaching an agreement on military requirements is a priority for the EU and its Member States, being the starting point for an effective Union-wide approach, enveloping all the actions defined in the other two key areas.

The second area of interest, of transport infrastructure, makes direct reference to infrastructure and investment policy, in order to create opportunities for a symbiosis between the civilian and the military needs. In 2019, the Commission nominated by the European Defence Agency developed a report on the parts of the trans-European transport network that are suitable for military transport, including suggestions for the necessary adaptations to the existing infrastructure (e.g., airport facilities, height or load-bearing capacity of bridges etc.). The Member States agreed on the need for priority projects and approved additional financial support for these major projects (Tibil, 2018). This project will support the Member States' commitment to simplify and standardise the cross-border military transport



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procedures. It aims to increase the speed of the military forces across Europe. Its purpose is to ensure the unrestricted movement of the military personnel and assets within EU borders. This means avoiding lengthy bureaucratic procedures for travelling through or between EU Member States, whether by rail, road, air or sea. The project should help reduce barriers, such as legal obstacles to cross-border traffic, persistent bureaucratic requirements (such as passport checks at some border crossings) and infrastructure problems, such as roads and bridges that cannot bear large military vehicles (PESCO, 2021).

In the spirit of the above, transport infrastructure policies offer a clear opportunity to combine the defence needs with the existing policies at EU level, especially in the field of trans-European transport. A pilot analysis made by Estonia had a remarkable practical importance in this field, aiming at the trans-European transport network in the Baltic Sea area. This pilot analysis proved to be very useful, with the Member States participating in the exercise underlying this analysis, identifying the weaknesses in their transport networks assigned for military purposes and the requirements to develop these networks. EU road networks, the maximum height of road bridges and the maximum allowable weight of certain bridges are not sufficient for certain military oversized vehicles. Similarly, with regard to rail transport, certain situations have been identified, which have resulted in limitations on the cargo and transport capacity of large military equipment. Last but not least, the pilot exercise also identified the opportunities offered by dual-use civilian military infrastructure, in particular the facilities represented by standard transport platforms and containers, which allow efficient mobility of goods within the transport infrastructure, regardless of ports, airports, railways or roads, a decisive role being played by the standardisation of loading gauges.

The regulatory and procedural issues covered by the third area of interest refer directly to the identification of variants that would be unanimously accepted by the Member States for streamlining and simplifying the customs formalities specific to the military operations and the need to reassess the alignment of regulations on the transport of dangerous goods in the military field. In parallel, the European Defence Agency has been designated as the structure responsible

for supporting the Member States in developing mechanisms for cross-border movement authorisations. Important issues are covered in this area, such as those relating to dangerous goods, customs duties and value added taxes.

Land transport of dangerous goods is an area in which the European Commission and the EU Member States are actively involved in negotiating a complex set of international conventions and recommendations made by the UN. Although they are applied only to civilian use, those particular ways of applying the national rules when requiring freedom of movement for military transport, including dangerous goods (ammunition, explosives etc.) must be found. Certain civil proceedings require legislative revisions regarding the granting of special authorisations in order to avoid possible delays in the mobility of military transport.

Customs duties and value added taxes are another set of problems in the regulatory aspects, which require timely solutions so as not to impede military mobility. In this regard, appropriate solutions must be found to the difficulties identified in the legislative framework regarding the export and import of military goods by or for the benefit of the various armed forces in the EU Member States. Military mobility may also require the transport of certain fuels, food, training materials, military equipment etc., which are subject to value added tax under local law.

The joint actions in the three areas presented above and the intense cooperation between the EU and NATO have led to the development of a wide range of tools to provide adequate security for the citizens of Europe and beyond. Thus, on 10 July 2018, the EU and NATO signed a new joint statement by which they agreed on a common vision of how the two entities will act together against common security threats. At the same time, the areas on which the EU-NATO cooperation will focus have been established, namely: military mobility, cyber security, hybrid threats, counter-terrorism, women and security.

It is worthwhile mentioning that although NATO initially campaigned for a position of cooperation with the EU on how to develop military mobility, NATO has meanwhile changed its approach to these efforts, amid new visions for the development of a common European defence,



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considering the EU's efforts to establish an armed force to be a step forward towards creating a "competitive" structure with NATO, which risks weakening and dividing the North Atlantic Alliance.

Last but not least, we consider that the actions of the European states in terms of military mobility have been on a downward trend, due to the problems caused by the new Coronavirus, with the national efforts focusing on public health, with the use of the available resources, including of the military, to limit and eradicate this pandemic.

### MILITARY MOBILITY FROM A NATIONAL PERSPECTIVE

From a national perspective, we have a well-defined *mobility-force protection* binomial, which has a decisive role in achieving freedom of manoeuvre and defending one's own forces from the possible enemy actions and/or against the adversities of nature. Achieving mobility directly refers to approaches to: overcoming various obstacles, manoeuvring in the tactical field, ensuring the viability of roads and identifying routes to bypass inaccessible areas.

Military mobility in Romania, approached from a multinational context, must address some important aspects regarding: the configuration of the land in the border area and the possibilities of conducting land manoeuvre (relating to mobility in the west versus mobility in the south), ensuring the conditions and possibilities for airports for air manoeuvring and, last but not least, for naval mobility in the Black Sea and the Danube areas.

The possibility of performing land manoeuvre brings with it the advantage of a rapid flow of military equipment on wheels, regardless of the size of the subunits/units/task forces, compared to the naval or air manoeuvre. For example, the execution of a manoeuvre by an armour or artillery battalion in the southern border area, analysed from the land and naval perspectives, can bring different manoeuvre times, with major influences on the success of the operations in which these forces are planned to participate. Specifically, the execution of the manoeuvre by a battalion of towed or self-propelled artillery on wheels, in case the Danube is crossed over the Ruse-Giurgiu Bridge, with a speed of 30 km/h, can be achieved in maximum 30 minutes.

If the passage of the same artillery unit is done by means of specialised military ships (e.g., ships provided by a battalion of river crossings), the crossing times would be very long compared to land mobility, which can lead to belatedly using the forces in planned military operations. For example, at least five heavy river crossing ships are required for the passage of an artillery battalion. If we add up the time required to embark with the time required for the crossing and the disembarkation time, given that the embarkation and disembarkation areas do not always ensure the possibility of anchoring all transport vessels simultaneously, we reach a total time of approximately 120 minutes, concluding that the total passage time is much longer than the passage time on wheels.

In the process of analysing military mobility on the national territory, we consider that a relevant analysis must also be made in the case of Dobruja, a geographical area to/from which military and civilian mobility is largely ensured by the Anghel Saligny Bridge and, in the near future, by the Brăila-Smârdan Bridge. We believe that this analysis must also be made in the situation where military mobility cannot be materialised from the perspective of using these bridges, being necessary, at some point, to manoeuvre land forces using floating bridges or river crossings with crossing ships/ferries. These are aspects that we consider important, and in the situations mentioned above, a decisive role will be played by the specialised engineering units, which will be responsible for building floating bridges or using specialised ships, otherwise military planners may face real problems ensuring mobility of the forces in this eastern part of the country.

The construction of a floating bridge over the Danube requires appreciable logistics, a fairly long construction time and, last but not least, forces to maintain its viability, both from a constructive point of view and from the force protection perspective. We consider this variant to be optimal in large-scale military exercises, which involve a significant number of military structures that are engaged in the river crossing. The exercises of building such a facility are essential for maintaining skills and putting them into practice when the situation requires it.



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*The Saber Guardian 2017 and Saber Guardian 2019 exercises highlighted the importance of floating bridges over the Danube. In the Saber Guardian 2019 exercise, a training sequence was represented by the Scorpions Fury (Soare, 2019) exercise, its scenario involving appreciable armed land, air and naval forces, in an area considered "vulnerable" and of critical importance for Romania and the NATO space: the banks of the Danube.*

The *Saber Guardian 2017* and *Saber Guardian 2019* (the largest NATO exercise in Romania, coordinated by the Romanian and American armed forces) exercises highlighted the importance of floating bridges over the Danube. For example, in the *Saber Guardian 2019* exercise, a training sequence was represented by the *Scorpions Fury* (Soare, 2019) exercise, its scenario involving appreciable armed land, air and naval forces, in an area considered "vulnerable" and of critical importance for Romania and the NATO space: the banks of the Danube. In this scenario, the construction of a floating bridge with a length of 2000 m was successfully completed. The bridge was successfully crossed by over 200 vehicles and fighting equipment.

The *Saber Guardian 2017* exercise was part of a similar scenario, in which a highway was built on water, with three lanes of traffic: the middle one, used by the tanks, which could stand a weight of up to 40 tons, and the side ones, with the possibility of bearing 20 tons each.

Another noteworthy aspect is that in the case of floating bridges the travel speed is very low (5 - 10 km/h), the military planners being forced to develop a well-established schedule of the crossing, so that the crossings of different military subunits are achieved safely, in compliance with all speed, tonnage and distance requirements during transit.

Analysing the mobility facilities using floating bridges, we can conclude that they are very useful, but the volume of activities, the personnel involved, the duration and the logistics required are a huge effort for the structures responsible for building and maintaining their viability.

We believe that mobility must be approached from all points of view, as a careful analysis of how to increase manoeuvrability, from the perspective of land, air and naval mobility. The equipment of the Romanian armed forces with modern weapons systems [HIMARS (Cozmei, 2021), Patriot], with major influences in increasing fire support capabilities, can also raise problems in the field of mobility, problems that result when the respective military structures have to execute the manoeuvre in different areas, with direct reference to the overall dimensions, possibilities to cross certain bridges etc.

From a land forces perspective, a relevant example for the mobility of forces on the national territory is the area of the Cincu firing range. Specifically, in order to ensure the access of the forces participating in the national or multinational exercises in the largest land forces firing range in our country, some limitations in the field of mobility have been identified, with influences on the times and possibilities of embarking/disembarking military equipment in Voila railway station and the existence of tonnage limitations for the bridge over the Olt River, in the same locality. In order to increase mobility, the necessary steps have been initiated and, in partnership with the US military, a new embarkation/disembarkation ramp has been built in Voila railway station, and work is currently underway to build a new bridge over the Olt River, allowing the passage of oversized military equipment.

We consider that the problems regarding mobility at national level are complex, and the relief features have a major influence, given that our country has about 30% mountainous area, a hydrological network with many rivers that can form natural obstacles, and a southern area with a complex network of hydro-improvement works, with a significant number of bridges, footbridges and tunnels. All these are challenges for the military planners, and solving the problems of land, air or naval mobility can be done, in our opinion, using the mathematical approach, with direct reference to methods and models of analysis and decision-making, so that the courses of action analysed by the military planners can be very well founded.

### MATHEMATICAL DECISION-MAKING MODELS FOR ESTABLISHING THE OPTIMAL MOBILITY VARIANTS

In order to choose an optimal mobility variant, we can use one of the decision-making models under certainty or uncertainty conditions, using different analysis criteria for the approached study. The mathematical analyses can be applied in the military field as well, where the different elements/data/ reference characteristics can be taken into account for solving the problem directly referring to the military equipment involved, the personnel, the costs, the missions, and so on.



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We suggest a real example of making a decision under certainty conditions, required by the conduct of a comprehensive analysis on choosing the optimal variant for crossing the Danube by a Land Forces Task Force consisting of units and subunits of NATO member countries, assigned to participate in a multinational exercise on the territory of our country, given the existence of terrorist threats in the area of the southern border, where we will use the method of moments, one of the most widely used methods of decision-making under certainty conditions.

The decisions made under certainty conditions are the most viable, the results being characterised by accuracy, but they require having data and information as precise as possible about the features used in the analysis.

In this regard, we suggest a real example of making a decision under certainty conditions, required by the conduct of a comprehensive analysis on choosing the optimal variant for crossing the Danube by a Land Forces Task Force consisting of units and subunits of NATO member countries, assigned to participate in a multinational exercise on the territory of our country, given the existence of terrorist threats in the area of the southern border, where we will use the method of moments, one of the most widely used methods of decision-making under certainty conditions.

Several variants of crossing the Danube in the Ruse-Giurgiu area were taken into account in order to solve this problem, as follows:

- V1 – the river is crossed over the Ruse-Giurgiu friendship bridge;
- V2 - the river is crossed by means of specialised ships/ferries, using the port facilities in the towns of Ruse and Giurgiu;
- V3 - the river is crossed over a floating bridge built in the Ruse-Giurgiu area.

The criteria taken into account to solve the problem are the following:

- C1 – the passage time;
- C2 – the personnel involved;
- C3 – the costs;
- C4 – the protection of forces during passage.

The first step in solving this analysis is to establish the criteria that need to be maximised or minimised, so as to obtain a consequence matrix based on the minimum/maximum criteria of the following form:

Criteria/ Variant	C1 <i>min/max</i>	C2 <i>min/max</i>	C3 <i>min/max</i>	C4 <i>min/max</i>
V1	$a_{11}$	$a_{12}$	$a_{13}$	$a_{14}$
V2	$a_{21}$	$a_{22}$	$a_{23}$	$a_{24}$
V3	$a_{31}$	$a_{32}$	$a_{33}$	$a_{34}$

where,  $a_{11}$ ,  $a_{12}$ , to  $a_{34}$  are values corresponding to the established C1, C2, C3, C4 criteria.



The next step is to transform the consequence matrix into a normalised matrix, using the following minimum-maximum relationships:

$$r_{min} = \frac{a_{max} - a}{a_{max} - a_{min}}$$

$$r_{max} = \frac{a - a_{min}}{a_{max} - a_{min}}$$

where,

$a_{max}$  = the highest value in the consequence matrix, corresponding to the analysed criterion;

$a_{min}$  = the lowest value in the consequence matrix, corresponding to the analysed criterion;

$a$  = the analysed element in the consequence matrix.

By entering the values corresponding to the criteria established in the consequence matrix, and taking into account the fact that for criteria C1, C2 and C3 the optimum is obtained if they tend towards the minimum and C4 towards the maximum, we will have the following consequence matrix:

Criteria/Variant	C1 <i>min</i>	C2 <i>min</i>	C3 <i>min</i>	C4 <i>max</i>
V1	15	10	50	10
V2	100	100	200	70
V3	30	200	250	50

By applying the minimum-maximum ratios, we will obtain the following normalised matrix:

Criteria/Variant	C1 <i>min</i>	C2 <i>min</i>	C3 <i>min</i>	C4 <i>max</i>
V1	1	1	1	0
V2	0	0.52	0.25	1
V3	0.76	0	0	0.66

For example, the values in the above normalised matrix were determined as follows:

a) for the element corresponding to Criterion 1 of Variant 1, the minimum relation was applied, with the following result:

$$r_{min} = \frac{a_{max} - a}{a_{max} - a_{min}} = \frac{100 - 15}{100 - 15} = 1$$



b) for the element corresponding to Criterion 4 of Variant 3, the *maximum relation* was applied, with the following results:

$$r_{min} = \frac{a - a_{min}}{a_{max} - a_{min}} = \frac{50 - 10}{70 - 15} = 0,66$$

Then, the moments corresponding to the lines of the normalised matrix were calculated using the formula:

$$M = (1 \cdot a_1 + 2 \cdot a_2 + \dots + n \cdot a_n) / (a_1 + a_2 + \dots + a_n)$$

Applying this formula, we obtain:

$$M_{1/V1} = (1 \cdot 1 + 2 \cdot 1 + 3 \cdot 1 + 4 \cdot 0) / (1 + 1 + 1 + 0) = 6/3 = 2$$

$$M_{2/V2} = (1 \cdot 0 + 2 \cdot 0.52 + 3 \cdot 0.25 + 4 \cdot 1) / (0 + 0.52 + 0.25 + 1) = 5.79/1.77 = 3.27$$

$$M_{3/V3} = (1 \cdot 0.76 + 2 \cdot 0 + 3 \cdot 0 + 4 \cdot 0.66) / (0.76 + 0 + 0 + 0.66) = 3.4/1.42 = 2.39$$

The next step is to rearrange the normalised matrix lines in ascending order, depending on the values of the above determined moments M1, M2 and M3. Thus, we obtain the following matrix:

Criteria/Variant	C1 <i>min</i>	C2 <i>min</i>	C3 <i>min</i>	C4 <i>max</i>
V1	1	1	1	0
V3	0.76	0	0	0.66
V2	0	0.52	0.25	1

In order to determine the optimal variant, the moments corresponding to the columns of the rearranged normalised matrix will be further calculated:

$$M_{1/C1} = (1 \cdot 1 + 2 \cdot 0.76 + 3 \cdot 0) / (1 + 0.76 + 0) = 2.52/1.76 = 1.43$$

$$M_{2/C2} = (1 \cdot 1 + 2 \cdot 0 + 3 \cdot 0.52) / (1 + 0 + 0.52) = 2.56/1.52 = 1.68$$

$$M_{3/C3} = (1 \cdot 1 + 2 \cdot 0 + 3 \cdot 0.25) / (1 + 0 + 0.25) = 1.75/1.25 = 1.4$$

$$M_{4/C4} = (1 \cdot 0 + 2 \cdot 0.66 + 3 \cdot 1) / (0 + 0.66 + 1) = 4.32/1.66 = 2.60$$

After determining the moments corresponding to the columns, the normalised matrix is rearranged with the columns in ascending order, as follows:

Criteria/Variant	C3 <i>min</i>	C1 <i>min</i>	C2 <i>min</i>	C4 <i>max</i>
V1	1	1	1	0
V3	0	0.76	0	0.66
V2	0.25	0	0.52	1

After each rearrangement of the columns, a new calculation of the moments is required. It will be done according to line, specific to variants V1, V2 and V3. This gives the following values:

$$M_{1/V1} = (1 \cdot 1 + 2 \cdot 1 + 3 \cdot 1 + 4 \cdot 0) / (1 + 1 + 1 + 0) = 6/3 = 2$$

$$M_{2/V3} = (1 \cdot 0 + 2 \cdot 0.76 + 3 \cdot 0 + 4 \cdot 0.66) / (0 + 0.76 + 0 + 0.66) = 4.16/1.42 = 2.92$$

$$M_{3/V2} = (1 \cdot 0.25 + 2 \cdot 0 + 3 \cdot 0.52 + 4 \cdot 1) / (0.25 + 0 + 0.52 + 1) = 5.81/1.77 = 3.28$$

In the event of changes in the values of the moments determined above, the lines of the normalised matrix would be rearranged in ascending order, followed by a recalculation of the moments of the columns. In our example it is observed that the lines do not undergo changes, which means that the last matrix is the correct variant and, consequently, Variant 1 is the optimal variant, which could underlie the decision of selecting how the Land Forces Task Group would cross the Danube, by taking all the necessary measures to protect the forces and counter possible terrorist action affecting the crossing of the bridge.

We believe that these types of analyses are particularly important, leading to mathematically sound results and facilitating the decision-making process. Also, military mobility, which involves developing rigorous plans, thorough calculations and identifying viable solutions for many constraints (bridge capacity, height limitations, transport capability etc.) can be approached mathematically, and the results obtained will certainly be optimal elements compared to other types of analysis.

### CONCLUSIONS

We consider that the initiatives to increase military mobility at European level represent an important step in the process of ensuring regional security, in the context of the existence of threats and vulnerabilities brought to the fore by the regional conflicts or the issues that have not been discussed so far, with direct reference to migration or various incidents at the NATO or EU border.

All the working groups set up at European level approach the European military mobility with full consideration for the sovereignty of the EU Member States over their national territory and the national



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All the working groups set up at European level approach the European military mobility with full consideration for the sovereignty of the EU Member States over their national territory and the national decision-making procedures for military manoeuvre. Moreover, the steps to improve cooperation between the institutions, agencies and bodies of the European Union and the national authorities of the EU Member States must be taken in full compliance with the various legislative peculiarities of the signatory countries.

decision-making procedures for military manoeuvre. Moreover, the steps to improve cooperation between the institutions, agencies and bodies of the European Union and the national authorities of the EU Member States must be taken in full compliance with the various legislative peculiarities of the signatory countries.

In our opinion, the continuation of the cooperation with NATO in the field of military mobility is also an important issue, Romania being a member of the Alliance. In accordance with the conclusions presented to the Council of Europe, we consider it essential to further the efforts of cooperation and consultation with NATO at the level of decision-makers, through regular meetings on military mobility issues in all areas (land, sea, air). In this way, a coherent and unified approach between the EU and NATO can be ensured in order to identify and remove the existing barriers, including the legal, infrastructure and procedural ones, in order to facilitate and accelerate the movement and crossing of borders by the personnel and equipment participating in various exercises, in full compliance with the laws of each state. This cooperation may be continued open-mindedly and transparently, respecting the decision-making autonomy and the procedures specific to both organisations, without prejudice to the specific nature of the guarantee and the defence policies of the Member States.

Last but not least, the multitude of variables and limitations that can occur in the process of analysing and increasing mobility require scientific approaches, with direct reference to mathematical models, whose applicability can help find solutions which can lead to well-founded decisions to efficiently ensure the success of the military operations or exercises.

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## A CRITICAL INFRASTRUCTURE PERSPECTIVE AND SYSTEMS PERSPECTIVE ON HYBRID THREATS IN THE BLACK SEA REGION

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*The Black Sea region features high complexity and other factors, such as the lack of a regional security architecture, which, in the current security context, result in a high effectiveness for hybrid warfare approaches. This has been proven by the track record of hybrid and unconventional warfare operations in the region, targeting also civilian infrastructure. The article proposes a Critical Infrastructure perspective on Black Sea insecurity, highlighting the potentiality for hybrid warfare but also measures which can increase resilience to hybrid threats on the basis of the Critical Infrastructure Protection framework. Lastly, the article highlights contributions which Romania can make on the basis of its experience and success in implementing CIP.*

*Keywords: critical infrastructures; hybrid threats; resilience; governance; Black Sea;*



## INTRODUCTION

The 2014 illegal annexation of Crimea by the Russian Federation brought to the fore an important development in the Black Sea region and in the realm of inter-state competition – the rise in the use of asymmetric, unconventional and hybrid means of warfare to replace or complement conventional means.

The actions of Russia but also of other actors in the wider region can be interpreted in terms of attempts at disrupting the functioning of critical infrastructures (CI) to cause human losses, material damage, loss of state prestige and confidence on the part of citizens, investors, partners and allies, as well as to coerce target entities into behaving in a certain way.

This has, arguably, always been the case, hybrid threats have existed for a long time, but the various conflicts in the Black Sea, in the Middle East and elsewhere led to the codification of strategic thought on this issue as “hybrid warfare”, “new generation warfare” and components such as “economic warfare” and “lawfare”. The attention paid to these developments is resulting in increased awareness of the potential of hybrid warfare to damage, disrupt or coerce an adversary through measures short of war and with built-in ambiguities that hobble existing security governance frameworks.

Critical Infrastructure Protection provides concepts, strategies and tools to achieve resilience in the face of a complex and dynamic security environment which affects the functioning of socio-technical systems on which entities such as states are critically reliant for their functioning, for business continuity and for quality of life.

The present article argues in favour of a perspective on the Black Sea security environment based on the conceptual framework of Critical Infrastructure Protection (CIP), which is officially employed by all NATO and EU member states, as well as by NATO and the EU themselves (Caşin, 2018). However, the article does not aim

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to approach the issue of hybrid warfare, but rather analyse the specificities of the critical infrastructure environment in the Black Sea and formulate recommendations for how Romania may contribute to the amelioration of the issues in the region from a CIP perspective.

### CRITICAL INFRASTRUCTURE PROTECTION – A PRIMER

The functioning of all societies, but especially advanced ones, is reliant on goods and services produced through the operation of infrastructures. These are socio-technical systems composed of technical assets, organisations and communication links, in the abstract, and which include pipelines, power plants, water treatment plants, roads, ports, but also public administration, the financial sector, education and health. These infrastructures are critical if their destruction or disruption exceeds certain authority-defined thresholds in terms of damage and loss of functionality that represent a grave threat to the affected societies. Critical Infrastructure Protection provides a conceptual framework to consider these issues and to develop methodologies to identify and designate critical infrastructures, while planning for their protection in an all-hazards approach that should result in resilience (Gheorghe et al, 2018).

The resilience concept has become an important buzzword in many fields but, in this instance, it refers to a system’s capacity to prevent the materialisation of a negative event and, should it occur, then a resilient system should minimise the resulting damage and restore a minimum acceptable level of functionality as quickly as possible, limiting the impact on society. CIP is important because criticality becomes a selection factor for the allocation of scarce security resources – we cannot protect every system 100% of the time and so we must optimise the allocation of limited protection capabilities on the basis of rationally proven need.

CIP features several important advantages over other systemic frameworks:

- ❖ Critical infrastructures are characterised by relations of interdependence, in which changes in the state of one infrastructure affect the state of another in accordance with a series of criteria that define the topology of the system-of-systems and which emerge

from the patterns of production and consumption of critical goods and services at societal levels. These interdependencies can be geographic, physical, logical, informational, cybernetic and even political and social (Gheorghe and Schläpfer, 2006).

- ❖ Disruptions in the system feature not only first order effects, but also second, third and so on, in accordance with the interdependency relationships. These lead to phenomena which may amplify the duration and the effects of a disruption event in previously unanticipated ways, such as through common cause failures, escalating failures and, most importantly, cascading failures. The latter may be so complex that they defy accurate understanding and modelling and, therefore, prediction, especially since their appearance relies on the “*fortuitous alignment of breakages*” that enable the transmission of disruption across a system-of-systems (Pescaroli and Alexander, 2016).

- ❖ The development of the CIP framework is taking it in the direction of analysing the issues of complexity described above, which result in systems whose functioning is ambiguous and uncertain and which are greater than the sum of their parts in terms of phenomenology. They present emergent behaviours resulting from the interaction between system components and between components and the environment which could not have been anticipated from the analysis of individual components (Keating and Katina, 2016).

CIP can be described as a transatlantic framework of thinking. It was first developed by a Presidential Commission established by the Clinton Administration (PDD-63, 1998) and implemented in the wake of the 9/11 attacks which emphasised the problems stemming from interconnectedness and cascading disruptions (Department of Homeland Security, 2003).

The EU mandates that member states develop CIP frameworks while also building a European Programme for Critical Infrastructure Protection (EPCIP) whose remit are European Critical Infrastructures (ECI), whose disruption or destruction would affect two or more member states (European Commission, 2008). Initially, this European activity was limited to transport and energy infrastructure, to which cyber infrastructures were added later. The published drafts of Directives updating the CIP framework (the Critical Entities Resilience



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Directive and the NIS 2 Directive) update the CIP framework with the concept of critical entities, as opposed to owners/operators of critical infrastructures, and increases the number of European critical infrastructure sectors to 10: energy, banking, transport, financial markets, health, drinking water, waste water, digital infrastructure, public administration and space (European Commission, 2020c). This expansion, though long in the making, was validated by the experience of the pandemic, which caused European disruptions to CI which had previously not been considered in a European dimension.

### BLACK SEA INFRASTRUCTURE CHARACTERISTICS

The Black Sea features peculiarities in terms of the critical infrastructure system-of-systems, arising from the interplay between historical specificities and recent experiences and policies.

Before we begin, we should underscore the fact that the Black Sea is a fluid space, promoting either confusion or ambiguity in its characterisation. We seem unable to ascertain whether the region is a border or a bridge between East and West and between civilisations, or to even define it properly. Triantaphyllou (2012) noted that the Black Sea is characterised by “*competing and conflicting narratives*” which undermine the possibility of effective transborder cooperation in various areas, which include environmental issues but also, as we contend, CIP. This becomes even more pronounced if we use the expanded formula for the region which is preferred by the EU and the Organization for Black Sea Economic Cooperation. In this case, rather than six littoral states, there are either four additional countries for the EU or six additional countries for BSEC.

It is also an especially diverse region from a civilisational perspective, which gives it transregional dimensions, leading towards the Eastern Mediterranean or the Caspian region, as well as subregional dimensions, such as the South Caucasus. Lastly, the Black Sea sits atop a series of fault lines, whether religious and civilisational (Christianity and Islam), as well as geopolitical (NATO/EU and the Shanghai Cooperation Organization).

The surface level analysis of the regions serves to outline the complexities – Romania, Bulgaria (and Greece if you include it)

are NATO and EU Members, Turkey is a NATO member that has become unreliable and has an acrimonious relationship with the EU and fellow allies while becoming a dialogue partner to the SCO, the Russian Federation is an SCO founding member and revisionist actor trying to maintain influence in its near abroad and fomenting conflict, Ukraine, the Republic of Moldova and Georgia are the sites of hybrid interventions aimed at triggering and maintaining frozen conflicts and so on.

Regional stakeholders are divided by: the absence of a regional identity; strategic competition – Russia and NATO, SCO and NATO, Turkey’s unpredictability; frozen and “lukewarm” conflicts; ethnic and religious conflicts; the absence of pre-existing institutions and arrangements that are functional and successful. *Figure no. 1* summarises some of these specific issues.



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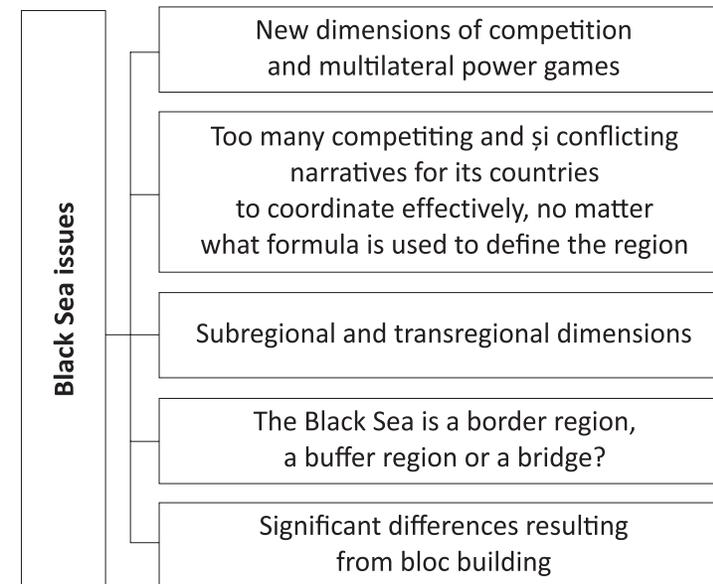


Figure no. 1: Main issues affecting the Black Sea Region

In turn, all of these affect the critical infrastructure landscape, as well as the security environment:

❖ the complex history of the region has led to a lack of an institutionalized security architecture which could have provided the basis for CIP efforts in the region and increased resilience.



On the contrary, geopolitical conflict has led regional actors such as Russia to undermine any possibility for the creation of the trust and political capital necessary for collective action in the region;

- ❖ the persistent instability, along with frozen and “lukewarm” conflicts, both old and new, have generated important issues with risk perception that affect local and outside players, as well as investors and citizens;

- ❖ the infrastructure topology is fragmented – there is a lack of regional interconnectors and a geopolitical difficulty in creating them (as shown by the various failed energy transmission projects or by the perennial Black Sea Ring Road proposal);

- ❖ the infrastructures are heterogeneous – they were created by individual states in periods with vastly different economic and political regimes and in the context of significant persistent regional differences between regional players. The different railway gauges in standard use between the SE and NW sides of the Black Sea emphasise this, as well as other factors;

- ❖ the *sedimentation* of different generations of infrastructure layers creates a complex environment, featuring, for instance, oversized and undermaintained industrial capabilities, as well as undersized multimodal transport capabilities. The risks, vulnerabilities and threats created are heightened by the decades of neglect of infrastructure maintenance and of conflict in much of the region, as well as the attrition of existing infrastructures. Poverty and regional disparities also contribute to regional diversity in terms of infrastructure endowment and security;

- ❖ digitalisation, as a fundamentally transformative phenomenon in the CI topology, is proceeding with varying speeds in the region, but the capacity to secure digitalised infrastructures has been lagging behind, for economic and governance reasons. This provides a main avenue for hybrid warfare in the region, which is cyberattacks (Tatar et al, 2017);

- ❖ the region remains a critical crossroads and is, therefore, an important site for proposals for strategic infrastructure in energy and trade, as seen from developments in energy (TurkStream, the Trans-Adriatic Pipeline functioning since 2020), in transport

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and in digital infrastructure (The Belt and Road Initiative, The Three Seas Initiative). These infrastructures are high-profile projects with geopolitical impact and are, therefore, both targets and elements of hybrid warfare in geopolitical competitions. *Figure no. 2* summarises some of these main points.

Black Sea Infrastructure Concerns	Lack of an institutionalized security architecture
	Risk perceptions in the area
	Persistent conflict and uncertainty
	Lack of infrastructure connectors around the Black Sea
	Aging and attrition in existing infrastructure
	Infrastructure heterogeneity, sedimentation and complexity
	Uneven and unsecured digitalization
	Geopolitical conflicts as instigators of hybrid threats
Site for strategic infrastructure development	

Figure no. 2: Main issues affecting the Black Sea infrastructures

Critical infrastructure governance is not the only area that has suffered, but also environmental protection and the fight against transborder organised crime, with Delanoë (2015) highlighting the region’s role in the smuggling of nuclear materials and technology.

### RECOMMENDATIONS ON ROMANIAN CONTRIBUTIONS TO COUNTERING HYBRID THREATS AT THE BLACK SEA

Romania, as an active player in the Black Sea region and with a significant exposure to the effects of the instability and deterioration of the security environment, has an incentive to leverage all of its advantages and tools in order to contribute to better security outcomes through systemic shifts in underlying risks, vulnerabilities and threats. This section deals mainly with the contributions that Romania can make outside its borders, in the context of critical infrastructure protection and system-of-system resilience. This is a challenging topic to approach, given resource constraints, jurisdictional issues, deficient toolboxes and the ebb and flow of will on the part of decision makers



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to invest in projects with security outcomes which are hard to measure. Figure no. 3 highlights the priorities for a Romanian approach to CIP in the region.

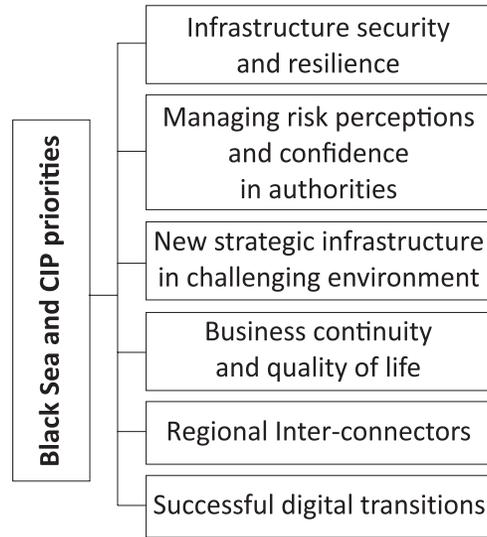


Figure no. 3: The CIP framework priorities for the Black Sea

### Leveraging Romanian contributions to CIP to the benefit of other states in the region

The first contribution that Romania can make is in leveraging its own successful application of Directive 114/2008 (Lazari and Simoncini, 2016) to assist countries in the region to develop their own CIP frameworks which are compatible with the European approach and integrate best practices. This not only improves the underlying security of the individual countries, but also heightens their compatibility with the EU in favour of closer cooperation and integration. Romania may coordinate a multi-pronged approach towards experience transfer, involving both state institutions, but also academia (universities), the private sector (security companies) and civil society groups (professional associations), Romanian entities can also take a lead in serving as an interface between other European actors interested in contributing to CIP in the region and counterparts in individual nations, especially from the South Caucasus. Possible items on such an agenda include:

- assistance for the drafting of documents of reference in CIP;



- assistance in setting up continuing education programs for experts and decision-makers;
- contacts for knowledge transfers between counterpart institutions and for setting up CIP-related bodies such as Interinstitutional Working Groups, Technical Secretariats, Crisis and Emergency Management Centers and so on;
- cooperation in the non-governmental sphere, in order to set up national Critical Infrastructure and Services Protection Associations for experts and companies;
- fostering greater cooperation with the Romanian security industry, which may provide useful solutions to address specific security needs.

This is not a farfetched proposal, and its complexity stems from the high number of possible components we can define, not from intrinsic difficulty. One of the authors of this paper also contributed to Ukraine’s Green Paper on Critical Infrastructure Protection after the organisation of a NATO Advanced Research Workshop in Kiev on this subject in 2015 (Mureşan and Georgescu, 2016).

### Supporting EPCIP expansion in the Black Sea

A second contribution that Romania can make is to lobby for an evolution of the European Programme for Critical Infrastructure Protection (EPCIP) to start developing the protection dimension of European Critical Infrastructures (ECI) located in non-Member States. The definition of ECI as “encompassing infrastructures whose disruption or destruction would critically affect two or more member states” (OUG 98/2010, art. 3b.) would remain, but the EU should strive to address the non-European dimension of ECI, as a vector for the propagation of risks and threats. This would involve the mobilisation of European resources for the same actions described in the previous section. Since Romania and Bulgaria are the two EU MS on the Black Sea and are the first line of transmission for disruptions generated in the region, it stands to reason that they would be important beneficiaries of any EU efforts in this regard. Such an expansion of EPCIP can only be done on a voluntary basis and with the provisioning of significant incentives for cooperating states, however there is already a precedent,



Romania could advocate for a Black Sea Macroregional Strategy of the European Union. Macroregions are a new form of governance in the EU, which “incorporate (wholly or partially) the territories of multiple countries framed around common challenges and features, common identities, historical or cultural commonalities, as a discursive underpinning of functional cooperation and territorial cohesion in areas such as transport, infrastructure and environmental policy”.

most recently placed on display in the *North Stream 2* project, of the EU regulating infrastructure functioning (the unbundling of energy and transmission) in relation to a third-party state based on EU security interests.

In addition to expanding EPCIP, the EU could apply the lessons learned in the Western Balkans to the Black Sea region, by transferring expertise and tools related to the Western Balkans Strategy (European Commission, 2020a) or the Western Balkans Connectivity Agenda (European Commission, 2020b). Georgescu et al (2020) have underscored how these approaches can support CIP efforts in terms of capacity building, knowledge transfer and raising awareness.

### Advocating for the Black Sea Macroregional Strategy of the EU

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Romania had been one of the initiators, alongside Austria, of the Macroregional Strategy for the Danube Region. Since there is no appetite to redefine the unwieldy Danube Macroregion to include a natural extension into the Black Sea, a new macroregion could be implemented for the Black Sea. Such a project can be proposed together with Bulgaria and, since macroregions encompass functional regions with transborder components, could automatically accommodate all Black Sea countries, plus even the wider region such as the South Caucasus. This initiative, based on the accumulated European expertise and resources, could provide a better institutional backdrop for cooperation in favour of resilience, in a way in which the Organization of Black Sea Economic Cooperation, the GUAM formula, the Community of Democratic Choice<sup>1</sup> and the much earlier EU Black Sea Synergy initiative have largely failed.

<sup>1</sup> The Community of Democratic Choice is an intergovernmental organisation established on 2 December 2005, by nine states of Northern, Central and Eastern Europe in Kyiv, Ukraine. Its main task is to promote democracy, human rights, and the rule of law throughout the region.



Figure no. 4 highlights the main components of the Danube Strategy, which includes also the Republic of Moldova and parts of Ukraine. In fact, a Black Sea Macroregional Strategy could encompass the Black Sea region at its largest extent, including Greece and the South Caucasus.



Figure no. 4: Map of the EU Strategy for the Danube Region (the European Commission, 2021-a)

Figure no. 5 highlights the main components of the Danube Strategy Agenda, which could serve as the basis for a Black Sea Strategy Agenda. Many of these components have CIP dimensions related to achieving their goals, while the “*Strengthening the Region*” subchapter explicitly deals in security issues and could include a CIP component.

The development of a macroregional strategy would encompass a wide array of issues, such as economic, infrastructural, environmental and cultural projects, while Romania could also promote a stronger security component compared to the safety orientation of previous macroregional strategies. Such a security component could include cybersecurity, supply chain security and other novel aspects such as undersea infrastructure security, some of them specific to the Black Sea region.

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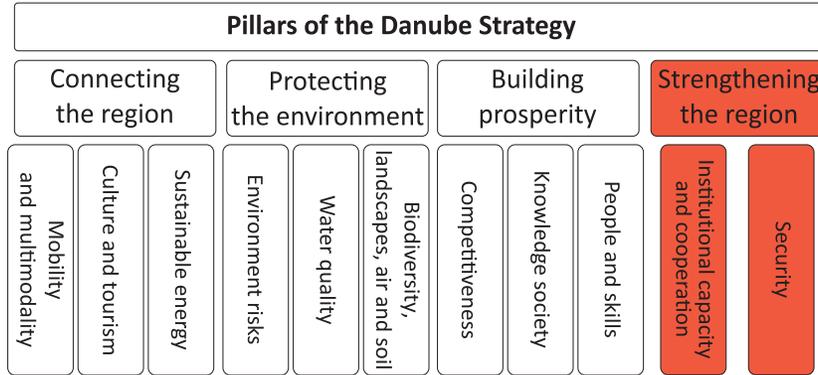


Figure no. 5: The pillars of the EU Strategy for the Danube Macroeconomy (the European Commission, 2021-b)

This project would respond to multiple needs in the region, which had previously been alluded to – the need for coordinated investment in sustainable infrastructure, the need for a functional, results oriented forum of the regional countries in the context of the absence of a workable regional security architecture, targeted investments in resilience and the effect on morale of EU involvement in a concrete project with defined benefits, but also the possibility of a transatlantic contribution given NATO-EU cooperation on maritime security, hybrid threats and cybersecurity. Lastly, it should be kept in mind that a macroregional approach affords the opportunity for calibrated cooperation with the Russian Federation at a later date, should it prove useful (Gänzle, 2017). Prior to Russia’s backslide into revisionism, irredentism and aggressive confrontationalism, the various transborder cooperation formulas of the Baltic Region, including the Baltic Macroeconomic Strategy and the Nordic Council, served a similar role in relation to the Russian Federation (Gänzle, 2017).

**Actions under the Three Seas Initiative**

Lastly, Romania should redouble its efforts within the Three Seas Initiative, an existing and established regional cooperation framework that is, nevertheless, in a phase of conceptual growth in which new dimensions and projects can be added (Żurawski vel Grajewski, 2017).



Mureşan and Georgescu (2017) noted that the “Black Sea region, as a whole, is the least developed of the three seas, in terms of infrastructure and accumulated wealth. Political fractures have prevented the formation of pan-regional infrastructure networks and current conflicts and geopolitical hotspots are diminishing the region’s wealth and attractiveness for investors”.

The Black Sea lacks strong, technologically sophisticated and wealthy countries aligned to the West with an incentive for cooperating in multilateral frameworks for cooperation and coordination, for creating resilient institutions and for incentivising behaviour conducive to regional peace, stability, resilience and predictability. Romania must lean on the strategic partnership with Poland and the United States to accelerate specific projects with Black Sea-related security outcomes, in areas such as transport infrastructure with military mobility potential, cybersecurity and more. Figure no. 6 summarises the proposals regarding Romania’s regional contributions from a CIP perspective.

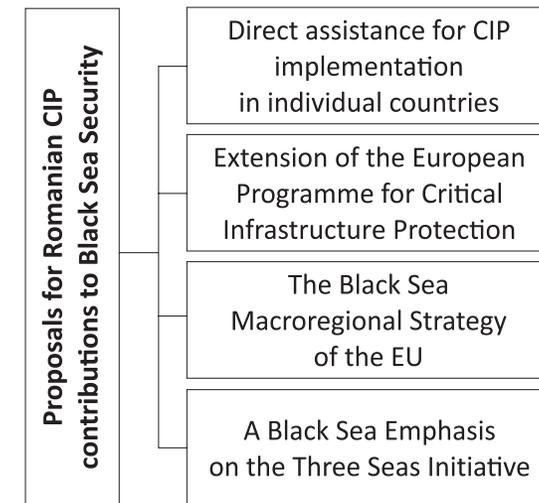


Figure no. 6: Proposal for Romanian contributions related to CIP in the Black Sea region

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## CONCLUSIONS

The Black Sea region presents a dynamic and challenging security environment, and its importance will grow, not just as a source of possible disruptions and instability, but also in economic terms, with energy and transport projects (like the planned Istanbul Canal).

An analysis from the perspective of Critical Infrastructure Protection offers a partial picture of the region's issues and a coherent explanation for the form of hybrid warfare that has been practiced in the region by revisionist and ambitious actors from inside and outside the region.

Romania can greatly contribute to securing the region against hybrid threats by sharing its CIP experience with other EU member states and not only, by promoting the EU strategy for the Black Sea microregion and by carrying out actions under the Three Seas Initiative.

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# TURKEY'S POSITIONING IN A POSSIBLE POLITICAL-MILITARY CRISIS TRIGGERED BY THE RUSSIAN FEDERATION IN THE BLACK SEA REGION

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*Against the background of the growing concern of the Euro-Atlantic community about Turkey's approach to Russia, this paper presents the probable posture of Turkey in a potential politico-military crisis caused by Russia in the Black Sea region. Thus, considering a projective scenario in which Russia is again engaged in a military conflict by invading Ukraine, it is estimated the most possible positioning of Turkey. This results from an operational analysis, based on a MACTOR model (Matrix of alliances and conflicts: tactics, objectives and recommendations) of Professor Michel Godet, focused on the influence between actors and their interests, adapted by the author of the material to this scenario.*

*Thus, the application of MACTOR model, configured based on the premise that Turkey has certain strategic objectives in the context created by the scenario of Ukraine's aggression by the Russian Federation, estimates that the Ankara administration will line up to NATO posture in this crisis because this way it maximises its chances to fulfil the objectives.*

*Keywords: scenario; aggression; Black Sea region; Turkish-Russian relationship; matrix;*

## INTRODUCTION

The Russian Federation and the Republic of Turkey are important players in the region. Moreover, they have the largest fleets in the Black Sea, so the relationship between them is very important for the Euro-Atlantic community, aware that a repositioning of Turkey closer to the Russian Federation can change the balance of forces in the region. Therefore, against the background of the recent events involving the two states – on the one hand, the recent actions of the Russian Federation to occupy some territories in neighbouring countries, Transnistria in 1991 (Republic of Moldova), South Ossetia and Abkhazia in 2008 (Georgia), as well as Crimea and Donbas in 2014 (Ukraine), and, on the other hand, Turkey's transition through a radical strategic transformation of its domestic and international policies in an attempt to resume its role as a regional power in the Middle East, which also included a slightly more eastern reorientation with an approach to Russia, which provoked various reactions from the international security community, especially the Western one – there arises the question of Turkey's positioning in a possible scenario in which Russia will provoke a new politico-military crisis in the region, other than the one already existing in Ukraine.

In order to achieve the purpose of the paper, it is necessary to identify the politico-military crises most likely to be caused by Russia in the Black Sea. Thus, following the study of the specialised literature in the field, among the potential politico-military crises generated by Russia in the Black Sea region in relation to which Turkey will have to position itself, there have been identified: the invasion of Ukraine by Russia, under the pretext of an intervention in support of the population of Russian citizenship in the regions of eastern Ukraine (possibly following a disruptive event artificially created by Russian forces through the specific means of hybrid warfare); an accident/incident caused by a Russian warship in the Exclusive Economic Zone (EEZ) of Romania, where offshore gas wells are operated by Western companies (possibly by causing casualties among their employees,



ROMANIAN  
MILITARY  
THINKING

*Among the potential politico-military crises generated by Russia in the Black Sea region in relation to which Turkey will have to position itself, there have been identified: the invasion of Ukraine by Russia, under the pretext of an intervention in support of the population of Russian citizenship in the regions of eastern Ukraine; an accident/incident caused by a Russian warship in the Exclusive Economic Zone of Romania, where offshore gas wells are operated by Western companies; an open Russian-Turkish military conflict generated on a foreign territory where the two state actors intervene on opposite positions and are engaged in a proxy war; a military conflict generated incidentally by the Russian Black Sea Fleet through interaction with ships of a NATO member state.*



Western citizens); an open Russian-Turkish military conflict generated on a foreign territory where the two state actors intervene on opposite positions and are engaged in a proxy war (Syria, Libya, Nagorno-Karabakh etc.); a military conflict generated incidentally by the Russian Black Sea Fleet through interaction with ships of a NATO member state.

Among these projective scenarios, against the background of previous facts, namely the precedent of the invasion of Ukraine by Russia created in 2014 with the capture of Crimea, to which are added the Russian-Ukrainian fighting on Ukrainian territory and the repeated accumulations of Russian forces on the Ukrainian border (the last took place in April 2021), we consider the scenario with the highest probability of getting materialised, in the current geopolitical conditions, to be the invasion of the Ukrainian territory by Russia, probably under the artificially constructed pretext of hiring Russian troops to protect the Russian community there.

### STAGES OF THE PROJECTIVE SCENARIO OF RUSSIA'S INVASION OF UKRAINE

The purpose of identifying the positioning of Turkey's reaction in a situation where the security of the Black Sea region could be affected by the exacerbation of the politico-military crisis generated by Russia, and not a prediction of the conflict results, allows us to pre-establish hypothetical elements in the scenario (the motivation for the problem emergence, the type of problem etc.) as the real course of action, as well as to relate them to a limited number of actors and a single set of objectives, those of Turkey.

The projective scenario of the Black Sea conflict (potentially generated by Russia) includes as stages of analysis: description of the operational environment, description of the crisis situation, threat analysis, analysis of strategic relations between actors, estimation of behaviour of the actors involved in crisis (Petrescu, 2019, p. 154).

#### Stage 1 –Description of the operational environment

The events of 2014 in which Russia took over Crimea and started the internationalised civil war in eastern Ukraine resulted in blurring peace conditions and creating some crisis and conflict premises in the region. Moreover, the open confrontation between Russia and Ukraine in Donbass and Crimea not only destroyed the relations between

Moscow and Kiev, but also changed the politics throughout the region, giving a boost to the four protracted territorial conflicts in Abkhazia, Nagorno-Karabakh, South Ossetia, and Transnistria.

Russia, at the moment, seems to have achieved its main immediate political goal, pursued by the military action in Ukraine, that of strengthening control over Crimea, from where it can project its power deeper into the Mediterranean, the Middle East and North Africa. Whatever Russia's strategic objectives remain, it is certain that its activities are usually, directly or indirectly, contrary to Western interests (especially NATO, the EU and the USA). Moreover, Ukraine remains at the forefront of the ideological struggle between Russia and the West, but it also represents a space for mercantile interaction with Turkey (Ciurtin, 2017). Turkey, with a declining economy, is aware that normalising relations with Western allies and increasing Turkey's pro-Western credentials are the only ways to create a positive economic outlook and dilute Turkey's international isolation. Proof of this awareness is the reaction of Turkish President Tayyip Erdogan to promise support to Ukrainian President Volodymyr Zelensky in a possible escalation with Russia (Polityuk, Gumrukcu, 2021). In fact, Turkey does not recognise the annexation of Crimea by Russia. As for Ukraine, in 2020, it presented the USA, the UK, Canada, Germany and France as key strategic partners, but Turkey and other states were also mentioned as partners.

#### Stage 2 – Description of the crisis situation

After 2014, Ukraine gave higher priority to securing its territorial integrity and prosperity by seeking integration into the North Atlantic Treaty Organisation and the European Union. Thus, the official status of Ukraine, as a country aspiring to membership of these two organisations, was enshrined in the Constitution of Ukraine in 2018 (Constitution of Ukraine, 2019, Art. 85, 5) and in its National Security Strategy for 2020. Subsequently, in March 2021, its Military Strategy stated that Ukraine's defence policy is designed to lead to NATO membership (Zaniewicz, 2021). In this context, Russia is becoming increasingly incisive, as Ukraine's accession to NATO would weaken its regional power. Against this background, in April 2021, considering the unprecedented accumulation of Russian forces on the Ukrainian border, the Western community suspected a major escalation in the Russo-Ukrainian war (Zagorodnyuk, Khara, 2021). Although it proved



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Given that only states that are not involved in territorial disputes with other states are allowed to join NATO, Russia can de facto prevent Ukraine's accession only by fuelling the Ukrainian existing conflict. However, the precedent of the invasion existed, and once the territory of a sovereign nation-state has already been violated by Russia without it being stopped, but only "scolded" by the international community with political statements and economic and political sanctions, another similar attempt remains possible.

to be only a show of force by which President Putin wanted to achieve several goals such: intimidating any NATO candidate state from the former USSR, especially Ukraine, to move forward in the process of becoming a member; reminding NATO that it is not "appropriate" to accept ex-Soviet states as its members (in the context of the NATO Summit in June 2021, to which Ukraine could have been invited in this direction); reiterating Russian military force at regional and international level; strengthening the anti-Western vision promoted inside and outside Russia, this probability should not be neglected.

### Stage 3 –Threat analysis

Given that only states that are not involved in territorial disputes with other states are allowed to join NATO, Russia can de facto prevent Ukraine's accession only by fuelling the Ukrainian existing conflict. However, the precedent of the invasion existed, and once the territory of a sovereign nation-state has already been violated by Russia without it being stopped, but only "scolded" by the international community with political statements and economic and political sanctions, another similar attempt remains possible. It is very likely to happen so considering that a hypothetical Russian invasion of Ukraine could easily find a pretext, such as the intervention in support of citizens with Russian identity documents in the self-proclaimed "people's republics" of Donetsk and Luhansk in eastern Ukraine or in Odessa (Joja, 2020). Therefore, the threat consists in the damage of international security and the rule of law by a Russian invasion in Ukraine.

### Stage 4 – Analysis of strategic relations between actors

The logical working premise of this stage is that Turkey will lean in favour of a decision of involvement/non-involvement in response to the Russian invasion in Ukraine based on at least two coordinates, *the maintenance of its strategic objectives unaltered in the region* related to individual relations with Russia and Ukraine and *the reaction of other actors with whom it maintains relations of dependence (or influence)* (for example, the influence of NATO, through its quality of member state in this organisation, or the USA, through the Turkish-American strategic partnership, but also of Russia, through the Turkey dependence on its energy resources). Therefore, in order to analyse the relationship between actors we will use a reconfigured model of MACTOR (Matrix of alliances and conflicts: tactics, objectives and recommendations) (Godet, 1994, p. 105), which is based on the influence between actors,

trying to give an overview of the importance and possible outcome of the various issues, as well as of the expected strategies of the actors, power relations and potential alliances in conflict. This initial model uses three main inputs, collected in three matrices, respectively<sup>1</sup>: *the positioning of the actors towards the problem, stored in the position matrix; the importance of the problem for the actors, stored in the evidence matrix (this matrix merges with the position matrix, creating a matrix that represents the product of the cells corresponding to the evidence and position matrices); the influence of the actors on each other, stored in the matrix of influence.*

In the scenario developed in this paper, the improved and explained version of MACTOR, exposed by Dan-Lucian Petrescu in his book "Realizarea scenariilor militare între știință și artă/Realisation of Military Scenarios between Science and Art" (Petrescu, 2019, pp. 73-86), is processed in another to better identify some of Turkey's estimated response to a possible invasion of Ukraine by the Russian armed forces so that its objectives set in relation to the directly positioned actors are not affected (or least affected) in conflict. Therefore, we will include as variables the following elements: the *actors* we consider relevant for the issue of Turkey's position in relation to the crisis generated by Russia in the Black Sea: Russia ( $A_1$ ), Ukraine ( $A_2$ ), Turkey ( $A_3$ ), NATO ( $A_4$ ), USA ( $A_5$ ) and Romania ( $A_6$ ); the *Turkish objectives* ( $OA_3$ ) identified following a descriptive analysis (conducted in the study *Turkey – the Evolution of the Political and Security Situation and the Implications at Regional Level* to be published under the auspices of the Publishing House of "Carol I" National Defence University from Bucharest), as a priority in relation to the issue we are referring to, respectively: de-escalation of the conflict ( $O_1$ ); maintaining a good Turkish-Ukrainian relationship ( $O_2$ ); maintaining the territorial integrity of Ukraine ( $O_3$ ); maintaining a balanced Russian-Turkish relationship ( $O_4$ ); Ukraine's integration into NATO ( $O_5$ ); maintaining the current content of the 1936 Montreux Convention ( $O_6$ ); *the level of importance given to the promotion of Turkey's objectives* by the states interested in the evolution of the region; *the influence* (power relations) between actors.

<sup>1</sup> *Positioning* is treated as the opinion of each actor on the problem, determining whether it agrees (value +1), is against (-1) or is neutral (0) for a certain problem. *Evidence* represents how important each objective is for each actor, this being evaluated on a scale ranging from 0 (unimportant) to +4 (extremely important). *Influence* represents the power that the influential actor has over the influenced actor, measured on a scale between 0 (without influence) and 4 (very high influence) respectively.



In order to analyse the relationship between actors we will use a reconfigured model of MACTOR, which is based on the influence between actors, trying to give an overview of the importance and possible outcome of the various issues, as well as of the expected strategies of the actors, power relations and potential alliances in conflict.



To identify convergences and divergences between actors by objectives there are used the convergence/divergence diagrams between actors. The result is expressed in graphical representations of the positions of the 6 actors in relation to each of the 6 objectives resulting in 6 corresponding work diagrams.

As working steps, developed from the MACTOR model and adapted for the specific type of analysis focused on the most likely course of action in crisis of a single actor, based on the probabilities of meeting its objectives, we will: a) identify the convergences and divergences between actors for each strategic objective; b) establish the positioning of each actor towards the strategic objectives of Turkey at the beginning of the politico-military crisis in the Black Sea; c) analyse the convergences/divergences between actors based on the established objectives; d) highlight the importance of the objectives for each of the actors, thus achieving a matrix of their prioritisation (MP); e) establish the intensity with which each actor aims to achieve the set objectives; f) identify the convergences and divergences between actors for the prioritised objectives; g) achieve the variable of direct influence between the actors involved; h) ponder the prioritised objectives with the ranking of direct influence; i) identify the convergences and divergences considering all three aspects: support/rejection of objectives; intensity of the objectives importance for each actor; influence between actors.

a) To identify convergences and divergences between actors by objectives there are used the convergence/divergence diagrams between actors. The result is expressed in graphical representations of the positions of the 6 actors in relation to each of the 6 objectives<sup>2</sup> resulting in 6 corresponding work diagrams. A model of such a diagram is presented in figure no. 1.

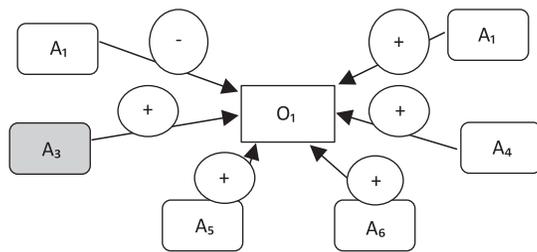


Figure no. 1: Diagram 1 – Convergence/divergence between actors and Objective 1 (O<sub>1</sub>)<sup>3</sup>

<sup>2</sup> The establishment of each actor’s position on the strategic objectives is based on the exploratory analysis of Turkey’s political, diplomatic and military relations with Eastern and Western actors with interests in the Black Sea, in the context of Russia’s already existing politico-military crisis in Ukraine since 2014.

<sup>3</sup> The actor we are most interested in, A3 – Turkey, is highlighted throughout the analysis.



From Diagram 1, it results that regarding O<sub>1</sub>, 5 actors are positioned in favour of de-escalation of the conflict<sup>4</sup>, only one being the exception – the aggressor state – Russia. Therefore, there is a high convergence towards conflict resolution. The motivation for this high convergence of the mentioned actors is the desire to secure the Black Sea region, to maintain the territorial integrity of Ukraine in its position of aggressed state, to eliminate potential threats to Turkey and Romania, as neighbouring states with a state in conflict, to continue pursuing NATO interests (securing its eastern border) and US policy (recognised political and economic interests in the Black Sea region). As a general orientation, the convergence diagrams between the actors show that in case of materialisation of such a scenario, a possible alliance will be concluded between actors A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub>, A<sub>5</sub>, and A<sub>6</sub>, against A<sub>1</sub>.

b) The positioning of each actor towards the objectives of Turkey entails the correlation of the actors with the objectives, respectively by indices -1, 0, +1 we will show for each of the actors if they do not agree, are indifferent or agree with that objective, as it results from the specialised literature. The quantification of the data is performed in tabular form, as a result of the diagrams created in the previous step, to which we associate the actors-objectives matrix (MAO) (figure no. 2).

The table can determine the general configuration of the relationships between the actors and the established objectives, expressed in the values  $\Sigma_{A+}$  (convergence of actors for each objective) and  $\Sigma_{A-}$  (divergence of actors for each objective), which shows the probability for each of the objectives to be supported by the actors involved. Therefore, for O<sub>1</sub>, O<sub>2</sub>, O<sub>3</sub> and O<sub>5</sub> there is a majority support, so high chances of being materialised, and for O<sub>4</sub> and O<sub>6</sub> the chances are equal both for their realisation and for their non-realisation.

The table can determine the general configuration of the relationships between the actors and the established objectives, expressed in the values  $\Sigma_{A+}$  (convergence of actors for each objective) and  $\Sigma_{A-}$ , which shows the probability for each of the objectives to be supported by the actors involved.

<sup>4</sup> The analysis was performed according to the personal vision and professional expertise of the author on the actors and events at the time of July 2021 so that the clues may transgress over time or, when performing another type of exploration, they may be interpreted differently. For example, if we were to discuss the fact that Turkey has benefited from the closure of energy corridors through Ukraine, becoming itself the main transport hub, we could deduce that Turkey could position itself to maintain a conflict between Ukraine and Russia; however, it is politically obliged to assert its position in favour of de-escalating the conflict, perhaps also for fear of provoking a large-scale conflict, through NATO intervention, against Russia, in the region in which it is also present, which would have negative effects on all states in the region, especially those bordering the Black Sea.



	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	Σ <sub>O+</sub>	Σ <sub>O-</sub>
A <sub>1</sub>	-1	-1	-1	+1	-1	+1	+2	-4
A <sub>2</sub>	+1	+1	+1	0	+1	0	+4	0
A <sub>3</sub>	+1	+1	+1	+1	+1	+1	+5	0
A <sub>4</sub>	+1	+1	+1	-1	+1	-1	+4	-2
A <sub>5</sub>	+1	+1	+1	-1	+1	-1	+4	-2
A <sub>6</sub>	+1	+1	+1	+1	+1	-1	+5	-1
Σ <sub>A+</sub>	+5	+5	+5	+3	+5	+2		
Σ <sub>A-</sub>	-1	-1	-1	-2	-1	-3		

$$\begin{pmatrix} -1 & -1 & -1 & +1 & -1 & +1 \\ +1 & +1 & +1 & 0 & +1 & 0 \\ +1 & +1 & +1 & +1 & +1 & +1 \\ +1 & +1 & +1 & -1 & +1 & -1 \\ +1 & +1 & +1 & -1 & +1 & -1 \\ +1 & +1 & +1 & +1 & +1 & -1 \end{pmatrix}$$

Table actors x objectives

Matrix actors x objectives (MAO)

Figure no. 2: Relation between actors and objectives

c) *Analysing convergences/divergences between actors based on objectives.* Godet considers that “the relationship between two actors is quantified by the difference between the values (in mathematical mode, author’s note) of the number of convergences and the number of divergences that occur between them, compared to the objectives under analysis” (Petrescu, 2019, p. 74), for their identification, proposing as a calculation method a product between the actors-objectives matrix (MAO) and its transpose, the objectives-actors matrix (MOA), resulting in a matrix of the form actors x actors (MAA) (figure no. 3).

$$\begin{pmatrix} -1 & -1 & -1 & +1 & -1 & +1 \\ +1 & +1 & +1 & 0 & +1 & 0 \\ +1 & +1 & +1 & +1 & +1 & +1 \\ +1 & +1 & +1 & -1 & +1 & -1 \\ +1 & +1 & +1 & -1 & +1 & -1 \\ +1 & +1 & +1 & +1 & +1 & -1 \end{pmatrix} \times \begin{pmatrix} -1 & 1 & 1 & 1 & 1 & 1 \\ -1 & 1 & 1 & 1 & 1 & 1 \\ -1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 0 & 1 & -1 & -1 & 1 \\ -1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 0 & 1 & -1 & -1 & -1 \end{pmatrix} = \begin{pmatrix} 6 & -4 & -2 & -6 & -6 & -4 \\ -4 & 4 & 4 & 4 & 4 & 4 \\ -2 & 4 & 6 & 2 & 2 & 4 \\ -6 & 4 & 2 & 6 & 6 & 4 \\ -6 & 4 & 2 & 6 & 6 & 4 \\ -4 & 4 & 4 & 4 & 4 & 6 \end{pmatrix}$$

Figure no. 3: Matrix multiplication actors x actors (MAA)<sup>5</sup>

If we consider the support/opposition/neutrality of the actors towards the objectives of Turkey, the matrices of convergence and divergence deduced from the MAA, show as follows (figures no. 4 and 5):

Thus, on the one hand, M<sub>1</sub>CA is obtained by maintaining the elements in the product matrix that have a positive value, the others being cancelled, its elements representing the number of objectives against which a pair of actors (line and column at whose intersection is the element) have a resulting convergence relationship (both being

<sup>5</sup> The calculations are performed with the matrix calculation program accessed at <https://matrixcalc.org>.



$$M_1CA = \begin{pmatrix} 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 4 & 4 & 4 & 4 & 4 \\ 0 & 4 & 2 & 2 & 4 & 4 \\ 0 & 4 & 2 & 6 & 4 & 4 \\ 0 & 4 & 4 & 4 & 4 & 4 \end{pmatrix}$$

$$M_1DA = \begin{pmatrix} -4 & -4 & -2 & -6 & -6 & -4 \\ -2 & 0 & 0 & 0 & 0 & 0 \\ -6 & 0 & 0 & 0 & 0 & 0 \\ -6 & 0 & 0 & 0 & 0 & 0 \\ -4 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

Figure no. 4: The matrix of convergences between actors based on prioritised objectives

Figure no. 5: The matrix of divergences between actors based on prioritised objectives

in favour or opposing in most objectives) (Ib., p. 77). On the other hand, M<sub>1</sub>DA is obtained by maintaining only the matrix elements of the MAA that have a negative value, the elements of the divergence matrix representing the number of objectives against which a pair of actors have a resulting divergence relationship (one is in favour of, and another opposes most objectives).

From the view of the two matrices, it is obvious that Russia (followed in line 1 and column 1, being the first actor in the grid) has 0 convergence for all objectives with the other actors and high divergence with them (on 4 objectives with Ukraine and Romania, on 2 with Turkey, and maximum divergence with the USA and NATO on all objectives).

d) *Highlighting the importance of Turkey's objectives for each of the actors, through their empirical prioritisation.* This will be achieved through a ranking of objectives based on indices ranging from 0 to +4 (unimportant, slightly important, important, and very important). We clarify that the indices of this indicator quantify the importance given by each of the actors to each objective of Turkey, respectively how much it is desired to achieve or not achieve it. The data presentation will be made in tabular form, establishing the objectives' ranking on importance for each of the actors involved, which will be associated with a prioritisation matrix (MP) (figure no. 6).

	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	O <sub>5</sub>	O <sub>6</sub>	Σ <sub>O</sub>
A <sub>1</sub>	2	2	4	3	4	4	19
A <sub>2</sub>	2	2	4	2	4	2	16
A <sub>3</sub>	3	2	4	4	1	4	18
A <sub>4</sub>	4	3	4	3	2	4	20
A <sub>5</sub>	3	3	3	4	2	4	19
A <sub>6</sub>	4	2	2	2	2	4	16
Σ <sub>A</sub>	18	14	21	18	15	22	

Table of objectives' prioritisation for the actors

$$\begin{pmatrix} 2 & 2 & 4 & 3 & 4 & 4 \\ 2 & 2 & 4 & 2 & 4 & 2 \\ 3 & 2 & 4 & 4 & 1 & 4 \\ 4 & 3 & 4 & 3 & 2 & 4 \\ 3 & 3 & 3 & 4 & 2 & 4 \\ 4 & 2 & 2 & 2 & 2 & 4 \end{pmatrix}$$

Matrix of objectives' prioritisation for the actors (MP)

Figure no. 6: Objectives' ranking for each actor



From the presented table we find out that Turkey has set: 3 primary rank objectives ( $O_3, O_4$  and  $O_6$ );  $O_1$  of secondary rank;  $O_2$  of tertiary rank; and  $O_5$  of quaternary rank. Therefore, the Turkish state is most concerned with maintaining the territorial integrity of Ukraine, its good relations with Russia and the content of the Montreux Convention.

d) *Establishing the intensity with which each actor aims to achieve the set objectives* by pondering MAO with the result of MP resulting in MPO (objective pondering matrix). The presentation of the data will be done in tabular form, establishing the objectives ranking by their importance for each of the actors involved (figure no. 7).

	$O_1$	$O_2$	$O_3$	$O_4$	$O_5$	$O_6$	$\Sigma_{O+}$	$\Sigma_{O-}$
$A_1$	-2	-2	-4	+3	-4	+4	+7	-12
$A_2$	+2	+2	+4	0	+4	+2	+14	0
$A_3$	+3	+2	+4	+4	+1	+4	+18	0
$A_4$	+4	+3	+4	-3	+2	-4	+13	-7
$A_5$	+3	+3	+3	-4	+2	-4	+11	-8
$A_6$	+4	+2	+2	+2	+2	-4	+12	-4
$\Sigma_{A+}$	+16	+12	+17	+9	+11	+10		
$\Sigma_{A-}$	-2	-2	-4	-7	-4	-16		

Table actors x objectives pondered with objectives ranking

Figure no. 7: Relation between actors and hierarchised objectives

-2	-2	-4	+3	-4	+4
+2	+2	+4	0	+4	+2
+3	+2	+4	+4	+1	+4
+4	+3	+4	-3	+2	-4
+3	+3	+3	-4	+2	-4
+4	+2	+2	+2	+2	-4

Matrix actors x objectives pondered with objectives ranking (MPO)

e) *Identification of convergences and divergences between actors for the prioritised objectives* resulting in the convergence/divergence matrices ( $M_2CA/M_2DA$ ) in terms of the intensity with which each of the actors aims to achieve/not achieve Turkey's objectives. To perform this step, the sum of arithmetic averages between the absolute values of the intensity of the actors' positions (considered in pairs) relative to objectives is applied to the MPO data (ib., p. 79). Given that for  $O_4$ , Ukraine has a neutral position, it will be excluded from the calculation. For example,  $M_2CA_{13}$  and  $M_2DA_{13}$ , which represent the convergence and divergence relations between Russia and Turkey, will be calculated as follows:

$$M_2CA_{13} = \frac{|+3|+|+4|}{2} + \frac{|+4|+|+4|}{2} = 7,5 \quad \text{and}$$

$$M_2DA_{13} = \frac{|-2|+|+3|}{2} + \frac{|-2|+|+2|}{2} + \frac{|-4|+|+4|}{2} + \frac{|-4|+|+1|}{2} = 7,5$$

Therefore, the level of divergence between the two states is higher than the level of convergence for the proposed objectives.

If we consider the level of support/opposition of the actors towards the objectives of Turkey, the convergence and divergence matrices deduced from  $M_2AA$ , show as follows (figures no. 8 and 9):

$$M_2CA = \begin{pmatrix} 3 & 3 & 7,5 & 0 & 0 & 2,5 \\ 7,5 & 14 & 13,5 & 11,5 & 10,5 & 10 \\ 0 & 13,5 & 11,5 & 12 & 11,5 & 10,5 \\ 0 & 11,5 & 10,5 & 12 & 11,5 & 10,5 \\ 2,5 & 10 & 13 & 11,5 & 10,5 & 10,5 \end{pmatrix}$$

Figure no. 8: The matrix of convergences between actors based on ranked objectives

$$M_2DA = \begin{pmatrix} 12 & 12 & 11 & 19,5 & 19 & 18,5 \\ 11 & 0 & 3 & 3 & 3 & 3 \\ 19,5 & 3 & 7,5 & 0 & 6,5 & 3 \\ 19 & 3 & 8 & 0 & 3 & 3 \\ 18,5 & 3 & 4 & 6,5 & 3 & 3 \end{pmatrix}$$

Figure no. 9: The matrix of divergences between actors based on ranked objectives

Visualising the resulting matrices one can find that Turkey (followed in line 3 and column 3, being the third actor included in the calculation grid) has the highest level of convergence with Ukraine (14), the following values of convergence being: with Romania (13), NATO (11.5), USA (10.5), the lowest value being registered with Russia (7.5). It has the highest level of divergence with Russia (11), but also lower levels of divergence with the USA (8), NATO (7.5), Romania (4), with Ukraine not registering divergences.

f) *The realisation of the variable of direct influence* between the actors involved is expressed in the form of a table and in the matrix of direct influence (MID)<sup>6</sup>, to identify the power relations between actors based on the total level of dependence ( $\Sigma d$ ) or influence ( $\Sigma i$ ) for each actor.

The table of direct influences<sup>7</sup> presents, by lines and columns, the actors within the analysis and has as elements values located in the range [0,4] that correspond to the intensity of influence between one actor and another, the quantification levels being: *non-existent, low, medium, high and very large* (figure no. 10).

The TID table in the figure above shows that Turkey has an equal level of dependence and influence (10) compared to the actors introduced in the analysis. The most dependent actor is Ukraine (12), and the most influential, NATO (18). Also, from the same table result the synthetic factors that quantify the value of the influence and the general dependence that each of the actors has on all the other actors. These are *the factors of general influence ( $M_i$ )* and *factors of general dependence ( $D_j$ )*, which are obtained by summing the values arranged on the lines and, respectively, on the MID columns, except for those at the intersection of the lines with the columns belonging to the same actor.

<sup>6</sup> We believe that Turkey and Russia are influencing NATO as a result of the current hegemonic manifestations, in the same category being the USA, a major global power, member of the Alliance. The USA influences, from the position of superpower, all the other smaller states in the analysis.

<sup>7</sup> We will limit the analysis to this aspect, focusing on the direct relations (not considering the indirect ones) between actors that, although important in the integral analysis of a projective scenario, are not necessarily relevant in the present situation.



The table of direct influences presents, by lines and columns, the actors within the analysis and has as elements values located in the range [0,4] that correspond to the intensity of influence between one actor and another, the quantification levels being: *non-existent, low, medium, high and very large*.



	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>	A <sub>6</sub>	Σ <sub>i</sub>
A <sub>1</sub>		4	3	1	2	2	12
A <sub>2</sub>	0		0	0	0	0	0
A <sub>3</sub>	2	1		3	2	2	10
A <sub>4</sub>	3	3	4		4	4	18
A <sub>5</sub>	2	3	2	3		3	13
A <sub>6</sub>	0	1	1	1	1		4
Σ <sub>d</sub>	7	12	10	8	9	11	57

Table of direct influence between actors (TID)

Figure no. 10: Direct influence between actors (power relations)

$$\begin{pmatrix} 4 & 3 & 1 & 2 & 2 \\ 0 & 0 & 0 & 0 & 0 \\ 2 & 1 & 3 & 2 & 2 \\ 3 & 3 & 4 & 4 & 4 \\ 2 & 3 & 2 & 3 & 3 \\ 0 & 1 & 1 & 1 & 1 \end{pmatrix}$$

Matrix of direct influence between actors (MID)

g) The final configuration of the convergence/divergence relations between the actors, taking into account both criteria: the priorities of each actor regarding the objectives and the existing balance of power in the context of the crisis.

In order to determine the result of applying the criterion regarding the ranking of objectives according to the priorities of each actor and the one regarding the power relations between actors, by weighting the general relative influence ( $M_i/\Sigma M_i$ ) of an actor with the inverse of the dependency function ( $M_i/(M_i + D_i)$ ) the coefficient of general influence ( $r_i$ ) is obtained:

$$r_i = \frac{M_i}{\Sigma M_i} \times \frac{M_i}{M_i + D_i} \text{ (Petrescu, 2017, p. 158)}$$

The results of the calculations related to obtaining coefficient  $r_i$  for each actor are included in the table below (figure no. 11).

Relation \ Variable	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>	A <sub>6</sub>	Sum
General influence factors (M <sub>i</sub> )	12	0	10	18	13	4	57 ΣM <sub>i</sub>
General dependence factors (D <sub>i</sub> )	7	12	10	8	9	11	57 ΣD <sub>i</sub>
Coefficient $r_i$	0,13	0	0,09	0,25	0,13	0,02	0,62 Σr <sub>i</sub>

Figure no. 11: General influence coefficients ( $r_i$ ) for each actor

From the general influence coefficients of each actor one can notice that in the current status quo, Russia and the USA have the same level of power in influencing Turkey's objectives in the context of the ongoing crisis. But the difference is made by NATO with the highest coefficient of influence (0.25), which tilts the balance towards supporting the Western point of view in order to achieve Turkey's goal of promoting its objectives.

The next step is to calculate the specific influence coefficients  $r_i^*$  obtained from the following formula (figure no. 12):

$$r_i^* = n \times \frac{r_i}{\Sigma r_i}, \text{ where } n \text{ is the number of actors in the evaluated system.}$$

Relation \ Variable	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>	A <sub>6</sub>
Coefficient $r_i^*$	1,26	0	0,87	2,42	1,26	0,19

Figure no. 12: Specific influence coefficient ( $r_i^*$ ) for each actor

It is observed that the ranking of actors in terms of power coefficients is the same as that one established in the balance of power on the criteria of general influence factors ( $M_i$ ), meaning  $A_4, A_3, A_1, A_5, A_6, A_2$  from the most influential ( $A_4$ ) to the least influential ( $A_2$ ).

Then, to obtain  $M_3AO$ , each line of the MPO matrix (containing information on the relationships between actors and objectives, by priorities) is pondered with the specific influence coefficient  $r_i^*$  of each actor (figure no. 13):

$$\begin{pmatrix} -2 & -2 & -4 & +3 & -4 & +4 \\ +2 & +2 & +4 & 0 & +4 & +2 \\ +3 & +2 & +4 & +4 & +1 & +4 \\ +4 & +3 & +4 & -3 & +2 & -4 \\ +3 & +3 & +3 & -4 & +2 & -4 \\ +4 & +2 & +2 & +2 & +2 & -4 \end{pmatrix} \times \begin{pmatrix} 1,26 \\ 0 \\ 0,87 \\ 2,42 \\ 1,26 \\ 0,19 \end{pmatrix} = \begin{pmatrix} -2,52 & -2,52 & -5,04 & 3,78 & -5,04 & 5,04 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 2,61 & 1,74 & 3,48 & 3,48 & 0,87 & 3,48 \\ 9,68 & 7,26 & 9,68 & -7,26 & 4,84 & -9,68 \\ 0,39 & 0,39 & 0,39 & -0,52 & 0,26 & -0,52 \\ 3,78 & 0,38 & 0,38 & 0,38 & 0,38 & -3,78 \end{pmatrix}$$

Figure no. 13: Matrix of prioritised objectives with the ranking of direct influence

h) Identify convergences and divergences considering all three indicators (support/rejection of objectives, intensity of importance of objectives for each actor, influence between actors), to determine which of Turkey's strategic objectives are most likely to be supported by most actors.

Following the procedure applied to the MPO matrix, from the  $M_3AO$  matrix will result in the square matrices  $M_3CA$  (matrix of convergences between actors weighted with priority of objectives and hierarchy of influences) and  $M_3DA$  (matrix of divergences between actors pondered with priority of objectives and hierarchy of influences).

The convergence and divergence matrices (of the ranked actors) related to Turkey's six prioritised objectives, deduced from the  $M_3AO$ , are as follows (figures no. 14 and 15):

The indices obtained against the background of the performed operational analysis show that, for the objectives formulated by Turkey, the highest convergence between actors – based on the ranking of objectives and actors' relations of influence (20.08) – is that between Turkey ( $A_3$ ) and NATO ( $A_4$ ), and the greatest divergence – based on the prioritised objectives and the power relations between them – exists



From the general influence coefficients of each actor one can notice that in the current status quo, Russia and the USA have the same level of power in influencing Turkey's objectives in the context of the ongoing crisis. But the difference is made by NATO with the highest coefficient of influence (0.25), which tilts the balance towards supporting the Western point of view in order to achieve Turkey's goal of promoting its objectives.

-	8,82	8,04	0	0	2,08
8,82	-	7,83	15,73	0,72	2,65
<b>8,04</b>	<b>7,83</b>	-	<b>20,08</b>	<b>5,07</b>	<b>8,74</b>
0	15,73	20,08	-	16,45	18,19
0	0,72	5,07	16,45	-	3,18
2,08	2,65	8,74	18,19	3,18	-

Figure no. 14: Matrix of convergences between actors based on prioritised objectives and power relations (M<sub>3</sub>CA)

	7,56	11,91	36,17	13,21	14,4
7,56		0	8,47	0,52	1,89
<b>11,91</b>	<b>0</b>		<b>11,95</b>	<b>4</b>	<b>3,63</b>
36,17	8,47	11,95		0	3,82
13,21	0,52	4	0		0,45
14,43	1,89	3,63	3,82	0,45	0

Figure no. 15: Matrix of divergences between actors based on prioritised objectives and power relations (M<sub>3</sub>DA)

between Russia and NATO (36.17). Therefore, Turkey’s objectives in the region in the context of the crisis caused by Russia will be the most supported by NATO, and the least by Russia. Adding to this the data showing that NATO has the greatest influence on the achievement of Turkey’s objectives, the most probable estimation is that Turkey will follow the Alliance’s policy when positioning itself against the Russian-Ukrainian conflict, and possibly in any crisis generated by the Russian Federation when, by that positioning, it maximises its chances of achieving own objectives, regardless of the levers of influence used by other regional actors.

From the operational analysis, we have already found that the best positioning for Turkey is to follow NATO’s policy and reactions if it wants to maintain the development of the objectives that are described in the projected scenario.

### ADDENDUM TO THE OPERATIONAL ANALYSIS TO JUSTIFY TURKEY’S MOST LIKELY ESTIMATED POSITIONING

From the operational analysis, we have already found that the best positioning for Turkey is to follow NATO’s policy and reactions if it wants to maintain the development of the objectives that are described in the projected scenario. However, for a more accurate estimate of Turkey’s positioning vis-à-vis Russia in a Russian-Ukrainian conflict, we provide a more detailed empirical analysis for each objective (primary, secondary, tertiary and quaternary), as an accumulation of convergences and divergences may trigger the failure in achieving a primary priority objective, which might determine a change in Turkey’s positioning in the Russian-Ukrainian conflict.

Turkey has set<sup>8</sup>: – *primary priority objectives*: O<sub>3</sub> – maintaining the territorial integrity of Ukraine, since secessionist actions in

<sup>8</sup> Priority levels for actors are identified on the basis of the Table of Prioritisation of Objectives for Actors (MP), by transposing them from 0-4 (the least important, less important, important, the most important) into a hierarchy IV-I (quaternary objective, tertiary objective, secondary objective, primary objective).

its immediate vicinity may affect its own territorial integrity given the imminence of the Kurdish problem in Turkey; O<sub>4</sub> – maintaining balanced Russian-Turkish relations, since Turkey is heavily dependent on Russian resources; O<sub>6</sub> – maintaining the current content of the 1936 Montreux Convention, which gives it control over the straits between the Black Sea and the Mediterranean, for Turkey the international document representing a diplomatic lever managing relations with Russia and non-riparian states with regional interests in the Wider Black Sea Region; – *secondary priority objective*: O<sub>1</sub> – de-escalation of the conflict. Ukraine is a direct neighbour to its maritime border, which causes its activities in the region to be affected, not only economically, but also politically. Turkey is already surrounded by troubled states – Armenia and Azerbaijan vying for Nagorno-Karabakh in the northeast; Iran with its hegemonic policy to the east; Syria and Iraq in civil wars in the south, another in its immediate vicinity will complicate its existence; – *tertiary priority objective*: O<sub>2</sub> – maintaining the good Turkish-Ukrainian relationship; – *quaternary priority objective*: O<sub>5</sub> – Ukraine’s integration into NATO to counterbalance Russia in the region.

In short, the operational analysis shows that Russia does not agree with 4 of the 6 Turkish strategic objectives (although it does agree with 2 of the 3 objectives considered primary by Turkey, which are actually used for its political purposes<sup>9</sup>), compared to the other actors: NATO and the USA (2 non-agreed objectives, each), Romania (1 non-agreed objective), Ukraine holding a neutral position towards these targets, being far too concerned about the conflict on its territory (although in peacetime, its options may differ).

Given that NATO and Russia emerge from the scenario data as the actors with the greatest potential to influence the achievement/non-achievement of these objectives, and also considering the greatest antagonism regarding them, as well as the fact that the other actors involved (Ukraine, USA and Romania) have similar positions towards the objectives of Turkey, in a first phase, we will focus our analysis only on the antithetical opinions NATO-Russia in relation to these objectives. Therefore, by synthesising the information obtained from the matrix analyses, the data from the following table are deduced (figure no. 16).

<sup>9</sup> The close relationship with Turkey arouses the dissatisfaction of Westerners and contributes to the division of NATO, and maintaining the content of the Montreux Convention does not allow NATO member states such as the USA or France to bring major military forces into the Black Sea.



Turkey has set:  
– *primary priority objectives*: O<sub>3</sub> – maintaining the territorial integrity of Ukraine, since secessionist actions in its immediate vicinity may affect its own territorial integrity given the imminence of the Kurdish problem in Turkey; O<sub>4</sub> – maintaining balanced Russian-Turkish relations, since Turkey is heavily dependent on Russian resources.



Objectives	Priority level for Turkey	Priority level for NATO	Priority level for Russia	Positioning to the objective <sup>10</sup>	
				NATO	Russia
O <sub>1</sub>	II	I	III	pro	against
O <sub>2</sub>	III	II	III	pro	against
O <sub>3</sub>	I	I	I	pro	against
O <sub>4</sub>	I	II	II	against	pro
O <sub>5</sub>	IV	III	I	pro	against
O <sub>6</sub>	I	I	I	against	pro

Figure no. 16: Summary of Turkish objectives' prioritisation and the positioning of Russia and NATO towards them

It should be noted that, on the one hand, NATO agrees with four of the six objectives, of which: one primary priority objective (O<sub>3</sub> – maintaining the territorial integrity of Ukraine) out of the three pursued by Turkey and all other secondary, tertiary and quaternary priority objectives. On the other hand, Russia agrees with Turkey's two primary priority objectives, denying the other four different priorities.

Next, in order to calculate the ratio of the possibility of achieving Turkey's objectives, in the view of the three actors, we give a priority weight to the six objectives according to the level of priority given by them. We establish the weights of the objectives taking into account the ranking of the actors' interest for their achievement/non-achievement, as follows: level I objective – 100%, level II objective – 80%, level III objective – 60%, level IV objective – 40%. The result is shown in the figure below (figure no. 17).

Objectives	Priority weight (+ support; - rejection)		
	Turkey	NATO	Russia
O <sub>1</sub>	80% (+)	100% (+)	60% (-)
O <sub>2</sub>	60% (+)	80% (+)	60% (-)
O <sub>3</sub>	100% (+)	100% (+)	100% (-)
O <sub>4</sub>	100% (+)	80% (-)	80% (+)
O <sub>5</sub>	40% (+)	60% (+)	100% (-)
O <sub>6</sub>	100% (+)	100% (-)	100% (+)
<b>Average of support/rejection for all the objectives</b>	<b>80% (+)</b>	<b>80% (+)</b>	<b>140% (-)</b>

Figure no. 17: The average interest of the actors towards the achievement/non-achievement of Turkey's objectives

<sup>10</sup> The positioning of the objectives is summarised from the MAO, explained in figure no. 2.



From the above, it appears that NATO is inclined to support Turkey's overall objectives to the same extent as Turkey, and Russia is more inclined to reject them. Therefore, it is normal to lean towards supporting NATO's position in a Russian conflict in the region, which is also the optimal variable in line with the current status quo in which Turkey is a full member of the Alliance.

An objective stated as viable for NATO, but disputed among its members, is O<sub>5</sub> (Ukraine's integration into NATO). The Alliance's reluctance in 2008 to approve action plans for accession (MAP)<sup>11</sup> to Ukraine and Georgia, although it promised the two to become members (NATO, 2018), offered Russia the opportunity to re-establish its sphere of influence in these post-Soviet spaces. Currently, regions of Georgia (Abkhazia and South Ossetia) and Ukraine (Autonomous Republic of Crimea, Sevastopol, Donetsk and Lugansk) (Ministry of Foreign Affairs of Ukraine, 2019) are under Russian occupation, while "over 14,000 Ukrainians are dead as a result of the Kremlin's ongoing military intervention in eastern Ukraine" (Reuters, 2021). However, no consensus has been reached between NATO member states in favour of Ukraine's integration, which in any case is not possible as long as Ukraine has an open conflict on its territory.

If we move forward in the analysis considering the weight given by Turkey to support its objectives, it results: the actual levels of NATO support (O<sub>1</sub> – 100%, O<sub>2</sub> – 100%, O<sub>3</sub> – 100%, O<sub>5</sub> – 100%) and rejection (O<sub>4</sub> – 80% %, O<sub>6</sub> – 100%); Russia's effective levels of support (80% – O<sub>4</sub>, 100% – O<sub>6</sub>) and rejection (O<sub>1</sub> – 75%, O<sub>2</sub> – 100%, O<sub>3</sub> – 100%, O<sub>5</sub> – 100%)<sup>12</sup>. The percentages in figure no. 17 show that NATO has a greater availability even than Turkey to support the achievement of objectives O<sub>1</sub>, O<sub>2</sub> and O<sub>5</sub>, and maximum availability (100%), similar to Turkey, for O<sub>3</sub>, which we frame as a level of support of 100% for those objectives. Also, in the case of Russia, an effective level of total support (100%) is granted only for O<sub>6</sub>, with O<sub>4</sub> being allocated a level of support of 80%. Moreover, if we analyse more empirically the primary priority

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<sup>11</sup> MAP - Membership Action Plan.

<sup>12</sup> Taking as a benchmark the priority weight given by Turkey, an equal or higher weight of another actor for that objective is considered as an effective level of support, or as the case may be rejection, of 100%. If the priority weight of an actor is lower than that of Turkey for that objective, the actual level of support/rejection is calculated as a percentage applied to the weight given by Turkey. Example: for O<sub>1</sub> in the relation of Turkey-Russia weights, to identify the effective level of rejection we will calculate 60% of 80%, resulting in 75%.



*If we are to estimate, Turkey's position on the Black Sea crisis generated by Russia will be one of support for Ukraine, along with other Western actors, position that, although it will bring a decline in one of the strategic objectives (that of maintaining a good relationship with Russia), will certainly facilitate the others, having as side effects, not to be neglected, the reheating of the relationship with the USA and the potential for relaxation of US sanctions imposed in 2020 following the acquisition of the Russian S-400 weapon systems by the Turks.*

objectives for Turkey, not agreed by NATO, but supported by Russia: O<sub>4</sub> – maintaining balanced Russian-Turkish relations and O<sub>6</sub> – maintaining the current content of the 1936 Montreux Convention, we find that they are antithetical to NATO's general policy towards Russia, but they do not reflect the Alliance's position on Turkey. In fact, there are already close Russian-Turkish relations that are bothering NATO, but the Alliance has not taken major action on this issue, and with regard to the Convention, amendments to it are possible, under US pressure, which wants warships in the Black Sea, obviously not giving Turkey more rights than it does today. Moreover, opinions on the Convention are also divergent between NATO member states, making changing its text only an objective for Russia's polarisation and not one on the Alliance's current political agenda.

Considering this research addition to the operational analysis, in such a scenario, if we are to estimate, Turkey's position on the Black Sea crisis generated by Russia will be one of support for Ukraine, along with other Western actors, position that, although it will bring a decline in one of the strategic objectives (that of maintaining a good relationship with Russia), will certainly facilitate the others, having as side effects, not to be neglected, the reheating of the relationship with the USA and the potential for relaxation of US sanctions imposed in 2020 following the acquisition of the Russian S-400 weapon systems by the Turks. Therefore, **the most possible estimate of Turkey's position is that it, together with NATO, will support Ukraine in crisis.**

Moreover, if we take into account the response of the international community to the Russian action in 2014, which we find presented in detail (Legucka, 2017, p. 47), we can consider that in a possible invasion of Ukraine, NATO will be limited again to provide intelligence and indirect military support, including the provision of weapons in strengthening Ukraine's defence capabilities. The preposition of military ships in the Black Sea, without violating the Montreux Convention, may be another NATO action. NATO member states such as the USA, France (which are not dependent on Russian gas) will also impose new sanctions, possibly in the form of imposing restrictions on Gazprom's financing on the capital market or blocking the operation of some Russian banks in Western states (VTB, Gazprombank) (O'Toole, Fried, 2021).

Russia's participation in the G20 or the OSCE could also be suspended. In this context, Turkey will carry out the most supportive actions such as visits to Ukrainians and consultations with political and military decision-makers in Ukraine, but without getting directly involved militarily and, possibly, again avoiding sanctions on Russia. These types of actions will not seriously endanger its relationship with Russia, not placing it in a real danger of the Russian "energy weapon" being used on it. Thus, it is provided with all 6 strategic objectives set to be achieved or maintained during the conflict, although probably with a slight decline in its relations with Ukraine, probably disappointed by the lack of a strong common response of the international community, including NATO and Turkey.

The option of NATO's direct military involvement in the Russian-Ukrainian conflict is unlikely for several reasons. The first major reason is that NATO is not obliged to intervene militarily because Art. 5 of the North-Atlantic Treaty can be invoked only by the Member States, not by the partners, which will mean that, including at a request from the UN Security Council to intervene under its auspices, the consensus will not be reached in the North Atlantic Council for such an action given the divergent interests within the Alliance vis-à-vis Russia. The second reason is that the great powers understand that a NATO military intervention in Ukraine will trigger a large-scale and high-intensity war, perhaps even a third world war with the use of nuclear weapons (Dibb, 2014, p. 8; Frederick et al., 2017, p. xi). The third reason is the current period of pandemic in which the resources of states are directed with priority in this direction. The fourth reason is the moment of the system of international relations – reorganisation towards multipolarity, or a multipolar unipolarity – in which each of the hegemonic actors of regional size (Russia, Iran, Japan etc.) expresses its influence on the weaker actors without risking large military actions, and other actors, that only want to maintain their current status, use their power resources to assert themselves internationally and not to protect the interests of other states. Neither NATO nor Russia is prepared for a long war, but this does not preclude an incorrect, hasty, proud decision or an incident in which the territory of a Member State neighbouring Ukraine is accidentally affected, not to cause the activation of Article 5 of the North Atlantic Treaty.





## CONCLUSION

The operational analysis focused on the regional actors' matrix (MACTOR) and supported by the addendum demonstrates, although limited, that in a possible open East-West confrontation Turkey's strategic objectives can be mostly achieved by positioning itself with the Euro-Atlantic community. In fact, the convergences of Turkish policy with Western ones are evident at the regional level, and the divergences with the Russian Federation are numerous in relation to their own interests, so only from the current position of a NATO member state can it counterbalance individual Russian interests.

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## THE MAIN RISKS AND THREATS TO NATO'S EASTERN FLANK

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*Located within the Ponto-Baltic Isthmus, the North Atlantic Alliance's (NATO) Eastern border faces a number of threats, which exceed in diversity and breadth the existing challenges at other border territories of the Alliance. In addition to the historical, permanent threats generated by the geographical and geopolitical position of the Eastern flank states, there are also new threats, that occurred in a pandemic context, especially in the context of the current technological era. This article aims to identify and analyse the main risks and threats facing NATO's Eastern flank states and to argue the need for complex, multi-purpose support for the materialisation, consolidation and securitisation of the East-European North-South Corridor.*

*Keywords: Ponto-Baltic Isthmus; technological era; NATO; East-European North-South Corridor; Russian Federation;*



### INTRODUCTION

Named as such at the beginning of the 20<sup>th</sup> century by Polish historian Oskar Halecki (1891-1973), the Ponto-Baltic Isthmus was considered by some geographers as the true frontier of Europe. This strip of land is stretched between the Southern shore of the Baltic Sea and the Northern shore of the Black Sea and the Moravian Gate to the West and the Caucasus Mountains to the East (see map in *figure 1*). From a geopolitical point of view, the Ponto-Baltic Isthmus is the boundary between the power that has controlled the Eurasian pivot zone for centuries and the dominant powers of Atlantic Europe.

Its geopolitical status as a "buffer" between two major global zones has sealed its destiny, the Ponto-Baltic Isthmus and its two semi-closed seas becoming the subject of domination concerns of the main active geostrategic players in its immediate vicinity.

Moreover, the predominantly plain landscape of the Isthmus also is the Western frontier of the pivot power, today called the Russian Federation. It is its most vulnerable border, because, unlike its other borderlands, which benefit from the natural protection provided by ice, dense forests or the Central Asian plateaus, in the West, the plains and the gauge of over 800 miles of the Isthmus require a huge effort for defence on the part of Russia.

### THE PONTO-BALTIC ISTHMUS – A GEOPOLITICAL COMPRESSION ZONE AND PIVOT BETWEEN EAST AND WEST

Like any "buffer zone", the Ponto-Baltic Isthmus becomes a pivot and implicitly acquires a huge geostrategic value, both for the pivot power and for the Atlantic powers. Because this territory can be transformed into either a barrier, blocking the human, military, commercial flows between the two great global spaces, or into an open gate to either of them. Therefore, the control of the Ponto-Baltic pivot becomes a strategic imperative of utmost importance, both for the Eurasian pivot power, whose internal security ring has its "gemstone"

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within the Ponto-Baltic Isthmus, and for the US, the dominant power of the Atlantic zone, which is interested in preserving its presence in Eurasia in strategic areas of great importance. Goeconomically speaking, the Isthmus represents a hub and a nexus of the transport corridors that unites Europe with Asia on the West-East axis and the Arctic Zone with the Levant and the Mediterranean on the North-South axis.

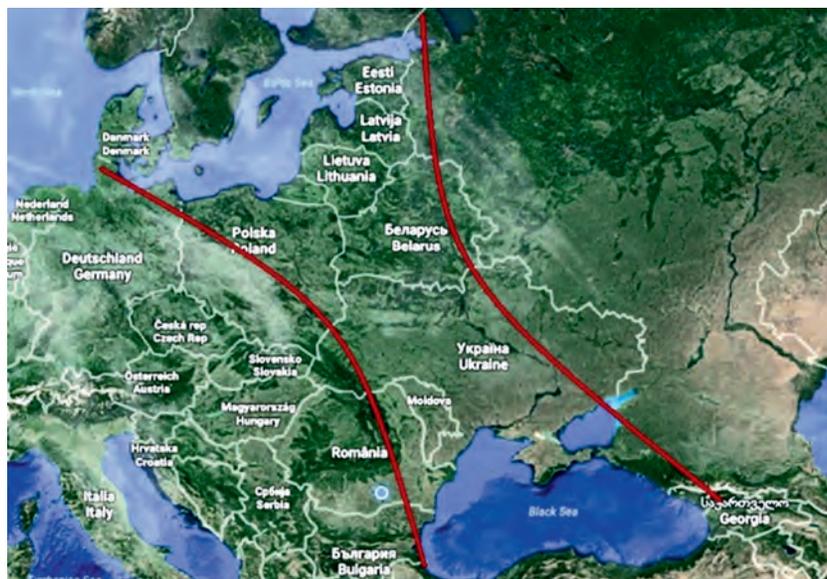


Figure 1: Ponto-Baltic Isthmus<sup>1</sup>

*Goeconomically speaking, the Isthmus represents a hub and a nexus of the transport corridors that unites Europe with Asia on the West-East axis and the Arctic Zone with the Levant and the Mediterranean on the North-South axis.*

From the same geopolitical point of view, the Ponto-Baltic Isthmus is an area of compression and convergence, subjected to geopolitical pressure from the two neighbouring massive force fields. This area might become a shatter belt – a common geopolitical status with the Middle East or Transcaucasia, other inter-civilisational “buffer zones” known for active geopolitical processes that marked their development during the last century and ended up triggering wars and frozen conflicts, territorial fragmentation, state failure, crime, terrorism, poverty and underdevelopment.

Therefore, by the nature of its geographical, geopolitical, geostrategic and goeconomic features, the Ponto-Baltic Isthmus

<sup>1</sup> [https://media.hotnews.ro/media\\_server1/image-2016-10-24-21370829-0-istmul-ponto-baltic.jpg](https://media.hotnews.ro/media_server1/image-2016-10-24-21370829-0-istmul-ponto-baltic.jpg), retrieved on 10 august 2021.

is one of the most disputed geopolitical areas in Eurasia and predisposes the states in the region to substantive, structural threats, springing from the essence of the paradigm of global domination.

From a political point of view, the Isthmus is divided between 10 sovereign states, of which:

- six are NATO (and European Union) members and form the Eastern flank of the Alliance, respectively: Estonia, Latvia, Lithuania, Poland, Romania, Bulgaria;
- one, Belarus, is in the sphere of influence of the pivot power;
- the other three, respectively Georgia, Ukraine and the Republic of Moldova, are in the “grey zone” between the two force fields, being subject to fragmentation and frozen conflicts orchestrated by the Russian Federation. All three unaffiliated states are riparian to the Black Sea, a matter that is turning the Pontic region into one of the most unstable areas in terms of security in Eurasia.

### PERMANENT, STRUCTURAL RISKS AND THREATS

The geographical positioning of NATO's Eastern flank states within the Ponto-Baltic Isthmus entails *structural, permanent risks and threats*, generated by:

- *Russia's historical strategic imperative of domination of the region.* This imperative has been included, since the time of Tsar Peter the Great (1672-1725), within the main objectives of Russia's Grand Strategy of transforming into the hegemon of Eurasia. Today, this imperative materialises through the hybrid actions of the Russian Federation in the Ponto-Baltic Isthmus region;
- the risk of transforming into a battlefield in the conditions of any change of the international *status quo* that could target the Eurasian security balance.

To which are added other risks and threats, so far structural, determined by:

- *European energy dependence on hydrocarbons from Russia;*
- *the risk of economic inability to keep up with the technological sprint in the conditions of modern war;*
- *the deficit of high-speed and/or economically efficient transport infrastructures, which should ensure the interoperability*



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of the armed forces of the states of the Eastern flank of the Alliance: railways, riverways, highways, express roads, airports/heliports;

- the ageing of the population and the depopulation of the Eastern flank states.

### Hybrid actions of the Russian Federation in the Ponto-Baltic Isthmus region

The strategic imperative of domination of the Ponto-Baltic Isthmus region is currently expressed by the aggressive behaviour of the Russian Federation about the states of this area, located in its immediate vicinity. This behaviour includes a wide variety of actions, from the militarisation of the Black Sea and Baltic Sea regions to the hybrid warfare waged by this state in the Pontic region.

In this regard, the security risks for the Alliance must be mentioned in the context of amplifying the hybrid aggression of the pivot power, which could target strategic objectives of maximum importance, such as:

- the mouths of the Danube – a river that connects the Western and Central Europe with the Black Sea;
- the Dniester estuary, which ensures river access to Northern Europe and the de-enclaving of Transnistria – the Russian bridgehead near the mouth of the Danube, located on a strategic axis with Kaliningrad, the other Russian bridgehead in the Baltic area;
- the Snake Island, strategically positioned in the immediate vicinity of the mouths of the Danube.

Thus, the hybrid actions of the Russian Federation at the Eastern border of the Alliance cover multiple forms of manifestation of unlimited war, namely:

- the **military invasion** of Georgia in August 2008 (Dickinson, 2021) or direct military involvement in armed confrontations in Eastern Ukraine by bombing Ukrainian army positions, supplying weapons to rebels through “humanitarian convoys” and significant mobilisation of Russian ground and air forces on the border with Ukraine (*Conflict in Ukraine*);
- **insurgency-type operations followed by the delegation of power and intervention** during the annexation of Crimea,

in February-March 2014. The annexation process began by “organising the Russian-speaking population” to ignite civic unrest and insurgency. Then “the little green men”, soldiers without national insignia, came up and started the military conflict. And, finally, the operation ended with the annexation of the peninsula by Russia (Reuters, 2014);

- **diversionary operations (manipulation/negotiation) and “false flag” operations** meant to limit the reaction capacity of political/geopolitical competitors, as is happening in the current migration crisis on the Poland-Belarus border (Al Jazeera, 2021);
- **subversion operations** meant to alter/cripple the political response of the targeted decision-makers involved in counteracting Russia’s strategic plans, which can be punctually identified in:
  - financial support to Europhobic and anti-Occidental political parties gathered in the non-governmental organisation known as the *Eurasian Observatory for Democracy and Elections (Brussels-Paris-Moscow-Sochi-Kishinev)*;
  - financial and logistical support given to mass media vectors, think-tanks and academics, such as in the Republic of Moldova, where, in 2014, two of the TV stations with a pro-Western orientation, EURO TV and Alt TV, had been bought by the tycoon Ilan Shor, known for his connections with Kremlin<sup>2</sup>;
- **the geopolitical instrumentalisation of the energy dependence** of European states on Russian gas in January 2009 (BBC News, 2009), in June 2014 (BBC NEWS EUROPE, 2014), September 2014 (Macalister, 2014) and, most recently, in October 2021 (Vasilyeva, Hugler, 2021);
- **psychological warfare** meant to intimidate opponents, such as the “parade” of the defeated, organised by pro-Russian separatists in Donetsk on the national day of Ukraine, a parade reminding the endless ranks of German prisoners in World War II (Toea, 2014);

<sup>2</sup> At <http://www.rbnpress.info/wp/o-alta-mana-a-moscovei-in-spatul-informatiional-al-r-moldova-cine-sunt-pionii/>, *O altă mână a Moscovei în spațiul informațional al Republicii Moldova. Cine sunt pionii?* (4 June 2014), retrieved on 4 October 2021.



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*“Bulgaria is one of the areas with the highest concentration of risk and threats in the Euro-Atlantic community” because it is subject to the Russian informational war and propaganda, carried out with the help of local media representatives, politicians and economic factors.*

- **blackmail, misinformation and media propaganda**, as it was stated in the report named *“Outlook 2020: Bulgaria and NATO in European Defence (Defence Ministry)*, published by the Bulgarian Ministry of Defence. This report states that *“Bulgaria is one of the areas with the highest concentration of risk and threats in the Euro-Atlantic community”* because it is subject to the Russian informational war and propaganda, carried out with the help of local media representatives, politicians and economic factors (Popescu, 2014);
  - **espionage actions**, such as:
    - the case of Jobbik member of the European Parliament, Bela Kovacs, accused of spying for Russia (Jurnalul.ro, 2014);
    - the case of Herman Simm, former head of the security department of the Estonian Ministry of Defence, convicted of espionage in favour of Russia (*Baltic Monitor*, 2019);
    - the expulsion by NATO of eight Russian *“undeclared intelligence officers”* in response to crimes and acts of espionage that took place in the Czech Republic during 2014 (Heynes, 2021);
- cyber espionage actions and acts of cyber warfare**, such as:
- the cyber attack codenamed *Epic Turla*, from August 2014, generated by Russian speakers, which targeted classified documents in the field of transatlantic security as well as European energy policy (Palade, 2014);
  - the cyber attack called *Dragonfly/Energetic Bear*, from 2011, which targeted information in the field of aviation and defence in the USA and Canada (*Dragonfly*, 2017);
  - the cyberattack during 2013, called *Energetic Bear*, which targeted targets in the field of energy production and supply in the USA, France, Italy, Germany, Poland, Turkey, Romania and other countries (Paganini, 2014);
  - the cyber espionage campaign entitled *Sandworm*, which peaked in 2014 and targeted servers belonging to NATO, Western European government agencies, Polish companies involved in the energy business, telecommunications

- companies in France, the government of Ukraine (Washington Post, 2014);
  - the cyber attack of October 2014 on the White House, the headquarters of the US presidential administration (Nakashima, 2014);
  - the crippling cyberattack NotPetya, from June 2017, which targeted government and business information systems in Ukraine. The attack spread to computer systems around the world and caused billions of dollars in damage (*Conflict in Ukraine, Ibid.*) etc;
- **organised crime networks** such as the *Russian Laundromat*
    - the money laundering network controlled by Igor Putin, the cousin of the current president of the Russian Federation (OCCRP, 2014). Between 2010 and 2014, the Laundromat *“bleached”* 20 billion USD. The criminal network included politicians, offshore companies, banks from Russia, Moldova, Latvia, 90 Russian companies connected to FSB officers<sup>3</sup>, undercover leaders and judges from the Republic of Moldova.

### **The risk of turning into a space for armed confrontation**

As for the changes in the international *status quo* that could target the Eurasian security equation, they turn into threats to the security of the states of this region, the first targeted by Russian expansionism and possible power games of other geostrategic players active in space. the immediate vicinity of the Isthmus. The history of the last three centuries (from Tzar Peter the Great till present) has shown that the great hegemonic confrontations ended up turning the states of the Isthmus into theatres of operations and *“currencies”* during the peace negotiations between the great victorious powers or between the victors and the vanquished<sup>4</sup>. Therefore, for the Isthmus states, the exit from the grey area of the buffer space status and the affiliation in military structures of collective security such as the NATO Alliance represent vital

<sup>3</sup> FSB - ФСБ – Федеральная служба безопасности Российской Федерации; transliterated Federal'naia Slujba Bezopasnosti Rossiiskoi Federacii – the Federal Security Service of the Russian Federation.

<sup>4</sup> See the Russian-Turkish wars, the Russian-Swedish wars, the two world wars of the 20<sup>th</sup> century.



ROMANIAN  
MILITARY  
THINKING

*For the Isthmus states, the exit from the grey area of the buffer space status and the affiliation in military structures of collective security such as the NATO Alliance represent vital strategic imperatives. Therefore, a threat with structural connotations to the eastern flank states of the Alliance is any action aimed at dividing the Euro-Atlantic unity and minimising the security role of the Alliance and the strategic partnerships with the USA in the region.*



strategic imperatives. Therefore, a threat with structural connotations to the eastern flank states of the Alliance is any action aimed at dividing the Euro-Atlantic unity and minimising the security role of the Alliance and the strategic partnerships with the USA in the region.

### Europeans' dependence on Russian hydrocarbons

In this context, it becomes clear that Europe's current energy dependence on hydrocarbons from Russia poses a major threat to Alliance states. A threat and a vulnerability alike. Threat because, in the conditions of a conflict with Russia, the European dependence on Russian gas turns into a military instrument in the hands of Moscow, with dramatic consequences on societal resilience. And a major vulnerability, known since the 2000s, when the European Council on Foreign Affairs (ECFR-1) released a report entitled *Power Audit on Bilateral EU-Russia Relations* (ECFR-2) stated that, although Europe is much stronger than Russia both economically (15 times) and demographically (3 times) and in terms of defence spending (7 times), Russia is the one that sets the agenda in bilateral relations and, in who does, goes beyond the rules of the game. In this sense, an important role was played by the dependence of Europeans on Russian hydrocarbons and Russia's energy policy in United Europe, a policy dependent on the ancient strategy of divide and rule. Aspects also supported by Valerij Panyshkin and Mikhail Zygar, authors of the reference volume *Gazprom: The New Russian Weapon* (Panyushkin, Zygar, 2008, p. 247). A vulnerability born of addiction, which can turn into a threat at any time, especially since decisions on Article 5 within the Alliance are taken unanimously and Russia's separatist game can affect the unity of the Alliance.

### The challenges generated by the contemporary technological sprint

As for the economic inability of the eastern flank states to keep up with the technological sprint in the conditions of modern warfare, this is an extremely serious threat in the years to come.

In this regard, he advocates the evolution of the Second Nagorno-Karabakh War in the autumn of 2020, which proved that:

- the fifth generation war is as current as possible;

- *“conventional armament is vulnerable and totally inefficient in front of the last generation. Consequently, the maintenance/acquisition of outdated weapons systems is counterproductive and budgetary;*
- *the need for an integrated air defence system (IADS) to counter modern air threats. That is, to fight the air cloud. Such a configuration, with different layers of modern capabilities (long, medium, short and very short range) and well connected in the network, would allow better management of the plethora of challenges, from traditional aircraft and radars to swarms of UAVs;*
- *the fundamental role of electronic warfare in modern warfare;*
- *certification of the radical transformation of the battlefield, in which unmanned systems and electronic “witchcraft” already operate;*
- *the fundamental role of the human factor, responsible for the strategic planning of defence, and of the capacity of a state to economically ensure its defence in a present dominated by an extremely rapid technological advance. Aspects that entail the need for a flexible military education system, based on creativity, analytical thinking and strategic thinking, adapted to the new realities of war;*
- *the overwhelming importance of alliances/coalitions, without which no state will be able to resist in the conditions of the current and future technological “sprint” (Popescu, 2021).*

In this context, the fundamental role of scientific research in the military and civilian fields has become obvious, which in the future will make the difference between survival and annihilation! But technological scientific research presupposes the existence of scientific research platforms and research funds provided by strong industrialised economies. Unfortunately, the economic restructuring, independent of NATO, of the states of the eastern flank of the Alliance brought with it the deindustrialization of these states, lower economic performances and an increased risk of technological backwardness compared to the other members of the Alliance. A risk that could be amplified shortly by the economic consequences of the SARS-VOC II pandemic crisis.



*“The fundamental role of the human factor, responsible for the strategic planning of defence, and of the capacity of a state to economically ensure its defence in a present dominated by an extremely rapid technological advance. Aspects that entail the need for a flexible military education system, based on creativity, analytical thinking and strategic thinking, adapted to the new realities of war.”*



The materialisation of the construction projects of energy, road, railway, river, air and data transport infrastructures that are the object of the Three Seas Initiative acquires a primarily strategic character for the Alliance. And, Romania and Poland must be involved in the master plans aimed at developing these infrastructures, given that they are pillar states of the eastern flank of the Alliance.

A risk that could turn into a major vulnerability in the conditions of massive disruptive attacks, specific to the technological era, capable of paralyzing the response of the target state.

### **The deficit of high-speed transport infrastructure**

The deficit of high-speed and/or economically efficient transport infrastructure that unites the eastern and central European states and ensures the interoperability of their armed forces (railways, riverways, highways, expressways, airports, heliports) is a vulnerability, which in the context of a regional conflict becomes a threat through the possibility of land, communication, isolation of eastern states. In this sense, the materialisation of the construction projects of energy, road, railway, river, air and data transport infrastructures that are the object of the Three Seas Initiative<sup>5</sup> acquires a primarily strategic character for the Alliance. And, Romania and Poland must be involved in the master plans aimed at developing these infrastructures, given that they are pillar states of the eastern flank of the Alliance.

Therefore, the states of the eastern flank, by the nature of their geostrategic position and the complexity of the threats they face, should benefit from ultra-modern weapons systems, to be able to withstand a symmetrical attack from strategic competitors and to discourage success their possible offensive intentions in the region. Weapons systems to ensure their interoperability with the allied armed forces, in parallel with strengthening the institutional capacity to counter hybrid actions.

### **Ageing population and depopulation of the Eastern flank states**

As mentioned in the *National Defence Strategy* drafted by the Romanian presidency, “in the social field, the security environment is influenced by asymmetric demographic evolution, rapid urbanization, the polarization of societies, accentuation of the ageing population, increasing individualism and isolation in space. virtually, the vulnerability of online social media to information warfare and the phenomenon of migration. Also, the intensification of the urbanisation process makes cities vulnerable, especially to climate change

<sup>5</sup> \*\*\*, *Three Seas Initiative*, available at <https://3seas.eu/>, retrieved on 30 October 2021.

and ensuring minimum living conditions” (*Strategia Națională de Apărare a Țării*, 2020). All these dysfunctions, among which the demographic asymmetry by ageing and depopulation, are, at the same time, punctual vulnerabilities of the member states and threats to the security of the Alliance – through the cumulative effect of the economic and military consequences generated by the increased percentages of ageing population, given that demographic power is fundamental in the equation of state or supranational power.

### **RISKS AND SHORT-TERM THREATS**

Another category of risks and threats to the eastern flank states are represented by conjunctural threats, which develop depending on the geopolitical context.

This category includes:

- the emergence of new geostrategic players active in the Ponto-Baltic Isthmus region, which could complicate the regional geopolitical game;
- triggering regional conflicts/wars, which could cause destabilising migration waves on the flank states;
- amplifying the activity of organised crime and terrorism networks;
- medical crises caused by pandemics or other natural cataclysms.

### **The emergence of new geostrategic players active in the Ponto-Baltic Isthmus region, which could complicate the regional geopolitical game**

These players can be states, international organizations or military alliances. In this regard, we must mention the emergence of China, a state that has developed the *16+1 Format* in the region (European Parliament, 2011) (the former *17+1 Format*, before Lithuania withdrew from it, see the map in *Figure no. 2*) overlapping the North-South Corridor/Three Seas Initiative, which includes states in the Balkan Peninsula, known as belonging to the sphere of influence of the Russian Federation (Popescu, 2020, p. 253).

Also, the regional economic presence has turned China into the main economic partner of some Isthmus states. For example, in 2020 China was Georgia's main export partner (Agenda.ge), Ukraine's main





*In 2020 China was Georgia's main export partner, Ukraine's main state trading partner, Bulgaria's strategic partner and an important trading partner of Latvia, Moldova, Belarus. Of course, China's mere economic presence cannot pose a threat to NATO. It can, however, turn into a threat if China's emergence in the region is the result of a geopolitical game in which Russia is involved.*



Figure 2: 17+1 Format<sup>6</sup>

state trading partner (Tass, 2021), Bulgaria's strategic partner (Xinhuanet, 2019) and an important trading partner of Latvia, Moldova, Belarus. Of course, China's mere economic presence cannot pose a threat to NATO. It can, however, turn into a threat if China's emergence in the region is the result of a geopolitical game in which Russia is involved. Because such a game would bring together the military power of Russia and the economic power of China, two great powers massively engaged in the current technological sprint. A true scenario if we remember that the Ponto-Baltic Isthmus and the Balkan Peninsula are extremely valuable geopolitical areas for Russia's security interests. Therefore, the emergence of China in these spaces could not be achieved without the consent of Russia, not coincidentally the 16+1 Format being completely relieved of the energy dimension, so sensitive to pivot power.

Of course, the situation may be complicated if, in the future, the Russian-Chinese geopolitical bloc is formed, most likely on the structure of the Shanghai Cooperation Organization<sup>7</sup>. This could lead

<sup>6</sup> From <https://i1.wp.com/www.silkroadbriefing.com/news/wp-content/uploads/2019/08/CEEC.jpg?quality=90&strip=all&ssl=1> retrieved on 1 November 2021.

<sup>7</sup> \*\*\*, *The Shanghai Cooperation Organization*, <http://eng.sectsco.org/>, retrieved on 1 May 2021.

to China's accession to the Organization of the Collective Security Treaty Organization (CSTO) and the establishment of a Russian-Chinese military bloc on the eastern border of the Alliance! A military bloc that would bring together the status of geopolitical centrality in Eurasia, resources, Russia's military and technological power with resources, direct access to the warm seas, China's demographic, military, economic and technological power. A military bloc that would lead to the appearance of a new "iron curtain" on the eastern border of the Alliance. This geopolitical dynamic depends exclusively on Russia's geopolitical calculation and its position in the context of the power competition between the other two ruling powers of the international system, the USA and China.

### ***The outbreak of regional conflicts/wars that could lead to destabilising migration waves on the flank states***

Given the geopolitical status of the region and the interests of geostrategic players active in the Ponto-Baltic Isthmus area, this scenario could materialize. The pan-ideas that dominated the geopolitical thinking of the early twentieth century could bring back today the same security risks as in the period preceding the hegemonic conflagrations. Russian expansionism in the Black Sea region could result in an open war with Ukraine, especially if Russia is given the challenge it needs to justify its invasion. In such a situation, the eastern flank states will face waves of refugees from their immediate vicinity. Over which could overlap the waves of migrants from South Asia who reach the Alliance's border and the Russian chain, as it can be seen today at the Polish border with Belarus. Migration waves bring with them a procession of risks and threats to the security of the eastern flank states, which cover all dimensions of national security. Risks amplified against the background of the current pandemic and the need for sanitary security of the national territory.

### ***The increase in the activity of organised crime and terrorist networks***

An increase in the activity of organised crime and terrorism networks could occur amid increasing outbreaks of instability in North and East Africa and the highly volatile security space of the "Eurasian Balkans" – which includes the Middle East, Transcaucasia, Central



*Migration waves bring with them a procession of risks and threats to the security of the eastern flank states, which cover all dimensions of national security. Risks amplified against the background of the current pandemic and the need for sanitary security of the national territory.*



and South Asia (see map in *Figure no. 3*). Such an increase in crime, whether or not in conjunction with hybrid actions orchestrated by the Russian Federation or other international actors, could flood migrants with the eastern border of the Alliance, force the penetration of militants of the global Islamist network and other terrorist/insurgent groups, non-Islamists, whose actions could seriously destabilise border states. Also, any criminal activity, from trafficking in dirty weapons and drugs to trafficking in human beings or counterfeit medicines, is an attack on the safety of the citizens of the Alliance's member states and, consequently, threats to the security of the Alliance.

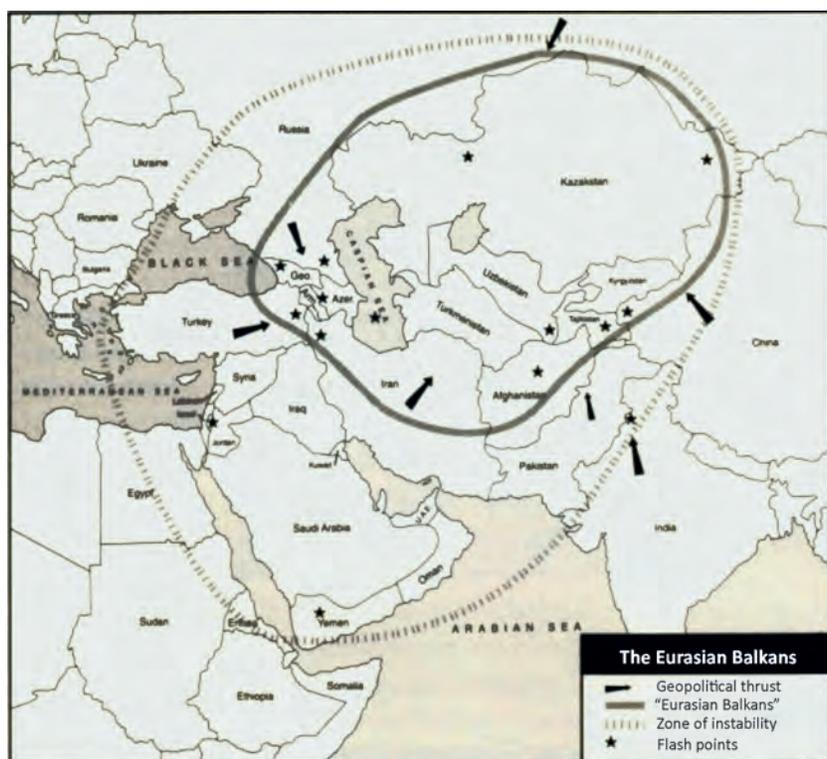


Figure no. 3: The extended region of the Eurasian Balkans<sup>8</sup>

<sup>8</sup> <https://fromestopwarscampaign.wordpress.com/2014/10/18/the-reverse-brzezinski-the-ultimate-eurasian-dilemma/>, retrieved on 1 May 2021.

### **Medical crises caused by pandemics or other natural cataclysms**

The SARS-VOC II pandemic brought to the fore the threat posed by pathogenic microorganisms and the need for a coordinated, global response to public health management. The ongoing pandemic highlighted the vulnerabilities of health systems and reiterated, 100 years after the Spanish flu, the need for regional health security architectures, in parallel with a reconceptualisation of security, in which the medical-sanitary dimension has become a free-standing matter. The chaos and total unpreparedness of world governments in the first months of the pandemic have shown that, in the absence of these institutional mechanisms, collective memory does not retain in the long run the lessons of similar disasters it has gone through. Therefore, only a rethinking of medical and health security, as a separate, independent dimension of national security and Alliance security could increase the level of preparedness in such situations or in the case, much more serious, of a biological attack that could target people, livestock, crops, forests, causing immeasurable damage in the absence of clear protocols, equipment and infrastructure specific to this type of aggression.

Also, we must not omit other types of natural disasters that could generate humanitarian crises and that turn into regional security risks with an impact on Alliance states.

### **WHY DOES THE EAST-EUROPEAN NORTH-SOUTH CORRIDOR NEED TO MATERIALISE AS SOON AS POSSIBLE?**

Some of the vulnerabilities, risks and structural threats facing the eastern flank states today could be mitigated by building the East-European North-South Corridor subsumed under the Big Three Initiative and the B9 Format. Thus, by building hydrocarbon transport networks, fast road and rail transport networks, data transport networks, by developing airport and port transport facilities, river transport facilities, the states of the eastern flank and implicitly the Alliance would be relieved. of energy dependence on hydrocarbons from Russia, of the deficit of high-speed transport infrastructures, increasing the interoperability of the armed forces of the states of the eastern flank of the Alliance and implicitly the mobilisation capacity.



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*The ongoing pandemic highlighted the vulnerabilities of health systems and reiterated, 100 years after the Spanish flu, the need for regional health security architectures, in parallel with a reconceptualisation of security, in which the medical-sanitary dimension has become a free-standing matter.*



In addition, these infrastructure projects generate economic activity, which is extremely welcome in the context of the deindustrialisation of the flank states and the imperatives generated by the current technological sprint. On the other hand, the extra security brought by the corridor generates prosperity, which is reflected demographically by increasing the birth rate and by stopping depopulation.

A strong and secure eastern flank means a great advantage for the Alliance in the context of security challenges in the Indo-Pacific and sub-Saharan areas. A strong eastern flank is a guarantee of transatlantic unity and a factor of Russia's contention in its current sphere of influence. A strong eastern flank is, in the medium and long term, the most economically viable option for the other Alliance states, which will no longer have to intervene economically in support of their weaker eastern partners.

And, last but not least, the interoperability ensured by the existence of infrastructures is an asset in the effort to counteract the risks and threats generated by organised crime and terrorism networks, migration waves, humanitarian crises triggered by natural cataclysms and other conjunctural threats.

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## SECURITY CULTURE – CONSTRUCTIVIST CONCEPTUAL OPERATIONALISATION ESSAY –

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*Hybrid warfare, a current reality, impossible to assimilate in doctrinal apparatuses and field manuals, requires a translation of the issue from the military level to the societal level and an attempt to operationalise, starting from the latter level and from the concept of “security culture”, the appropriate response of society to hybrid threats. In current security research, the concept of “security culture”, normatively designed through the two most recent national defence strategies (2015-2019 and 2020-2024), is most often used as a vague, even ambiguous, term, despite the normative definition in the National Defence Strategy 2015-2019 Guidance. “The totality of values, norms, attitudes and actions that determine the understanding and assimilation at the level of society of the concept of security and derived concepts” (NDS Guidance, 2015, p. 7) is not an exhaustive definition. In security studies, where the “security culture” operates as a variable subject to precise further measurements, conceptual operationalisation is required. This article is aimed at operationalising the concept so that it could be properly used in future studies, starting from the dimensions proposed by Alexander Siedschlag (2018) based on the categories identified by Peter Katzenstein (1996), filtered according to the local cultural pattern.*

*Keywords: security culture; conceptual operationalisation; constructivism; National Defence Strategy; norms and regulations;*



## INTRODUCTION. WHAT IS THE USE OF SECURITY CULTURE IN THE CONTEXT OF HYBRID THREATS?

Against the background of a high interest from researchers and practitioners in relation to the term *hybrid warfare* – the original English term including the whole series of conceptual developments, thus not involving associated meanings, as it is the case of the Romanian term *war*<sup>1</sup> –, a diffuse and all-encompassing term in itself, invoked in numerous studies and debate contexts, the problem of countering it, namely the set of coordinated hybrid measures, arises. While non-state actors rarely develop hybrid strategies, important state-actors – for example, Russia – propose such strategies, mimicking defensive actions and accusing the West of intimidating actions, which can be

<sup>1</sup> With regard to the Romanian concept of *war*, defined in accordance with Gaston Bouthoul’s perspective (which probably needs adjustments to meet the major changes in conducting military actions, especially as a result of the unprecedented technological progress) as “*the bloody armed fight between organised groups*” (Bouthoul, 1978, p. 54), we have published numerous studies among which we mention *Operațiile mass-media. Echilibrul instabil dintre logica militară și logica media* (2013), *Introducere în arta militară* (2014), *Războiul informațional* (2016). The necessary conditions for a violent social phenomenon to be dubbed war are the following: the existence of two social groups in conflict, the existence of two armed forces or paramilitary forces in confrontation on behalf of the two social groups, having conflicting political goals, and the existence of open violence in the battlefield. It is not mandatory for the current hybrid confrontation to meet all the conditions established by the French sociologist, considering the results of the analysis, conducted taking into account various indicators, of the armed confrontations between 1946 and 2016, which shows the following: after 1990, the total number of casualties on the battlefield decreased considerably, the majority resulting from civil confrontations and civil conflicts involving foreign states intervention, according to the statistics used by Max Rosen (2016) in his study: in 2016, per 100,000 inhabitants, 1.08 died in civil conflicts with foreign state intervention, 0.10 died in civil conflicts, and insignificant figures in other forms of conflict, as opposed to 1972, in which the number of victims in the mentioned types of conflicts remained at the same rates, and the number of casualties resulting from conflicts between states rose to 6.28 percent of the population, or 1950, when, in conflicts between states, it reached a maximum of 19.7 percent of one hundred thousand inhabitants, and in the colonial conflicts, it reached 1.73, compared to the same calculation base.



In US doctrines, the concept of hybrid warfare is associated with that of warfare, but the doctrinal apparatus and the set of field manuals rather refer to counterinsurgency or special operations.

subsumed under the concept of *hybrid warfare*<sup>2</sup>. Doctrinal confusion generates mistrust, on the one hand, and prevents an appropriate response, on the other hand, as it cannot be anchored in a doctrine that operates with precise and operationalised terms, which can lead to concrete courses of action and field manuals. From this perspective, in US doctrines, the concept of *hybrid warfare* is associated with that of *warfare*, but the doctrinal apparatus and the set of field manuals rather refer to counterinsurgency or special operations. In a footnote of a concluding article from a collection of texts on *hybrid warfare*, suggestively entitled “*Hybrid Threats and a Possible Counter-Strategy Still Missing: A Useful Counter-Hybrid Warfare Doctrine or Something that Looks Like a Strategy*”, Helmut Habermayer states: “*Adjacent to Hybrid War are Field Manuals (Army, Marine Corps) about counterinsurgency, military operations other than war (MOOTW), small wars, Special Forces operations etc. Often quoted is also the recent FM 3.0 Operations (2008) and FM 3.24 Counterinsurgency, both published by the Department of the Army, Washington D.C.*” (Habermayer, 2011, p. 250).

Unfortunately, even at the time of writing, the US doctrine has not assimilated, considering the inability to operationalise the concept of *hybrid warfare*, the hybrid approach to conflict. Justin Baumann demonstrates the failed attempts to assimilate the concept in the article “*Using Hybrid War Theory to Shape Future US Generational Doctrine*” (2021). It is worth noting, from Baumann’s plea, the way in which a strategic direction of thinking was established, focused on the idea of eliminating the terminology incapable of being operationalised and thus maintained in the area of terminological confusion. Terms with a diffuse coverage area, such as the mentioned hybrid war (fare) or gray zone, should be removed from the strategic lexicon, according

<sup>2</sup> Starting with the Gerasimov Doctrine, frequently invoked in specialised studies, the concept of *hybrid warfare* has become one through which a consistent doctrinal concealment has been attempted from Moscow. We have paid special attention to this topic. Moreover, the theme has not gone unnoticed in many other contemporary studies, most mentioning a game of mutual accusations. For example, in the study *Social Media’s Role in ‘Hybrid Strategies’*, Thomas Elkjer Nissen (2016, p. 2) emphasises the maintenance in the limits of a generalised confusion, as an interest in conceptual non-clarification, in order to obtain doctrinal concealment: “*Nonstate actors therefore fight in an asymmetric way, but they do not employ <hybrid strategies> – while Russia does. If we are to call it hybrid warfare that is because Russia doesn’t. Russia accuses the <West> of conducting hybrid warfare and information attacks against Russia, not the other way around. Russia, on the other hand, wages <New Generation Warfare> or <Non-linear Warfare>, but even those terms are not precise, although their purpose is*”.

to military historian Donald Stoker and researcher Craig Whiteside (2020)<sup>3</sup>. From the latter study we note, first of all, the effect obtained by the diffuse terminology that leads to the inability to distinguish between peace and war and to undermine or erode the US strategic thinking. The American term *hybrid war*, in the sense proposed by Frank G. Hoffman and subsequently developed as “*at best simply a neologism for tactical innovation*” (Stoker, Whiteside, p. 30) in line with the use of new technologies, has theoretically failed in terms of the researchers’ efforts to provide precise and universally applicable research tools. Therefore, Stoker and Whiteside have suggested abandoning a path that leads to theoretical confusion and, implicitly, to an area from which no doctrinal projection and no definite course of action can stem. Moreover, according to Habermayer’s 2011 study, the inclusion of the concept of *hybrid warfare* in a broader conceptual field can neither lead to clarifications: “[...] *The current Field Manual dealing with Counterinsurgency has all the ingredients for Hybrid Warfare, but is a too large volume and one wonders if a battalion commander will seek advice from a 350-page book, written like a military order, when engaged in a fierce battle*” (Habermayer, 2011, p. 251). However, if the aim of the Gerasimov doctrine and of the documents stemming from the projection of Russian General has been to create confusion, starting from the dangerous lack of precision in discriminating between peace and war (Stoker, Whiteside, p. 34)<sup>4</sup> in order to justify interventions that are not permitted by international law and to legalise terrorist actions, cyber-attacks and operations in the electromagnetic spectrum

<sup>3</sup> In relation to the terms *gray zone*, *gray-zone conflict* and *hybrid war*, developed in line with the Gerasimov doctrine and aimed at generating the doctrinal confusion pan-chronically analysed, see Lesenciuc (2020, pp. 63-68), Donald Stoker and Craig Whiteside suggest their elimination from strategic lexicons: “*These terms, as well as the concepts arising from them, should be eliminated from the strategic lexicon. They cause more harm than good and contribute to an increasingly dangerous distortion of the concepts of war, peace, and geopolitical competition, with a resultant negative impact on the crafting of security strategy for the United States and its allies and partners around the world*” (Stoker, Whiteside, 2020, p. 13). Their suggestion is justified as long as the mentioned terms represent the content of a Pandora box opened by Gerasimov, leading to doctrinal confusion (in compliance with the goals pursued by General Gerasimov and the Russian doctrinal school) and to the impossibility of their inclusion in a functional doctrinal apparatus.

<sup>4</sup> The most eloquent emphasis in this chapter of the study conducted by Stoker and Whiteside refers to the Gerasimov doctrine obtaining the expected effect even on US researchers: “*American analysts are forgetting that subversion is a tool both of peacetime state interaction and of war. Believing that subversion is restricted to wartime activities, and classifying it as an act of war, clouds our thinking. Historically, subversion has always been a part of both Russian foreign policy and military action*” (2020, p. 35).



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*“Influence activities are primarily carried out in <peace-time> before violence or hostilities occur, in order to shape the public, media and political discourse. Influence, in this context, is the systematic application of informational and other means by a state or non-state actor to clandestinely undermine or overthrow a liberal democratic government or an international organisation, fomenting civil strife in the interest of this actor.”*

to justify sponsoring terrorist actions, it means that, up until it is abandoned, the issue of *hybrid warfare* should be scientifically placed in another area of analysis. If the (strictly) military instrument has failed in identifying the possibilities to analyse and operationalise the concept of *hybrid warfare*, it results that this concept should be studied and operationalised in a different framework, the one in which it has been pushed by the strategic thinking school in Moscow to generate doctrinal confusion, namely the entire society.

Until then, as long as this new type of hybrid action, more and more frequent and important in contemporary society, generates confusion in terms of the distinction between peace and war, because hybrid conflict is prolonged by a kind of hostility during peace, it is necessary to first address the society affected by hybridity and then hybridity as an effect on military action. By this prolongation in peacetime and in society, the whole society gets involved in the hybrid war and, implicitly, the society gets affected in a wide spectrum of fields or subdomains of activity, through a concentrated influence in relation to the major directions and intentions that directly derive from “*hybrid strategies*”. Nissen describes this way of influencing by employing hybrid strategies in the following terms: “*Influence activities are primarily carried out in <peace-time> before violence or hostilities occur, in order to shape the public, media and political discourse. Influence, in this context, is the systematic application of informational and other means by a state or non-state actor to clandestinely undermine or overthrow a liberal democratic government or an international organisation, fomenting civil strife in the interest of this actor. The activities are predominantly aimed at weakening (shaping) a country’s political, economic, social, cultural, scientific, technological and military structures in order to exert the desired influence. This influence can be aimed at either a contextual change or a behavioural change in society and in the political discourse and subsequent decision-making*” (2016, p. 2).

Placing the contemporary *hybrid warfare* in the new analytical framework, the societal one, requires – as Nissen emphasises in his study – considering the appropriate response to hybrid threats. This response can be but one: to create societal resilience, a central concept in the current *National Defence Strategy* (NDS, 2020), in response to hybrid influence and hybrid threats propagated through altered and precisely targeted information. Therefore, as Nissen

emphasises, it is important to debate “*How civil society and its information environment can be influenced both overtly and covertly*” (2011, p. 2). In the particular case of the Romanian state national security, the point we have reached debating the current influences on the global security environment, the precise and categorical response comes from the mentioned *National Defence Strategy*, which states that in order to achieve the necessary level of state resilience “*national security values must be carefully protected and further promoted, and the security culture must follow an upward path of development and inclusion of as many societal and generational segments as possible*” (NDS, 2020, p. 10).

Our assumption is the following: in order to precisely define and operationalise the concept of *hybrid warfare*, it is necessary to transfer it from the military to the social level. At the social level, the definition of societal resilience is conditioned by the definition of national security values (an issue to which strategic documents have already responded precisely) and by the definition and promotion of the security culture. Security culture, the appropriate society response to hybrid threats, is a fluid term, which has not been doctrinally operationalised. Therefore, the natural approach is to conceptually operationalise the term of security culture, at least within the limits of a school of thought. Once this term is operationalised (and once a series of security culture consolidation programmes have been developed), the extended societal framework proposes the appropriate response: resilience to hybrid threats, and hybrid warfare can be defined in precise terms, can be operationalised and transformed into a series of actions precisely described in field manuals. The purpose of the present article is to conceptually operationalise the security culture, in accordance with the projection of a certain school of strategic thought, the constructivist school, and later, through other studies, to expand research in the area of the concept of hybrid warfare operationalisation.

## DIMENSIONS OF SECURITY CULTURE

The concept of security culture is derived from the concept of culture, understood as *mental software*, as promoted by Geert Hofstede et al. (2012, p. 17), as a set of rational and emotional projections, as well as resulting actions, which “*consists in the social game unwritten rules*”. The concept of security culture can be also analysed in relation



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Security culture in National Defence Strategy Guidance is defined as “the totality of values, norms, attitudes or actions that determine the understanding and assimilation at the level of society of the concept of security and its derivatives (national security, international security, collective security, insecurity, security etc.)”.

to another term, mentioned in the same study, namely that of *cultural genome*, which entails cultural continuity, preservation of deep cultural layers and their expression unaltered by different cultural patterns, even after a long period of retention in the recession zone. The *cultural genome* is not a simple theoretical construction, as Hofstede assures us; it exists and it is perpetuated through a system of values, symbols and centripetal forces that keep culture within the limits of its activation potential, i.e., the transformation of a recessive gene into a dominant gene. In other words, the *cultural genome*, according to Geert Hofstede, is what Ralph Linton (1968, p. 61) identifies as *cultural continuum* (regardless political, social or economic changes), manifested in a form of collective sharing. In order to be the object of sharing, the value of the aspects to be shared is acknowledged.

Security culture entails relating to the set of inherited patterns, transmitted through the aforementioned systems of values, symbols and centripetal forces in relation to the cultural genome, which is why, in the programmatic document entitled *National Defence Strategy Guidance* (2015, p. 7), security culture is defined as “the totality of values, norms, attitudes or actions that determine the understanding and assimilation at the level of society of the concept of security and its derivatives (national security, international security, collective security, insecurity, security etc.)”.

In such a definition framework, which presupposes the understanding of the concept of security culture in relation to a cultural continuum and a series of behavioural patterns that can be acted upon through security education (a concept introduced by the *National Defence Strategy Guidance* and defined as an educational dimension that is achieved by “developing a social attitude having a preventive role in personal, group and state defence and protection against risks, threats, vulnerabilities, real and potential aggression”, 2015, p. 7), maintaining the concept in the simple normative or projective framework does not help in the development of security studies and, even less, in the precise measurement of a certain level of individual or collective security. Definitions from the Anglo-Saxon security schools – such as that provided by Ken Booth (1990, pp. 121-128), representative of the Aberystwyth School: “The concept of security culture refers to traditions, values, attitudes, behaviour patterns, customs, symbols, achievements of a people and the special

way in which they adapt to the environment and solve problems taking into account threats and the use of force” or even by the Romanian school (which cumulates surface and deep cultural contents and the transmission of culture from generation to generation): “Security culture is the result of the social interactions within groups, organisations, communities concerned with the aspects of social security, of some learning processes and knowledge accumulation, in line with the human needs for protection, security, shelter. Security culture is adaptive, it is developed in relation to the evolution of society and is transmitted across generations through different forms of written and oral communication, as well as practices meant to support security values” (Lungu et al., 2018, p. 5) – emphasise the same continuum. The definition provided by Ciprian Lungu, Ruxandra Buluc and Ioan Deac is based on a series of definition frameworks and explicitly refers to the cognitive, affective, evaluative, historical and operational dimensions of security culture (2018, p. 6).

However, in order to achieve the desired level of operationalisation, entailing the identification of a set of dimensions, variables and directly or indirectly measurable indicators, the definitions regarding the cultural continuum are unsatisfactory. We have identified, in accordance with the assumed projection of the constructivist school, a frame of reference from which we can develop a set of dimensions that allow the conceptual operationalisation. The frame of reference is the well-known *Security culture model* proposed by Alexander Siedschlag (2018, pp. 1-40), considering security studies schools in relation to the security culture issues of interest from the perspective of the types of norms derived from the perception and definition of threats, including the projected threat response, as well as to a series of standards, which entail the understanding of culture as a securi(ti)zation<sup>5</sup> factor or as a form of security governance. The considered dimensions are those identified by constructivist Peter Katzenstein in his 1996 paper, *The Culture of National Security. Norms and Identity in World Politics*, demonstrating that national security interests do not exist *per se*, but originate in a series of cultural frames of reference relating

<sup>5</sup> Even if in *Security culture model*, Siedschlag prefers the term “securization”, arguing this approach, he makes reference to “securitization” when citing from other sources (i.e., Katzenstein’s categories, which become coordinate axes in his own model), see Siedschlag (2018, p. 14).



ROMANIAN  
MILITARY  
THINKING

The frame of reference is the well-known Security culture model proposed by Alexander Siedschlag, considering security studies schools in relation to the security culture issues of interest from the perspective of the types of norms derived from the perception and definition of threats, including the projected threat response, as well as to a series of standards, which entail the understanding of culture as a securi(ti)zation factor or as a form of security governance.



to the development of appropriate response to threats. The perspective presented by Alexander Siedschlag is systematised and summarised in the matrix in *table no. 1*. It can be noted that the culture-continuum perspective is only the primary hypostasis, resulting at the intersection of constitutive norms (culture understood as a factor in perceiving/defining threats) with cognitive standards (culture as a security domain and a securitization factor):

Table no. 1: Alexander Siedschlag's Security culture model summarised

	Constitutive norms	Regulatory norms
Cognitive standards	Knowledge and interpretation	Actions repertoires
Evaluative standards	Common symbols	Affirmative values (affective engagements included)

The results of this primary class of perspectives, in which security culture is understood as *“a cognitive form by which members of social communities make sense of reality, attribute meanings to facts, as well as save and reproduce practical competences (e.g., resilient communities debates)”* (Siedschlag, 2018, p. 18), are *“knowledge and interpretation”*, included in the summarised form in *table no. 1*. This dimension is one that maintains culture, in general, security culture, in particular, in the vague, difficult to operationalise, area of the concepts that can propose as ways of practical relevance *“Culture as software of the mind that evolves over time”*, *“cultural selection of risk”* and the possibility of establishing a competent vision of the world through the prism of a national security system. It is based on important works such as *The Interpretation of Culture* by Clifford Geertz (1973), proposing a vague theoretical projection on the concept of culture, maintained under the influence of Clyde Kluckhohn, having internal coherence and being reducible to text and semiotic interpretation: *“The concept of culture I espouse, and whose utility the essays below attempt to demonstrate, is essentially the semiotic one”* (Geertz, 1973, p. 5) or *Risks and Culture* by Mary Douglas and Aaron Wildavsky, suggesting a cultural explanation of the relation to risk, close to that of Hofstede's studies, rather projecting a subjectivisation of the relation to risk: *“Standing inside our own culture, we can only look at our predicament through our culturally fabricated lens”* (Douglas, Wildavsky, 1982, pp. 194).



Taking into account the same cognitive standards in relation to regulatory norms (culture as a factor in responding to threats), the result is a set of *“action repertoires”* developed on the coordinates of US researcher Alasdair Iain Jonston, interested in strategic culture as understood by Jack L. Snyder (1977, p. 8)<sup>6</sup> and, recently, by the mass media in relation to security dilemmas, a view expressed especially in *Cultural Realism. Strategic Culture and Grand Strategy in Chinese History* (1995), as well as on the ones established by Ann Swidler, a sociologist of culture, who identifies strategies of action applicable within distinct cultural repertoires in the study *Culture in Action* (1986). According to this perspective, security culture is defined as a *“set of individual (or proprietary) experience-based strategies associated to individual attributions of meaning and normative convictions; this concept is strong in explaining how existing strategies and courses of action may determine which policy goals are developed or met, rather than strategies and courses of action being attuned to defined goals”* (Siedschlag, 2018, p. 18), and the practical relevance is not rooted in ideological aspects but in the pragmatic ways in which national security can be projected as set of strategies based on precise meaning and normative beliefs. From this perspective, security culture can be seen as a discontinuous, fragmented structure, which can be reduced to personal interpretations regarding the uneven distribution of security in society. Moreover, a society can have more than one security culture and *“considering interpretation of security strategies may differ across security cultures”* (Ib., p. 18). Fuelled by American studies, the issue of *“actional repertoires”* related to security culture is one that is rather covered by the British doctrinal apparatus – see, for instance, *UK Defence Doctrine*, which provides primacy to the concept of Human Security (JDP 0-01, 2014:3) followed by that of national security (United Kingdom Security) and collective security<sup>7</sup> – than by the US doctrines.

Regarding the summarised version of the projection of Siedschlag's model of security culture, the constitutive norms produce, in relation

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<sup>6</sup> *“Strategic culture can be defined as the sum of common ideas, emotionally-shaped responses and behavioural patterns learned by the members of a national strategic community by training or imitation, shared among them in relation to nuclear strategy”* (Snyder, 1977, p. 8).

<sup>7</sup> With regard to this aspect, David Gilmore notes that, excepting the UK Defence Doctrine, no other doctrine gives primacy to the human being but to the state; *“National security and the stability of the inter-state order still remain the foundational concern”* (Gilmore, 2015, p. 51).



to the evaluative standards (culture as a form of security governance/ as an organising factor), a series of “*common symbols*”, based on the projection of US sociologist Robert J. Wuthnow, who maintains the concept of culture in the fluid, continuous, unconstrained zone, projected on the earlier perspectives of Peter L. Berger’s phenomenology, the already mentioned Mary Douglas’ cultural anthropology, Michel Foucault’s structuralism, and Jürgen Habermas’s critical theory – see *Cultural Analysis* (1984), where culture is understood as a behavioural phenomenon or as a behavioural analytical aspect (Wuthnow et al., 1984, pp. 19-20), reducible to common symbols. Continuing the analogical (and difficult to operationalise) perspectives of constitutive norms, security culture, as series of “*common symbols*”, entails the existence of a cultural continuum as *software*, more precisely as a set of “*shared symbols on which citizens orient their actions and which are a kind of software for operating interfaces between actor and overarching structures (i.e. federal, state, local, tribal and territorial agencies), flexible enough to reflect and adapt to new threats and challenges*” (Siedschlag, 2018, p. 18).

Security culture, as series of “common symbols”, entails the existence of a cultural continuum as software.

The practical relevance of such a perspective lies in understanding security as a public good, shared, organised and oriented based on symbols “*that represent a nation’s founding values*”, focused on observable facts in relation to security needs and not to bureaucratic norms.

The common area of regulative norms and evaluative standards includes “*affirmative values*” (and affective engagements), rooted in the studies of US comparatist political scientist Gabriel Almond, promoter, together with his former student Sidney Verba, of the concepts of political culture (and civic culture<sup>8</sup>) in the well-known paper *The Civic Culture: Political Attitudes and Democracy in Five Nations*, as well as in those of Arnold Wolfers, renowned representative of classical realism in international relations, author of the article *National Security as an Ambiguous Symbol* (1952), defining security positively within the limits of realist projection as lack of threats, objectively, and lack of fear, subjectively, (1952, p. 484) and negatively, by relating it to insecurity, as lack of security. The discontinuous perspective on security culture as set of affirmative values is limited to the sum

<sup>8</sup> Based on communication and persuasion and representing “*a culture of consensus and diversity, a culture that [permits] change but [moderates] it*” (Almond, Verba, 1989, p. 15).

of discrete (measurable) entities defined as basic normative values, while security culture is understood as “*ideational representation of foundational decisions about basic normative values (e.g., the security versus liberty and freedom debate), which shape the normative arena in which homeland security takes place*”. The practical relevance of this dimension of security culture consists in identifying and defending the acquired common values, relating to national historical identities, keeping within the limits of the normative projection and identifying a set of actions that will focus on saving “*affirmative values*”, aspect that leads to “*Balance security with other social values, such as liberty and freedom, nurturing security cultures rooted in a view of the citizens being the ultimate owners of homeland security, vested with inalienable democratic rights*” (Siedschlag, p. 18).

The four dimensions of security culture offer the possibility to understand a complex picture of this concept approach, filtered through the prism of the constructivist school, but not reduced to the interpretive limits of this school.

### CONCEPTUAL OPERATIONALISATION OF THE TERM SECURITY CULTURE

The Romanian projective-normative perspective on security culture is one that is based on its mentioned dimensions. The four dimensions identified by Siedschlag are found (with uneven focus) in the definition included in the *National Defence Strategy Guidance*, according to which security culture encompasses the set of values, norms and resulting actions (“*the totality of values, norms and actions*”) that determine the “*understanding and assimilation*” of the concept of security. The definition has a gap (attitudes) or entails a projective reversal in relation to psycho-behavioural studies, in which attitudes, structural components of the human personality, subsequently determine behavioural engagement (action). Moreover, the norms (written or unwritten) of the society prefigure the values. That is why it is necessary to revisit the set of security culture projected dimensions in autochthonous understanding. We consider Alexander Siedschlag’s matrix (2018, p. 5), built on a 2013 synthesis projection of the Department of Homeland Security, according to which “[...] *Culture supports workforce resilience by encouraging norms, values*



Security culture is understood as “ideational representation of foundational decisions about basic normative values (e.g., the security versus liberty and freedom debate), which shape the normative arena in which homeland security takes place”.



“Security culture is a set of rules, values, attitudes and actions resulting from the customs, traditions, symbols and patterns of behaviour of a people, in turn conditioned by adaptation to the environment (including response to threats), which results in understanding and assimilating the concept of security and related concepts (including the security-freedom balance), achieving and maintaining a minimum level of confidence in state institutions and societal resilience, through social interactions, learning processes in formal, informal and non-formal education, and based on a pre-existing civic culture”.

and **expectations** that are consistent with and advance it and by establishing structures and practices that enable it”.

While revisiting the projective-normative definition of *security culture* in Romania, the logical order is: norms → values → attitudes → actions, easy to integrate in Siedschlag’s matrix in relation to the cognitive and evaluative standards, and the constitutive (resulting in “understanding”) and regulatory (resulting in “assimilation”) norms, which leads to the possibility of extrapolating the matrix to the local environment, in which the definition entails the interpretive formula rewritten in table no. 2:

Table no. 2: Definition of security culture in the understanding of the National Defence Strategy Guidance, applied to the Security culture model matrix developed by Alexander Siedschlag

	Understanding	Assimilation
Cognitive standards	Norms	Actions
Evaluative standards	Values	Attitudes

This repositioning in relation to the projective-normative definition allows the limitation (in accordance with Siedschlag’s matrix and with the aforementioned definition frameworks developed by the Aberystwyth School and the Romanian School of Security Studies) of the dimensions of security culture to the set of norms, values, attitudes and actions, and the reconsideration of a complex but operationalizable frame of reference (which allows the reduction to entities within which sociological measurements can be performed), presented on several occasions as the Lesenciuc-Cozmanniciuc definition: **“Security culture is a set of rules, values, attitudes and actions resulting from the customs, traditions, symbols and patterns of behaviour of a people, in turn conditioned by adaptation to the environment (including response to threats), which results in understanding and assimilating the concept of security and related concepts (including the security-freedom balance), achieving and maintaining a minimum level of confidence in state institutions and societal resilience, through social interactions, learning processes in formal, informal and non-formal education, and based on a pre-existing civic culture”.**

The graphical projection of the operationalised *security culture* formula is the following (figure no. 1):

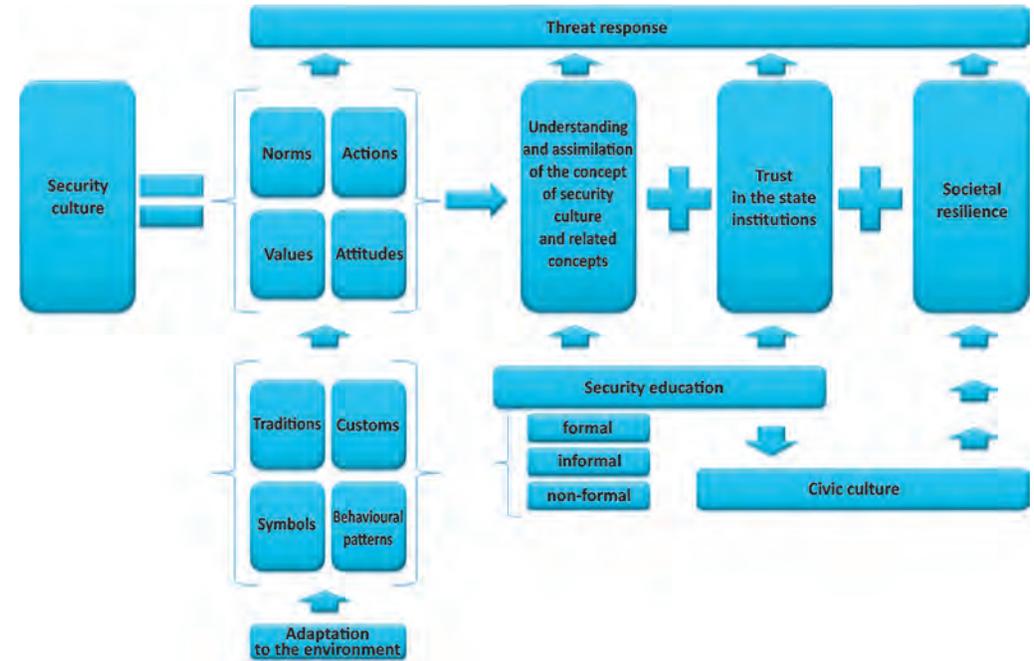


Figure no. 1: Operationalisation of the concept of “security culture” (Lesenciuc-Cozmanniciuc)

Starting from this operational framework of defining *security culture*, reducible to the dimensions (already operationalised or possibly to operationalise) “security”, “trust”, “resilience”, “security education”, “civic culture”, “threat response” , filtered through a cultural pattern that includes norms, values, attitudes and actions, at the reference level, and traditions, symbols, behavioural patterns and customs, at the basic level, a series of variables and indicators necessary in the study of security culture (or of certain dimensions of it) can be developed, and the framework for the operationalisation of the concept of *hybrid warfare* can be established.



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## SECURITY OF 5G NETWORKS – A COMPLEX ISSUE –

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*“5G is a big step forward on several fronts, but won’t actually provide a full security upgrade until we see pure 5G networks with no legacy tech – so not for another 10 years or more.”*

Karsten Nohl,  
founder of Security Research Labs GmbH (SRLabs)

*The history of mobile telecommunications is not very old. It has been a bit more than 40 years since the first generation of cellular communications (1G) was launched on the market, offering the possibility of making and receiving phone calls while on the go, even accompanied by a number of technological limitations, including network and system security. Each new generation of technologies that followed this stage brought significant diversification and improvements in services. Today, there is more and more talk of the fifth generation of mobile communications technologies (5G). The security aspects of 5G networks are a hot topic worldwide, both among major state and non-state actors. This article highlights the main characteristics of 5G technologies and why security of 5G networks is essential and complex.*

*Keywords: mobile communications; 5G networks; network architecture; 5G security; 5G threat landscape;*

### RESEARCH METHODOLOGY

The aim of this article is to analyse the threats and risks of 5G-based networks as currently identified, in order to highlight whether the concerns about the security aspects associated with 5G, which have been released into the public space, are really supported or are mere speculations hiding issues of a completely different nature (e.g., interests in banning Chinese manufacturers/suppliers of 5G equipment and infrastructure from the market).

It would not be appropriate to address the security of 5G networks without a study of previous generations and the specific aspects of each of them at the time of their launch. To this end, the longitudinal method, combined with the comparative analysis method, have examined the characteristics of each generation and the main differences between them.

The comparative analysis method and the descriptive method have been used to present the communication networks based on 5G technologies and the types of network architectures, given that the current 5G services in the portfolio of Romanian communication operators are mainly based on existing 4G/LTE infrastructures.

In order to identify and highlight the security aspects of 5G networks, i.e., the threats and risks associated with them, the comparative analysis method and the bibliographic research method have been combined, in particular the study of documents developed at EU level on cybersecurity of 5G networks, the EU toolbox on risk mitigating measures and the report on the EU coordinated risk

*The current 5G services in the portfolio of Romanian communication operators are mainly based on existing 4G/LTE infrastructures.*



assessment on the cybersecurity of 5G networks. The bibliography studied has also included the United States' national strategy to secure 5G, as a strategic partner of Romania and the European Union, for the analysis of the United States; vision on the security aspects of new 5G technologies.

### FROM 1G TO 5G – A HISTORY OF 40 YEARS

The telecommunications industry is undoubtedly one of the areas that has known a significant and high-impact progress in a relatively short period of time. In the early 1980s the first generation of mobile communications technologies (1G) was launched. Although a limited technology in terms of the offered services (analogue voice communications only), it paved the way for the follow-on developments. It did not have the power to replace traditional fixed telephony, but offered the possibility to make phone calls while being in motion outside the buildings, although the size of equipment used was quite large (in fact not a problem at that time, since there were no other similar terminals to compare with).

About 10 years later, a second generation of mobile communications (2G) technologies, also known as GSM (Global System for Mobile Communications), appeared on the market, offering superior voice quality by switching from analogue to digital, and also providing a new service, known as SMS (Short Message Service). They are still in use today. The first call in GSM technology was made in the Finnish network Radiolinja, in 1991<sup>1</sup>.

Continuing the series of developments in the field of mobile communications, the 3rd generation (3G) appeared in 2000, adding to the already existing services the possibility of data and (even at low speed) internet access. That was the moment opening the way to future high-speed networks and smartphones. Unlike previous technologies, 3G have had a significant lifecycle and are still used today. They were followed in 2009 by the fourth generation (4G LTE, and 4G+ later on),

<sup>1</sup> On 1 July 1991, the world's first GSM call on a commercial network was made between Finland's former prime minister Harri Holkeri and vice mayor of the city of Tampere Kaarina Suonio, <https://www.fonearena.com>, retrieved on 8 May 2021.

when speed and stability of the connections became a constant in the needs of any user of smart devices. In retrospect, it can be seen that each generation of technologies has meant a “revolutionary” moment in the evolution of mobile communications at the time when they were launched on the market.

But a “really true” revolution is announced today by the fifth generation of mobile communications (5G), which goes beyond the individual communication needs, moving towards the connectivity of a wide variety of smart devices and concepts such as the Internet of Things (IoT), Artificial Intelligence (AI), Virtual/Augmented Reality (VR/AR) or Big Data (figure no. 1).



Figure no. 1: The evolution of mobile communications (5G\_Technology\_the\_Fourth\_Gen\_Technology, 2020)

Consequently, the telecommunications industry will join other industries and sectors such as automotive, agriculture, energy and utilities, emergency services, health, security, education, smart homes and cities, that will benefit from the advantages of the new generation of technologies of mobile communications.

### 5G NETWORKS IN A NUTSHELL

The mobile communications networks based on 5G technologies can be briefly characterised by a variety of new features, such as: instant connectivity (1 million devices per km<sup>2</sup>), huge speeds (over 10 Gbps), extremely low latency (1 millisecond), scalability (possibility to extend the network), energy efficiency (hardware components switch off when not in active use).



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The standards have been developed by the *3<sup>rd</sup> Generation Partnership Project (3GPP)*<sup>2</sup>, and named “5G NR” (New Radio). They have been continuously developed under “releases”. For example, the first standard started in 2018 with Release 15. It was updated and followed by Release 16 that was published at the end of 2019. Release 17 completion date was initially planned for 2021, but because of COVID-19 global pandemic, the 3GPP postponed it for 2022, assuming the meetings in-person will be possible again.

Basically, a mobile communications network comprises two main components: *the radio access network (RAN) and the core network (CN)*. The role of the *radio access network* is to connect mobile users to the main core network; it consists of physical infrastructure elements, such as towers/pillars/masts, small network cells, connection devices and dedicated systems installed inside the buildings (indoor equipment).

A requirement of 5G networks is that, in order to be able to provide specific features and services according to the standards (e.g., support of large number of users, high speeds and data capacities), as well as an adequate coverage, a sufficient amount radio spectrum distributed in several frequency bands is necessary. While frequency bands below 1 GHz are suitable for coverage, including indoor or rural areas coverage, the millimetre waves at 26 GHz and above will be able to provide large data transport capacities, but over short distances, since the short millimetre waves have limited propagation through obstacles. This explains the presence of small network cells (femtocells, picocells, microcells) within the architecture of future 5G networks. It has to be mentioned that this higher part of radio spectrum has not been used in the networks based on the previous generations of technologies.

The antenna is one of the key components of a radio access network, and play a major role within the small cells. The 5G networks will use “*massive MIMO*” (Multiple-Input and Multiple-Output) antennas, consisting of hundreds of elements, able to transmit and receive data from a large number of users connected simultaneously to the network.

<sup>2</sup> The 3<sup>rd</sup> Generation Partnership Project (3GPP) unites 7 telecommunications standard development organisations (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC), known as “*Organisational Partners*” and provides their members with a stable environment to produce the Reports and Specifications that define 3GPP technologies, <https://www.3gpp.org/about-3gpp/about-3gpp>, retrieved on 10 May 2021.

The core network must support devices and applications with different traffic profiles. It ensures the management of mobile connections, respectively voice transfers, data, internet. It is designed to manage network functions such as virtualisation and network slicing, with cloud integration and in internet-based services, thus minimising latency/response time. Software applications and software-defined networking are key to ensure the flexibility for an efficient use of the 5G network.

One of the 5G characteristics is that 5G Radio Access Network can connect both to 5G and 4G (LTE) Core Networks, thus defining the type of network architecture (*figure no. 2*).

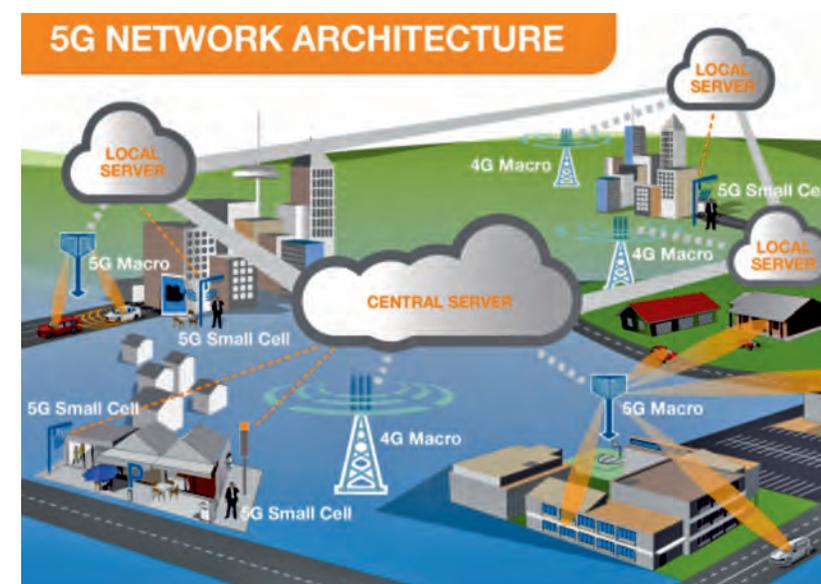


Figure no. 2: 5G and 4G working together  
(5G Explained – How 5G Works)

The case of 5G RAN connected to 4G (LTE) CN is known as “*non-standalone architecture*”. It allows mobile network operators to provide 5G services without replacing the existing network, but limited to high-speed connectivity and lower latency to those users having 5G-enabled devices. The integration of 5G with existing 4G networks is what the majority of mobile network operators offering “5G” has done or will do as a first step of 5G deployment, since the option minimises costs on infrastructure.



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The case of 5G RAN connected to 5G CN is known as “*standalone architecture*” and requires a new fully virtualised network. It is a cloud-based solution, separated from any existing 4G network, and suitable for those mobile operators who plan to deliver new enterprise services (e.g., smart cities) and vertical market solutions. This type of architecture will actually be the one supporting the car-to-car communications/self-driving cars, remote imagery and surgery, real-time monitoring and control etc.

### SECURITY ASPECTS OF 5G NETWORKS – THE THREAT LANDSCAPE

The network architectures of previous “G”s have not presented significant issues of concern from a security perspective, therefore the question “*why things look different in the case of 5G?*” might be justified.

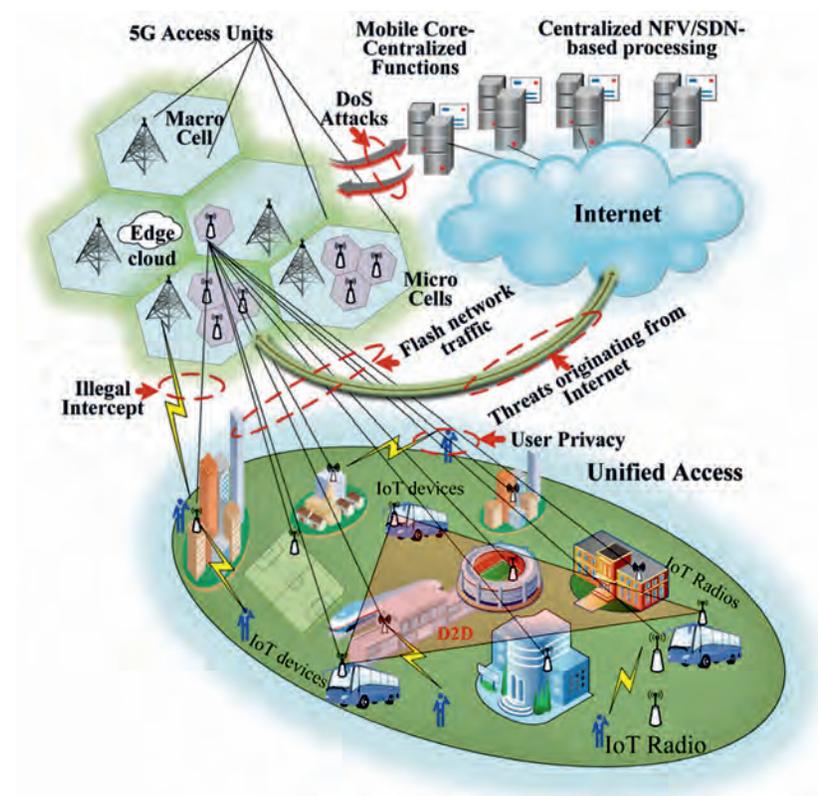
The 2G and 3G networks have been basically focused on people connectivity through voice and text messages, while 4G has added high-speed internet connectivity to the previous services. As it has already been shown, 5G networks comes now with the feature of mass connectivity: connectivity of things to things, services, people, ...to everything. It means designing new infrastructures able to use the network functions virtualisation (NFV) for new services, the software defined networking (SDN) for adaptability, and cloud-native architectures for the scalability of resources. The real 5G networks will be based on a standalone architecture and will use a producer-services model instead of fixed functional entities.

The security of 5G networks has multiple dimensions. There are three main types of risk that make 5G a security complex issue.

A *first type of risk* is represented by the larger attack surface and attack opportunities (*figure no. 3*). Considering that the new architecture of 5G networks (mainly the standalone networks) is different from the previous ones, new risks would target a larger physical surface, especially on the RAN. It happens due to the large number of (poorly secured) IoT devices connected to the 5G network, new endpoints, frequent software patching, therefore more opportunities for the hackers and various ways to penetrate the networks. The less secured

IoT devices, especially the cheapest ones, could introduce weak points into home networks, thus making possible ransomware attacks, sabotage, theft of data etc. Or they could be introduced in botnets and distribute malware across the networks, launch DDoS (Distributed Denial of Service) attacks to shutdown websites, or get fraudulent data and information (credit cards, passwords etc.) by tricking people through *phishing* attacks<sup>3</sup>.

The widespread use of network configuration software will be able to open up opportunities to attack networks and take control of them by malicious state or non-state actors.



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Figure no. 3: Threats in 5G networks  
(5G Security: Analysis of Threats and Solutions, 2017)

<sup>3</sup> *Phishing* attacks are a means to persuade potential victims into divulging sensitive information such as credentials, or bank and credit card details. They involve a combination of social engineering and deception, <https://www.enisa.europa.eu/topics/csirts-in-europe/glossary/phishing-spear-phishing>, retrieved on 10 May 2021.



In March 2020, the US Administration issued the “National Strategy to Secure 5G of the United States of America”, as President Trump’s vision for America “to lead the development, deployment, and management of secure and reliable 5G communications infrastructure worldwide” together with US allied and partner nations.

Another sensitive aspect is related to the 5G antenna. In high frequency spectrum, the propagation of microwaves is on short distance, allowing a higher data capacity. That means comparing with 4G, on the same geographic area there will be a larger number of 5G antennae. Through radio jamming the mobile user access to network services in a specific area could be easily blocked. *Spoofing*<sup>4</sup> and *sniffing*<sup>5</sup> are other potential threats that should worry.

In March 2020, the US Administration issued the “National Strategy to Secure 5G of the United States of America”, as President Trump’s vision for America “to lead the development, deployment, and management of secure and reliable 5G communications infrastructure worldwide” together with US allied and partner nations (National Strategy to Secure 5G of the USA, 2020). According to the strategy, “5G infrastructure will be an attractive target for criminals and foreign adversaries due to the large volume of data it transmits and processes as well as the support that 5G will provide to critical infrastructure” (ib., p. 1)

The analysis of the US strategy reveals two major types of threats to 5G infrastructure:

1. theft of data transited through 5G networks, for the purpose of obtaining financial gains, gathering information and monitoring;
2. the interruption of public and private services based on or causing malfunctions in communications infrastructures.

Therefore, 5G infrastructures will need to ensure an adequate level of information security and address the risks to critical infrastructure, public safety and health, and economic and national security.

The concerns in respect with the 5G security are not related to the White House only. The European Commission pays an utmost attention to the security aspects of the future 5G networks, recognising that this new generation of technologies will play a key role to the development of the Digital Single Market within the EU.

<sup>4</sup> *Spoofing* is the act of disguising a communication from an unknown source as being from a known, trusted source, <https://www.forcepoint.com/cyber-edu/spoofing>, retrieved on 10 May 2021.

<sup>5</sup> *Sniffing* is a process of monitoring and capturing all data packets passing through given network, <https://www.greycampus.com/opencampus/ethical-hacking/sniffing-and-its-types>, retrieved on 10 May 2021.



The supply chain and its complexity represent a second type of risk. On the one hand, it refers to the location of subcontractors – they may be located in several countries, so that the identification of the country of origin of a component is quite difficult (if not impossible) to achieve. In addition, the number of entry points in 5G supply chain could allow malicious threat actors to access the supply chain directly, or by compromising vendors.

As a result of the preliminary study on 5G security, in November 2019 the European Union Cybersecurity Agency (ENISA) published a first edition of the “ENISA Threat Landscape for 5G Networks” Report, as an overview of the security challenges in 5G networks. It was reviewed by ENISA, NIS Cooperation Group and European Commission, and updated in December 2020. The document presents an overview on 5G threats as result of the comprehensive studies based on public information available, coming from the 5G standardisation groups (3GPP, ETSI etc.) and 5G stakeholders (mobile network operators, vendors, national and international bodies, institutes etc.).

According to the Commission Recommendation on Cybersecurity of 5G networks, “the dependence of many critical services on 5G networks would make the consequences of systemic and widespread disruption particularly serious. As a result, ensuring the cybersecurity of 5G networks is an issue of strategic importance for the Union, at a time when cyber-attacks are on the rise and more sophisticated than ever” (Commission Recommendation, 2019, p. 1).

The supply chain and its complexity represent a *second type of risk*. On the one hand, it refers to the location of subcontractors – they may be located in several countries, so that the identification of the country of origin of a component is quite difficult (if not impossible) to achieve. In addition, the number of entry points in 5G supply chain could allow malicious threat actors to access the supply chain directly, or by compromising vendors. For example, the EU coordinated risk assessment report on cybersecurity states that “While a threat actor’s direct access to or influence on the telecom supply chain may significantly facilitate its exploitation for malicious actions and make the impact of such actions significantly more severe, it should also be noted that actors with a high level of intent and capabilities, such as State actor, would seek to exploit vulnerabilities at any stage of the product lifecycle provided by any supplier” (NIS Cooperation Group, 2019, p. 22).

On the other hand, the supply chain refers to the component quality control – at the beginning of a component’s lifecycle, the quality control is low, while the impact of possible sabotage actions in the supply chain is high. In order to mitigate the risk, it is crucial



that the primary vendor and its companies should have an effective quality control process able to identify any vulnerability on security (mainly in software products). The trust in employees and common security measures to protect any illegal access to the vendor’s production activity are also essential.

The software used in 5G networks contains millions of lines of code written in different locations, many errors in turn generating vulnerabilities. The EU coordinated risk assessment report concluded that unidentified vulnerabilities are “a leading cause of potentially undetected, long-lasting intrusions into networks” (Ib., p. 26). Regular software updates or patches are good occasions for insertion of backdoors or new vulnerabilities in the source code, since 5G networks will heavily rely on it.

Even though most of the nations banned Huawei as a 5G vendor, this will not prevent the Chinese companies to influence the future supply chains. For example, Cisco, Nokia and Ericsson have factories in China; in addition, Nokia and Ericsson operate their Chinese subsidiaries mainly through joint ventures with local firms, although Nokia has moved part of its production out of China because of a possible ban, and also to demonstrate alignment with the security measures, especially the US ones.

The *third type of risk* refers to a limited diversity of 5G vendors. Nowadays, the 5G vendors worldwide able to provide 5G networks are not too many. The “*traditional*” providers of RAN equipment are Nokia and Ericsson in Europe and Huawei and ZTE in China, so the choices are not too diverse; this is another challenge for 5G because of the risk of systemic failures or hostile exploitation of the networks.

On the other hand, apart from a limited vendor competition, banning the Chinese companies and reliance on just one or two vendors (e.g., Nokia and Ericsson, in case the Chinese vendors are banned) would reduce competition and open new risks in case of problems. It is the same situation with the Chinese operators relying exclusively on Huawei and ZTE in case of banning the European manufacturers in return of international sanctions.

The controversial technological war between the USA and China on 5G has also repercussions at European level, its dimensions

being both political and economic. Politically, it is worth mentioning the signing, on 13 August 2018, by US President Donald Trump of a document (National Defense Authorization Act, 2018) by which one of the provisions on telecommunications equipment and services refers to the ban on the US government and their contractors to use equipment and technology produced by Huawei and ZTE or its subsidiaries or affiliates.

The intention to exclude the two major Chinese telecommunications equipment and services companies was extended by the USA and its allies worldwide aiming to remove Huawei from any critical infrastructure tender, based on the argument that this company presents high security risks.

### CONCLUSIONS

From the aspects presented, it can be concluded that most of the devices in 5G networks will not be mobile phones, but IoT devices. This is one of the main reasons of concern with respect to the level of security and protection that have to be offered by the future 5G networks.

The transition and deployment of 5G networks will be gradual. Although more and more mobile operators have introduced 5G in their commercial offers, the services provided are based on the current 4G network infrastructures, and are not “*pure 5G*” ecosystems yet. Because of the COVID-19 pandemic as well as of the lack of national legislation on 5G networks’ security, spectrum auctions have been postponed and the 5G deployment process delayed.

Analysing the US and EU statements, it can be noticed that potential vulnerabilities of the new 5G networks are common worries. 5G networks can offer great flexibility through multiple configuration possibilities. At the same time, the network configuration may be accompanied by errors, opening door to new vulnerabilities.

Considering the threat landscape and the large variety of potential risks, it seems the goal of getting full security of 5G networks is unreachable, however measures for 5G mitigation of risks will have to be adopted. The new networks will be included in the national critical infrastructures, so any disruption could have a bad impact on national



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security. Consequently, mitigating 5G risks and keeping the security of 5G networks under (state) control will be essential, no matter the controversies on vendors are.

It can be easily anticipated that once 5G will be deployed and operational, people and organisations will become dependent on the new services offered, for running their business and living the daily life. It happened the same with each of the previous generations...

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## THE LEVEL OF “MULTIDIMENSIONAL POVERTY” INDEX OF LEBANON IN 2021: AN ATTRIBUTE OF A COLLAPSED OR A “NGOs STATE”?

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*Lebanon's difficult financial and economic situation is making headlines around the world, evoking somehow the latest Greek government-debt crisis. The context appears to have become so acute in Lebanon starting in 2020, and it continues to worsen by the day, that the World Bank has recently described the economic crisis devastating Lebanon as one of the worst of its kind in the last 150 years, according to TRT WORLD.*

*This research argues that the pandemic has strongly affected Lebanon's economic equilibrium, since travel and tourism services contributed more than 60% to Lebanon's exports in 2019 (Harvard's Atlas of Economic Complexity, n.a.) and they decreased by 68% in 2020 (Global Blue), but there are other significant factors that have led to this condition in the long term, requiring to be analysed in order to answer the question mentioned in the title.*

*In addition to analysing the financial meltdown, the dollarized economy etiquette, and the role of the international pressure on Lebanon to give up the banking secrecy, special attention will be given to this Levantine tiny state's so-called Multidimensional Poverty Index (MPI) and to the relationship between the analysed dimensions and the existing NGOs in Lebanon, in order to be able to answer the research question.*

*Keywords: Multidimensional Poverty Index (MPI); NGOs; banking secrecy; Levant's geopolitics; collapsed state; dollarized economy;*



## INTRODUCTION

Lebanon is the smallest country in mainland Asia occupying an area of 10,400 sq. km, situated in West Asia, being located on the shores of the Mediterranean Sea and having land borders with Israel on a distance of 81 km and Syria on a distance of 403 km. The official language in Lebanon is Arabic, while French is a recognised language. Most Lebanese live near the Mediterranean Sea and/or near the capital Beirut. In the case of Lebanon, it can be said that from a geographical point of view, the type of rugged terrain has favoured, throughout history, the isolation, protection and development of many factional groups based on religion, clan and ethnicity, with long-term effects. The estimated population of Lebanon in the summer of 2021 was 5,261,372, of which 95% considered themselves Arabs, 4% Armenians, and 1% others (The World Factbook, 2021). Here it should be added that the main source for this section of research – The World Factbook – asserts that many Christian Lebanese do not identify as Arabs but prefer to be called Phoenicians because they consider themselves descendants of the ancient Canaanites<sup>1</sup>.

From a religious point of view, in the case of Lebanon, which officially recognises 18 denominations, among the most important and relevant ones in the Lebanese politics there are: Muslims 61.1%, respectively 30.6% Sunnis, 30.5% Shiites, the rest Alawites and Ishmaelites, Christians 33.7%, Maronite Catholics holding the highest percentage of the Christians, and Druze 5.2%. It is important to note that the data mentioned above do not include the religious affiliation of that important segment of the population consisting of Syrian and Palestinian refugees from Lebanon, but only those who are officially Lebanese citizens (The World Factbook, 2021).

Ignoring the Sykes-Picot Agreement, it can be stated that at the end of the First World War, France gained control of today's Syria and Lebanon, under a UN Mandate from which Lebanon obtained

*Lebanon obtained independence, de jure in 1943 and de facto in 1946. Since then, this small country has been marked by periods of political turmoil interspersed with prosperity built on its position – at least apparently – as a regional centre for finance and trade.*

<sup>1</sup> Authors' Note. The authors of this article do not adopt this perspective 100%, considering academic and ethical reasons.



independence, *de jure* in 1943 and *de facto* in 1946. Since then, this small country has been marked by periods of political turmoil interspersed with prosperity built on its position – at least apparently – as a regional centre for finance and trade. However, the consecutive crises, intercalated with the 1975-90 Civil War, which resulted in 120,000-170,000 deaths (Baker, 2020), were followed by years of social and political instability, dominated by sectarianism, interventionism by regional and traditional powers, Hezbollah and Israel still seem to have not resolved their differences, while Lebanon’s borders with Syria and Israel remain unclear.

### Lebanon

The historical complexity of Lebanon as a unit of analysis is masterfully rendered by Phillip K. Hitti, as follows: *“Six miles north of Beirut, where the Dog River empties into the Mediterranean and the Lebanon wades in the sea to its ankle, the face of the limestone rock bears nineteen inscriptions in almost as many languages, beginning with ancient Egyptian, Assyrian and Babylonian, continuing through Greek and Latin and ending with English, French and Arabic”* (Hitti, 1965, p. 1).

Among those who left the inscriptions in the languages mentioned by Professor Phillip Hitti, there are legends and personalities of history including Ramses II, Nebuchadnezzar of Babylon, Alexander the Great, Salahuddin, Baldwin I during the Crusades, Sultan Salim of Constantinople, or British and French generals. Hitti also points out that the last – chronologically speaking – inscription was the one in Arabic that was sculpted by the Lebanese Republic to celebrate the evacuation of the last French troops at the end of 1946 (Ib., p. 1).

Despite the historical complexity mentioned above, any specialist in Lebanon who tries to describe or talk about this country today will certainly use the adjective *“small”* in the first sentences. This is because geographically, demographically, and from the perspective of its natural resources, Lebanon is a country that falls into the category of those states that occupy a place at the bottom of the rankings.

In Antiquity, Lebanon had a strategic position as a passage on the eastern shore of the Mediterranean, and its well-known ports were ideal for maritime trade, but that position was affected by the advent of steamships, planes, and paved roads (Rubin, 2009, p. 2).

In modern times, the considerable advantage of Lebanon seems to have been the human resource holding a relative education, that was familiar with the Western world, and had experience in trade – skills that other populations of some regional countries did not have, and, consequently, the Lebanese were sought after precisely for the mentioned abilities (Ib.).

Not long after gaining independence from the French in 1943, Lebanon began to experience a series of never-ending kind of political, economic and security crises, which over time have become a major feature of this small state. In a few decades of existence as an independent state, Lebanon has experienced a long and painful civil war, has been invaded by neighbouring countries, has seen a steady and alarming increase in the number of refugees, the emergence of Hezbollah, and an explosion in the number of non-governmental organisations, which have taken over – intentionally or not – a part of the state’s attributions in relation to its own citizens. To the mentioned aspects it can be added that, in August 2020, it was a terrible Beirut port explosion, which caused huge material damage as well as a lot of pain to Lebanon.

As if all of the above were not enough, these days, Lebanon’s difficult financial and economic situation is making headlines around the world, evoking somehow the latest Greek government-debt crisis. The context appears to have become acute in Lebanon starting in 2020, and it continues to worsen by the day that the World Bank has recently described the economic crisis devastating Lebanon as one of the worst of its kind in the past 150 years (News-Middle-East, 2021). At the beginning of the second semester of 2021 Lebanon has become a geographical area characterised by – literally– fights for a few liters of gasoline, while it is running out of medicine, electricity, foreign and national currency (Hodali, 2021). A situation that affects the majority of the population, not just a small segment of it, while the Lebanese politicians are desperately trying to identify that lifeline – even a temporary one – to avoid entering into an obvious, visible collapse of the state. Because of the lack of natural resources, Lebanon is forced to import fuel, which must be paid in a non-existent foreign currency, electricity has become a luxury available a few hours a day as those few power plants cannot operate, fact that seriously and directly



ROMANIAN  
MILITARY  
THINKING

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The pandemic has strongly affected Lebanon's economic equilibrium, since travel and tourism services contributed more than 60% to Lebanon's exports in 2019 and they decreased by 68% in 2020.

affects education in the ongoing pandemic period, and under these conditions, online teaching is at least an ordeal (Ib.).

This research argues that the pandemic has strongly affected Lebanon's economic equilibrium, since travel and tourism services contributed more than 60% to Lebanon's exports in 2019 (Harvard's Atlas of Economic Complexity, n.a.) and they decreased by 68% in 2020 (Blue, 2021), but there are other significant factors that have led to this condition in the long term, requiring to be analysed in order to answer the question mentioned in the title.

Consequently, in addition to analysing the financial meltdown, the dollarized economy etiquette, and the role of the international pressure on Lebanon to give up the banking secrecy, special attention will be given to this Levantine tiny state's so-called *Multidimensional Poverty Index (MPI)*, and to the relationship between the analysed dimensions and the existing NGOs in Lebanon, in order to be able to answer the research question, which emerges from the title.

### Lebanon from the Phoenicians to the State of Great Lebanon/ Lebanese Republic: Main Features

*Motto: "For all the flavours of its storied past and rugged natural beauty, Lebanon is a well-kept tourist secret that begs exploration".*

The Lebanese Republic Embassy  
in the United Arab Emirates (About Lebanon, 2016)

Professor Phillip Hitti emphasises in an extremely artistic way the special relationship between Lebanon and history: the latter (i.e., history) "*knew Lebanon from the earliest of times and never forgot it*" (Hitti, 1965, p. 1). It would not have happened without certain special physical characteristics of Lebanon. First of all, it is about *its strategic location* at the crossroads of the world that connects three historic continents, *its vicinity with the birthplace of Judaism and Christianity*, place that is also closely linked to Islam as religion, and *its mountainous character* that conditions its climate, and hinders *communication* with hinterland, especially among its communities, and encourages it indirectly *with the West*, due to access to Mediterranean Sea. In Lebanon, the mountain has permeated its character over its inhabitants, encouraging them to love their freedom and independence at the community level compared to others in a neighbourhood that is usually difficult to reach. Thus can be explained



The altitude at which Lebanon is located, the diversity of its soil and terrain, combined with its climate offer opportunities for the growth of more species and plant varieties than any other area of comparable size. In the past, the strong point in trade was hardwood trees, but today fruit trees are a major source of income at the national level. Beyond the grandeur and beauty of the cedar that Lebanon prides itself on even its flag, or that of the pine and eucalyptus, the olive tree is closely associated with all the communities that make up Lebanon today.

the *autonomous nationalist or semi-nationalist communities of Druze, Maronites, Shiites, Armenians* etc, that prevail today; most of them, like true mountain people, have withstood many invasions over the centuries, and when the Arab conquest of the seventh century brought them into the political orbit of Islam – in its heyday, the Maronites demanded tribute from the caliph as a price for good behaviour, considering that Lebanon's Christian neighbours had given way over time to the religion of Islam (Ib., pp. 1-2).

The altitude at which Lebanon is located, the diversity of its soil and terrain, combined with its climate offer opportunities for the growth of more species and plant varieties than any other area of comparable size. In the past, the strong point in trade was hardwood trees, but today fruit trees are a major source of income at the national level. Beyond the grandeur and beauty of the cedar that Lebanon prides itself on even its flag, or that of the pine and eucalyptus, the olive tree is closely associated with all the communities that make up Lebanon today.

The olive tree has accompanied Lebanon throughout its history being first mentioned in a Phoenician inscription from the fifteenth century BCE, because this tree lives long, requires little from the owner and produces much, so its fruit is a basic element on the table of the lower classes, while the oil produced from olives takes the place of butter in Lebanese cuisine and it has been also used as a fuel for lamps. Olives feed the animals too and the crushed seeds are used as fuel for cooking. Apart from these trees, the potential to grow various varieties of plants, the climate and its landscape, Lebanon has no natural resources, a fact that distinguishes it from its neighbours, the Lebanese living the same type of life since Canaanites in agriculture, trade and travel (Ib., pp. 12-14).

To these physical characteristics of Lebanon, it must be also added the importance of Lebanon's heritage as part of the Mediterranean community known as the *Phoenician Route*, used since the twelfth century BCE as the essential route for trade and communication in the region, which played an important role in spreading the values, ideas, local products in the whole Mediterranean area, among riparian communities (Phoenicians' Route, 2020). But of all the characteristics of Lebanon today, the most special and the most beautiful, beyond its people, is *the historical imprint that is either forgotten or intentionally*



*The highly diversified ethnic composition of Mount Lebanon, composed of different sects and beliefs, has become a reason for the potential intervention of European powers, so that the old ports of Lebanon have come to have again a relevant significance not only for traders but also for diplomats and especially for Jesuit missionaries and European Protestants.*

*omitted from speeches spread in millions and billions of ways in media and social media since the beginning of the current crisis.*

Lebanon has some of the most enchanting cities in the world, whose beauty is equal to their antiquity, importance and multitude of historical elements found in cities such as Byblos, Tripoli that was founded by the Phoenicians around 800 BCE, Sidon founded in the third millennium BCE, which hosted the Phoenicians, Greeks, Romans, Arabs, Crusaders or Mamluks, Tyre built around 2750 BCE, initially in two parts, on the shore and on an island, or the City Sun – Baalbek, founded by the Phoenicians and which, when conquered by the Macedonians, was renamed Heliopolis (La Rotta de Fenici, n.a.). It must be added that in Lebanon the temple of Jupiter can be found as well, the temple of Bacchus and the so-called circular temple of Venus, the temple of Mercury, but also the famous Adonis Valley. In a sentence, it can be stated about Lebanon that it is *a necklace of ancient vestiges scattered on the hills and valleys that offer spectacular panoramic views*. However, its strategic location between three continents near Jerusalem and, last but not least, on the shores of the Mediterranean, to which it must be added the beauty of the landscape and its historical vestiges, has not exempted Lebanon over time from attracting the attention of various state entities that have passed through the region over the millennia. On the contrary.

The Ottoman rule during the 400 years of control of the region materialised in the case of Mount Lebanon by recognising the dominance of strong families in the region, by collecting taxes, as well as by carefully monitoring the dynamics of conflicts between the strongest clans in the area, and by timely intervening for maintaining the balance of power between them. However, the highly diversified ethnic composition of Mount Lebanon, composed of different sects and beliefs, has become a reason for the potential intervention of European powers, so that the old ports of Lebanon have come to have again a relevant significance not only for traders but also for diplomats and especially for Jesuit missionaries and European Protestants. (Daniş, 2019).

The first form of political organisation of Lebanon was the one known as the Emirate of Mount Lebanon, established at the end of the sixteenth century as an autonomous region within the Ottoman Empire, in which emerged and then developed a series of distinctive features

that will have an important impact on the structure and evolution of subsequent political, security and economic events within modern Greater Lebanon and contemporary Lebanese Republic. Among the most important characteristics formed in the period mentioned above and maintained until present day are the following: *a considerable Maronite Christian majority, a long cultural and economic exposure to Europe and, very importantly, a tradition of intervention of the European powers in its internal affairs* (Traboulsi, 2012, p. 3).

### LEBANON AND MULTIDIMENSIONAL POVERTY INDEX – MPI

Although Lebanon is not listed in the 2020 Global Multidimensional Poverty Index – MPI from the Oxford Poverty & Human Development Initiative and the United Nations Development Programme (OPHI, UNDP, 2020), which publishes a yearly situation at global level, a comprehensive report on multidimensional poverty evolution in Lebanon is published by the United Nations Economic and Social Commission for Western Asia (UN ESCWA, 2021).

The United Nations Department of Economic and Social Affairs – UN DESA provides a historical description of poverty measurement (UN DESA, 2015). The report indicates that, until the 1970s, poverty was basically measured only based on income, as development itself was dominated by macroeconomic policies and growth. In the 1970s, development became associated with “*basic needs*”, while the development assessment method switched from income (measurement) method to direct method, the latter being more related to basic needs. The trend towards the direct measurement method was determined by the observation that monetary measures of deprivation were not necessarily accurate reflections of physical/non-monetary deprivation.

This major transformation in development measurement may translate into a challenge when attempting to assess long-term trends. UN DESA’s paper mentions four approaches that can be found in development measurement: dashboard approach (like the Millennium Development Goals), composite indices approach (Human Development Index, other indexes) multivariate statistical approach and fuzzy sets. The initial monetary measurement of poverty (and/or development) utilised poverty lines as reference. In the multidimensional approach,



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the estimation of poverty requires “deprivation cutoffs” in each poverty dimension (e.g., a line that separates those deprived of food from those not deprived of food), but also an overall/final “poverty cutoff”, which represents the sum of one or more cutoffs depending on the definition of overall poverty cutoff/threshold.

The study mentions that the principle of counting the poor in a multidimensional setting has gained prominence. Before introducing precisely defined models, utilised in formal assessments, an empirical example instantiating the transition from unidimensional (monetary) to multidimensional poverty will be presented. In country A, with a population of 30, 10 people earn 100 coins per year, 10 people earn 2000 coins per year and 10 people earn 5000 coins per year. Assuming that the resources are uniformly available throughout the country, the 10 people that earn 100 coins per year can be catalogued as below the poverty line (which is set, for example at 500 coins per year). The total number of poor people in the country would be 10, for the year considered.

However, if three dimensions are added to the monetary dimension, like the access to schools, access to health services and available road infrastructure, then the counts may become (for example): 10 people earn below a (monetary) poverty line of 500 coins per year, 8 people have to wait 2 years before they can start school, 15 people have to wait more than 2 weeks for getting a general medical consultation and 6 people have to travel more than 30 minutes before reaching a paved road, then another (multidimensional) assessment has to be carried. The cutoffs become: 500 coins/year to assess financial poverty, 2 years waiting time for starting schools, 2 weeks for getting medical consultation and 30 minutes time to reach a paved road. Defining the poverty criteria for an inhabitant of country A can take multiple forms: for example, if an inhabitant’s set of measures is below all four cutoffs (monetary, access to school, access to health and access to road infrastructure), then he/she will be COUNTED as a person in extreme poverty. If two or three measures related to an inhabitant are below cutoffs, in this example, then he/she can be catalogued as not poor, poor, extremely poor, or as belonging to another category. The number of dimensions, and the criteria utilised to establish the poverty level depends on the model and its definitions, but the principle of counting

*The number of dimensions, and the criteria utilised to establish the poverty level depends on the model and its definitions, but the principle of counting is mentioned as dominant in methodologies that assess development or poverty.*

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The principle of multidimensional poverty assessment has been briefly introduced because the generally accepted method, i.e., Alkire-Foster, utilised by OPHI and UNDP to compute multidimensional poverty around the globe, does not appear to have been strictly adopted by UN ESCWA when assessing Lebanon’s situation in the period 2019- 2021, although they are both based on the counting principle and the dimensions considered are similar. In fact, more countries appear to have defined either different dimensions of poverty, or different cutoffs, in their efforts to assess and stimulate development: Mexico (CONEVAL, INEGI, Mexico, 2021), Paraguay (Instituto Nacional de Estadística, Paraguay, 2021) and others. *Table no. 1* presents similarities and differences between 2020 definition of MPI provided by OPHI and UNDP and the UN ESCWA definition utilised for the assessment of Lebanon’s situation.

*Table no. 1. 2020 OPHI and UNDP MPI definition vs (2021) UN ESCWA definition of MPI in Lebanon 2019-2021*

Parameter	OPHI&UNDP MPI definition	UN ESCWA MPI definition
Assessment method	Counting	Counting
Total dimensions/ indicators	Dimensions: 3 Ind.: 10	Dimensions: 6 Ind.: 20 stated (21 counted)
Weight of dimensions/ indicators	Equal weights of dimensions Unequal weights of indicators	Equal weights of dimensions Equal weights of indicators
Multidimensional poverty definition	Household vulnerable to poverty: deprivation score 20 – 30% Poor household: deprivation score 30 – 50% Severely poor household: deprivation score > 50%	Poor household: under cutoff in one or more dimensions Extremely poor household: under cutoff in 2 or more dimensions





Parameter	OPHI&UNDP MPI definition	UN ESCWA MPI definition
Dimension: health	Nutrition Child mortality	Health insurance Access to medicines Access to medical services
Dimension: education	Years of schooling School attendance	Access to education Educational attainment School attendance
Dimension: standard of living	Cooking fuel Sanitation Drinking water Electricity Housing Assets	<i>Some of OPHI &amp; UNDP indicators under different UN ESCWA dimensions</i>
Dimension: public utilities	<i>Some of UN ESCWA indicators under different OPHI &amp; UNDP dimensions</i>	Electricity Drinking water Sanitation Waste collection
Dimension: housing	<i>Some of UN ESCWA indicators under different OPHI &amp; UNDP dimensions</i>	Overcrowding rate Housing type Having a toilet
Dimension: assets and property	<i>Some of UN ESCWA indicators under different OPHI &amp; UNDP dimensions</i>	Internet access Information, communications and technology Means of transport Household electrical devices Heating devices
Dimension: employment and income	<i>Some of UN ESCWA indicators under different OPHI &amp; UNDP dimensions</i>	Unemployment Employment informality Income

According to the UN ESCWA report, multidimensional poverty almost doubled in Lebanon from 2019 (42%) to 2021 (82%). The poverty situation in 2021, according to UN SCWA definition from *table no. 1* was: 18% of the population: not poor, 82% of the population

in multidimensional poverty, of which: 40% of the persons in poverty being multidimensional extremely poor and 60% of the persons in poverty being not multidimensional extremely poor. From the total 1.21 million households situated on the territory of Lebanon, 1 million are considered poor. The highest share of extreme poverty can be found in governorates of Akkar (51.5%), Baalbek-Hermel (49.3%), Nabatieh (46.7%) and Bekaa (43%), while the highest share of poverty (which includes extreme poverty) can be found in Akkar (92 %), Baalbek-Hermel (92%), Nabatieh (92%) and Bekaa (91%). The share of poor people in all governorates exceeds 80%, with two exceptions: Mount Lebanon (75%) and Beirut (73%).

The report emphasises the contribution of each dimension to the multidimensional poverty: health (30%), public utilities (21%), employment and income (18%), education (14%), assets and property (13%) and housing (4%). Hence, the nowadays crisis in Lebanon is dominated by deprivations in health, public utilities and employment and income.

### HISTORICAL EVOLUTION OF HEALTHCARE IN LEBANON

The beginnings of Lebanon’s healthcare system are associated in literature with the arrival of Western missionaries and foundation of the American University in Beirut back in 1866 (medical programme introduced in 1867), and that of the French Jesuit University in 1883 (Kronfol, 1989, p. 379), (Abyad, 1994, p. 159). Under the French Mandate after the First World War, the Department of Health was founded as part of the Interior Ministry. The French Medical School from the Jesuit University was supervising the development of the department as well as the training of the staff. Although the state-driven French model was adopted, private health providers were already present in the country. In the decades that followed, Lebanon’s health system was negatively influenced by economic recessions, but by 1971, 21 hospitals had been built in Lebanon. In 1960, President of Lebanon, Fouad Chehab, former commander of the Lebanese Armed Forces, commissioned Louis-Joseph Lebret and the institute he founded (the French Institute for Research and Training for Harmonised Development – IRFED)



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to develop a study/plan for balanced development (*Development et Civilizations*, 2021), which impacted the healthcare sector as well. Consequently, the National Social Security Fund – NSFF was created in 1964 and the “*Law of Polar Centres*” was promulgated in the same year (Kronfol, 1989, p. 382).

All in all, the state began to increase its involvement not only in healthcare development, but also in other fields (for example *Électricité du Liban* was also founded in 1964, civil service board, central inspection office, budget review division, state research centres as well) in the reform period 1960-1964. In terms of healthcare policy, the Public Health Ministry lost influence and its scope was limited to legislation, public policies, planning and similar tasks, while it had to enter an agreement with NSFF for finance personal healthcare and therapies for peoples. The “*Mutuelle of Civil Servants*” – MCS, a new social security instrument created by the government, became yet another institution that would finance health expenses. The private healthcare sector boomed, stimulated by the fee-for-service policy of the state after 1960, but its growth ended in 1975 due to the beginning of the conflict. In 1990, at the end of the war, healthcare infrastructure was heavily damaged and NSFF funds depleted (Wim Van Lerberghe, 2018, p. 13). For the period 1960-1990, two aspects will be considered as trends: a multiplication of state agencies in charge of healthcare management despite simultaneous development of private healthcare capacity (including Non-Governmental Organisations – NGOs), and a chronic lack of effective regulations to manage the entire system efficiently.

The 2018 study cited above mentions that the Ministry of Public Health – MoPH from Lebanon ran out of negotiation power in 1990 and it was substituted by external agencies and NGOs even for basic programmes like vaccinations. The capacity in private hospitals increased from 1562 beds in 1972 to 7373 beds in 1994, an almost 5-fold increase, as the costs were subsidised by MoPH (60%) and other agencies like NSSF, MCS, Army and others (40%) (Wim Van Lerberghe, 2018, p. 13). State agencies paid also for persons without insurance coverage. Another study (W. Van Lerberghe, 1997, p. 298) claims that international NGO services in healthcare sector increased in number from 28 at the beginning of Lebanese (Civil) War (1975) to 171.

National not-for-profit NGOs also grew, amid financing from external aid organisations, and turned gradually into “*propaganda machines*” or “*fronts for commercial organisations*”. After 1990, the healthcare industry boomed even faster, in terms of equipment, specialists and medicines, while payment was basically guaranteed by the state. The system became oversized and not sustainable in the long term, and competition from NGOs and private practitioners was also increasing. A further study indicates that the number of cardiac catheterisation facilities increased from 10 in 1994 to 32 in 2002, while the rate of procedures increased to 72 per 10,000 inhabitants, Lebanon’s ranking increasing to second in the world for this type of procedure (Abla-Mehio Sibai, 2006). The same development was observed in terms of CT-scanners: in 2006, Lebanon had more than three times the OECD average for CT-scanners installed (Wim Van Lerberghe, 2018, p. 22). In 1993, Hariri government attempted to boost the sustainability of healthcare sector by reshuffling ministerial teams, attempting to obtain data on the healthcare system and investing \$ 320 mln. in 30 new hospitals. The period 1990-2000 was generally marked by high healthcare costs supported by the state, oversized investments in medical technology, lack of efficiency, overbilling, over-hospitalisation and a further increase of private offer and NGO contribution to healthcare sector in Lebanon.

After the year 2000, medical technology investments slowed down, but private health services in Lebanon continued to expand. Expenditure with healthcare became gradually more efficient. The newer infrastructure focused on larger facilities, and was financed by the World Bank, Saudi Arabia and Kuwait (Ib., p. 21). Accreditation of facilities became an important tool to maximise the efficiency of the infrastructure, a procedure initiated in 2001.

According to Dr. Shadi Saleh, founding director of Global Health Institute within the American University of Beirut, more than “*10,000 NGOs operate in Lebanon*” (as of 2019), the highest number of NGOs related to population in the world (Safa, 2021). Among them, several are listed in different sources as active in healthcare/medical sector: Marsa, Al-Shifaa for Medical and Humanitarian Services, Howard Karagheusian Primary Healthcare Centre, Heart for Lebanon, project HOPE, among others.



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### Historical Evolution of Public Utilities in Lebanon

The dimension “public utilities” is the second contributor to multidimensional poverty in Lebanon according to UN ESCWA. This dimension encompasses *electricity, drinking water, sanitation and waste collection*. In the Ottoman era, *Société Anonyme Ottomane des Tramways et de l'Électricité de Beyrouth* received a concession in 1906 for producing electricity and running the tram system in Beirut (Lebanese Center for Policy Studies, 2021). The company was then merged into *La Société des Tramways et de l'Éclairage de Beyrouth* (Arabic – *Sharikat al-Tramway wa-al-'Inara fi Bayrut*), which also oversaw conversion of street lighting from gas to electrical.

*Électricité du Liban* – EDL was created in 1964, as part of the modernisation efforts undertaken by President Fouad Chehab amid the implementation of IRFED country plan called “*Besoins et possibilités de développement du Liban*”. In 1964, electricity production came thus under state monopoly. The interview with Dr. Ziad Abu-Rish points out that despite the electricity’s poor quality in the early stages, i.e., before 1943 independence and afterwards, arbitrary concessions and political interests led to protests of consumers, but first and foremost of workers in the electricity field. Underscoring that the country’s electricity system was not in the position to meet the need before 1975, he emphasises that Israeli bombing during the civil war “*featured the destruction (if not explicit targeting) of the electricity infrastructure in Lebanon*”. In the post-1990 era, the national discussion on electricity sector did not manage to address and overcome previous damage and, on the contrary, it accentuated tensions and attempted to address the privatisation of EDL without any positive result.

A 2020 study from SOAS Consortium (London) presents nowadays issues related to Lebanon’s electricity sector (Ali Ahmad, 2020). A brief overview of the study revealed that corruption was a central problem in developing the country’s electricity sector. In technical terms, following data would be sufficient to understand the state of electricity sector in Lebanon: EDL produces 63% of the electricity needed, the losses in power, both technical and non-technical, affect one third of EDL’s total production, the centre of Beirut being probably the single area with a relatively stable electricity supply. Zahle region,

with a regional production facility based on British generators and distribution (*Électricité de Zahle* – EDZ) is the only success story from Lebanon. EDL’s tariffs have not been updated since 1994, the consequent losses of EDL amounting to more than half of Lebanon’s national debt (Ali Ahmad, 2020, p. 4), while the company had a collection ratio of 66% in 2017. From the 3000 MW installed power of EDL, 2764 MW (or 92%) are power plants depending on imported oil. Between 32,000 and 37,000 generators are trying to complement EDL’s output, and the owners/operators of these generators have also become politically relevant, but since Lebanon does not own hydrocarbon resources, the local generation of power is clearly not a long-term viable solution. The study SOAS Consortium, citing other sources, indicates that, in 2018, diesel generators produced 40% of total emissions from electricity and 11.4% of country’s total emissions, with possible negative impact especially in urban areas. Furthermore, power coming from diesel generators, although theoretically taxed starting with 2019 budget law, is basically not part of the formal economy yet, as the payments are carried out in cash.

Although the so-called “*mafia of electricity*” is said to profit from the \$ 1.5-2 billion market (Dziadosz, 2021), allegedly poorly regulated and taxed, groups of owners started to strike in the latest round of confrontations with state representatives due to lack of fuel and the poor quality of the one provided (Rose, 2021). Finally, the International Bank for Reconstruction and Development/World Bank Group published a study in May 2020, suggesting that distributed power in Lebanon, based on solar energy, might be the least expensive solution available for the country at an estimated price of 8 cents (\$) per kWh under 2020 market conditions (Ahmad, 2020).

A UNICEF press release from July 2021 revealed that over 71% of people in Lebanon risk entering the vulnerability categories “*highly critical*” and “*critical*” with respect to *water access* (Blanche Baz, 2021). Should the state-run water system collapse, the prices are expected to double and to amount to 263% from monthly average income. Among issues in the water supply system, the following are mentioned: dollarized maintenance costs, collapse of the power grid, rising fuel costs, water loss. At the time of the report, UNICEF mentioned



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*The public utilities crisis in Lebanon has a historical background, apparently similar to the one of health crisis vis-à-vis development politics. The fragmentation of state and state services, externalisation of responsibilities and actions to individuals, private organisations and foreign institutional actors, with a relatively limited efficiency and no long-term perspectives, appear to remain major factors in overcoming shortages.*

that it needed \$ 40 mln. in order to maintain water supply to over 4 million people in Lebanon.

*Water management* in Lebanon followed a path similar to electricity: imposition of state monopole after independence, paralleled by partnerships with foreign companies or governmental organisations, destruction during the 1975-1990 period, followed by a disorganised reconstruction in post-war era. Along this path, the following episodes can be mentioned: foundation of Beirut Water Authority in 1951, creation of Lithani River Authority in 1954 at the request of Americans and signing the contract for building the Qaraoun Dam based on the Tennessee Valley model, the Decree 14438 from 1970 that sought to regulate the increase in private wells, but only those that were deeper than 150 m and pumped more than 100 m<sup>3</sup> per day (Stéphane Ghiotti, 2013). The authors mention that in 2013, Lebanon had only two dams, i.e., Qaraoun and Chabrouh (the latter built until 2007), an abnormal situation for a Mediterranean country. In 2014, the World Bank approved Bisri Dam project, in amount of \$ 617 mil., that is supposed to store 125 mln. m<sup>3</sup> of water after completion in 2024. The project is financed by World Bank, Government of Lebanon and Islamic Development Bank (World Bank, 2021).

A crisis of *waste management* was signalled in July 2015 in Lebanon: the Ministry of Environment was ending a 17-year emergency plan by closing the Naameh landfill, *leaving the country with practically no alternative in the short and middle term and the waste collection service by state stopped*. While NGOs, companies and local initiatives coped with the situation, the state launched the new plan (for 4 years) in March 2016 (Azzi, 2017). As the 2016 solution was a middle-term one, another waste crisis was looming in 2020, amid reaching the capacity of existing landfills.

The public utilities crisis in Lebanon has a historical background, apparently similar to the one of health crisis vis-à-vis development politics. The fragmentation of state and state services, externalisation of responsibilities and actions to individuals, private organisations and foreign institutional actors, with a relatively limited efficiency and no long-term perspectives, appear to remain major factors in overcoming shortages.

### Historical Evolution of Employment and Income in Lebanon

The third most relevant contributor to multidimensional poverty in Lebanon is the dimension “*employment and income*”. As this sector is directly related to economy, although it impacts social arrangements in a state as well, some of the major developments that influenced Lebanon’s evolution in the twentieth century will be briefly described in the following paragraphs.

After the study that the British company of Sir Alexander Gibb and partners completed in 1948 on Lebanese economy, President Fuad Chehab commissioned, besides IRFED project, a study on Lebanese economy in 1960. He invited Benjamin Higgins from the University of Texas, USA, to perform it, as part of a project financed by the predecessor of USAID, the International Cooperation Administration – ICA (Kardahji, 2015, p. 10). This study confirmed previous opinions that Lebanon’s economy is unusual and it can play a role in supporting other (regional) economies. Kardahji’s research underlines that while the French were fighting the two world wars, a mercantile, local, elite emerged in Lebanon and became rich, prompting the French diplomacy to call Lebanon a “*parasitic economy*” in a post-WW II report. Hence, *Banque de Syrie et du Liban* – BSL, a French bank led by Rene Busson (French citizen), limited money supply in Lebanon in the second part of 1940, with the aim to reduce the assets accumulated by the local mercantile elite, “*eliminating speculative elements*” that “*had mushroomed*” during the war.

However, BSL and other foreign-controlled banks appear to have contributed to what Salim Nassar calls “*Lebanese financial instrument ... one of the most important means for the control of the regional economy of the Middle East by Western capitalism*” (Nassar, 1978, p. 4). Nassar’s study points out that the foreign financial institutions, which grew exponentially after 1943, basically excluded the Lebanese banking institutions from the market, and hindered Lebanese economy directly and indirectly, often supporting local mercantile elite in obtaining import monopoly at the expense of development in local production in many sectors, including agriculture.

The paradox that the banking sector was facing in Lebanon was unique: although deposits were increasing, it was not able/allowed



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to fund projects in Lebanon, as the capital fled to Western mother institutions. Trade was oversupplied with capital (import of goods), real estate as well, while the rest of the economy, infrastructure, education were not priorities. Some examples of monopoly instances are provided in Nassar's study: Renault and World Bank managed to direct loans from Lebanon according to their interests (Ib.); Law no. 34/1967 that prohibited the dismissal of local representatives of foreign companies (these important monopolies helped four big houses to control 2/3 of Lebanon's imports: Fattal, Kettaneh, Pharaon and Chiha, and Abou-Adal); limitation of tobacco and sugar beets local production by importers etc. In the 1950s, the main employers were services and public administration. In less than two decades, these fields became saturated and highly educated graduates began to migrate, especially in the Persian Gulf states that experienced economic booms. Unemployed people count was 70,000 in 1969 (10-13% of total workforce) and rose to 120,000 (15-20% of total workforce) in 1974 (Ib., p. 11).

Kardahji divided the circles that politically controlled Lebanon's economic sector after 1943 independence in two major groups (Kardahji, 2015, pp. 11-20): *"the Consortium"*, itself divided between a presidential clique and a group loyal to French interests. Representatives of these categories were:

❖ *"The Consortium"*, the pole *"presidential clique"*: former finance minister Hussein Oueini – architect of trade and foreign exchange policies, Khalil al-Khoury, Fuad al-Khoury (son and brother of president Beshara al-Khoury at that time);

❖ *"The Consortium"*, second pole *"French Group"* or *"French Banking Interests"* – largely encompassing or connected to the Maronites: Jean Fattal – virtual monopoly on Western pharmaceuticals to Lebanon and Middle East, Alfred Kettaneh – exclusive agent of more than 50 American industrial concerns like General Electric, Chrysler, Henri Pharaon – banking, Michel Doumit – speculation with gold, Michel Chiha – brother of president's al-Khoury wife, Rene Busson – previously mentioned as president of BSL, Lebanon's de facto national bank immediately after 1943 independence, Maurice Berard – subsequent director of BSL, leader of Berard group that controlled the railway network in Lebanon and Syria, *Damas et Hama Prolonguement*, P. Philippar – leader of the Philippar group that controlled the Tobacco

Monopoly, *Société des Grands Hotels du Levant* and the *Societe Foncier de Syrie*.

In order to increase French control over the Levant, Rene Busson established *Société d'Études et de Realisations Industrielles, Agricoles et Commerciales (SERIAC)* as a successor of wartime Office de l'Economie de Guerre – OEG, an organisation similar to the Anglo-American Middle East Supply Company/Center – MESC (Ib., p. 19). Hence, the Lebanese economy appears to have been closely connected to foreign interests in one way or another from the very beginning of independence.

Starting in 1990, Lebanon's economic environment reported 8-9 % unemployment rates. This situation lasted until 2007, when a steep decline of unemployment led to 6.36% in 2009. A slower decrease to 6.04 % was observed until 2019 (World Bank, 2021). The GDP per capita (current \$) also increased from \$ 1,012 in 1990 to \$ 5,208 in 2007 and reached \$ 7,355 in 2009 and 8,012 in 2018. The increase in income strengthens the unemployment decrease trend and both indicators hint at a fast-growing economy.

The financial meltdown of Lebanon that became obvious in the wake of COVID-19 pandemic has just underlined the structural weakness of Lebanon's economy, and it had multiple causes. Amid pressures to drop its Bank Secrecy Law (in December 2020 a 1-year suspension of the secrecy was enacted), its financial system became less attractive. As tourism was strongly affected by the pandemic, the sector that actually brought foreign currency into country and represented a major employer as well, Lebanon's inflation exceeded to 80% in 2020 (year on year, compared to 2019) and remains high. Along with the indicators presented above, these developments contribute significantly to the rise of multidimensional poverty in Lebanon.

### A STANCE ON LEBANON'S CRISIS

In order to introduce a political point of view on Lebanon's crisis, it would be necessary to establish what is exactly meant with *"Lebanon"* and with the term *"crisis"*. This latter term is of particular interest, since one can hardly find a mainstream material nowadays that does not associate *"Lebanon"* with a term like *"crisis"* or *"collapse"*.



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*The personal leadership model, probably the only one successful in modern Middle East so far, was not seriously challenged in the twentieth century: the countries that avoided states of “crisis”, especially in the economic sector, were generally ruled by different types of authoritarian leaders. A clear lack of success in adopting Western governance models was the 1960-1964 period, when Louis-Joseph Lebret’s plan failed to transform the Lebanese state into a liberal policy agent in terms of definition, supervision and development.*

Leaving aside the Sykes-Picot Agreement and its regional consequences entails accepting the formation of a new multi-ethnic country, in the sense of a Westphalian state. Between secession on ethnic or religious lines and coexistence, the Agreement decided for the future of the Lebanese, i.e., to adopt coexistence. The borders and duties associated to protecting and developing a state were also imposed to the Lebanese, more precisely through the ruling classes that were in contact with the former colonial powers. After more than one century, the sense of national identity has probably developed. However, membership of an ethnic or religious group has remained very important in Lebanon. The fact that the Lebanese state did not emerge as an alliance after long-term collaboration, as in Europe, has definitely led to subsequent tensions and episodes of mistrust.

The relations between Christians and Sunni Muslims, majority at that time in terms of population, were agreed upon through the 1943 National Pact: the president had to be a Maronite Christian and the prime-minister a Sunni Muslim. But the balance envisioned by this sharing of power was not reached until the Taif Agreement in 1989, since the French initially transferred power to the president upon leaving, not to the prime-minister as expected. The 1989 Taif Agreement redistributed the prerogatives of the president and aimed to reduce the sectarian representation in politics.

The post-colonial influence of the former colonial powers morphed into an economic interest directed through the banking sector and international trade. The USA became a competitor of France in this sense, but the geopolitical interests of France were challenged in multiple dimensions: its favourite partner group, the Maronites, were engaged in prosperous economic activity, but Nasser’s pan-Arabism seeded enthusiasm in other Lebanese communities, and Soviet pivoting in the region offered alternatives to liberal models of development. In fact, the personal leadership model, probably the only one successful in modern Middle East so far, was not seriously challenged in the twentieth century: the countries that avoided states of “crisis”, especially in the economic sector, were generally ruled by different types of authoritarian leaders. A clear lack of success in adopting Western governance models was the 1960-1964 period, when Louis-Joseph Lebret’s plan failed to transform the Lebanese

state into a liberal policy agent in terms of definition, supervision and development: instead of creating a state that balances and improves a holistic development, the state monopolised domains of activity and was paralleled by support structures from the private Lebanese environment or foreign countries. One can argue that the policy-makers might have not understood their role, but another question that arises is whether the government, social and economic structures available in Lebanon were sufficiently developed as to sustain adoption of such policies.

The foreign interests factor appears to be a major contributor to many if not almost all of the “crises” in Lebanon. The obvious interests of France, USA and eventually the Soviet Union were not the only ones. Israel appears to have constantly impacted the development of Lebanon through involvement in conflicts and support of certain actors, as in the case of the self-proclaimed *Free Lebanon State* between 1985-2000, what some consider a Lebanese puppet of Israel. Additionally, the rise of the Islamic Republic of Iran in 1979 saw an increasingly powerful Hezbollah organisation on the territory of Lebanon. Finally, the Syrian Arab Republic occupied Lebanese territory in multiple incursions spanning from 1976 to 2005. Indirect economic and geostrategic interests, reflected in political relations, trade and investment revealed ties of different Lebanese groups and Persian Gulf states. The current situation is also exacerbated by different formal or informal sanctions that are meant to further weaken individuals or groups in Lebanon.

The “rentier state”, or “merchant republic”, “dollarized economy” etiquettes attributed to Lebanon come in a very unusual context: the continuous multiplication and parallelisation of state structures, obviously driven by the multi-ethnic structure, intertwine themselves with an ever-increasing presence of the so-called NGOs on its territory. Assuming that one expects political, social and economic progress in Lebanon, the question whether NGOs are the solution or the problem arises especially since the presence of such organisations amounts now for decades, not months or years: if the NGOs are the solution, why have they not managed to solve the now permanent situation of crisis in Lebanon? If one compares the presence of Soviet invaders



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in Afghanistan, and then that of the Allied invaders, which had an unsustainable mission and finally gave up, to the presence of NGOs in Lebanon, one can ask himself: *how will the NGOs manage to help develop Lebanon from now on, since after decades of activity there is no sign of getting away from crises?* NGOs like Caritas or Norwegian People's Aid in Lebanon are becoming veterans in helping the development of Lebanon. This perspective does not underestimate or question the efforts carried out by the high number of organisations present in Lebanon, but opens the stage for research on other tools that might systematically contribute to the *multidimensional stabilisation* of Lebanon.

At any time since 1943, a certain type of crisis has been associated to Lebanon in the literature, either in peacetime or wartime. The latest downfall is clearly exacerbated by pandemic-related developments, but the background of Lebanese is historic and complex. If this is just another crisis, similar to the civil war, or the beginning of what the literature indicates as *"collapse"*, remains to be established. However, Lebanon has overcome many crises in the multi-ethnic format that it adopted, and should it collapse, the number of entities interested in helping it rise again would probably increase, not decrease, since its pivotal role in Levant arrangements does not appear to have diminished in past millennia.

## CONCLUSIONS

This study approached Lebanon's recent political, social and economic evolution, from the perspective of multidimensional poverty, a characterisation manner that is more and more often associated with Lebanon. The findings demonstrated that the long-term structural issues related to the development of Lebanon were amplified by a short-term financial meltdown, amid lack of foreign currency that was usually obtained from tourism. However, the multi-ethnic characteristic of Lebanon has continuously led to tensions after 1943, especially in the context of different external influences.

*The three main contributors to multidimensional poverty in Lebanon, i.e., health, public utilities and employment/income were analysed from the perspective of historical development.* Especially the political aspects of economic development identified in the analysis

suggest that the political fragmentation was reflected in social and economic fields, but not in the sense of a distributed decisional system, like in the case of federations. Certain forms of clientelism became obvious in the political system from the very foundation of Lebanon, as especially France, and the USA apparently to a lesser extent, followed a natural tendency to preserve and possibly strengthen the influence and privileges in the tiny Mediterranean country. The clientele system developed on political, ethnical, religious, regional and possibly other criteria to an extent difficult to imagine – water supply, electricity supply, lately gasoline supply, and similar services, helped providers to develop politically and have a say in either regional or national policies. The health sector had a merely different development – a crumbling system in 1991 was flooded with technology and workforce paid by the tax-money in just a few years, leading to oversupply and debt, instead of a balanced and sustainable health industry. Hence, the main contributors to the debt burden were electricity generation and distribution, as well as expensive imports like the medical technology in 1990s. Certainly, the one-year suspension of bank secrecy might help the country to restore a minimal credibility in front of possible further creditors, but the main question that remains open is whether financial support alone will help development in the long term, as in the past it stabilised only certain situations.

Finally, in the attempt to identify how the 10,000 NGOs contributed to the development of Lebanon, a paradox was observed: the country with the highest number of NGOs per capita in the world, working to help develop Lebanon in various fields, gradually moves towards poverty and extreme poverty. This leads to the obvious question whether the effort is well spent, or whether other instruments would be necessary in order to multidimensionally stabilise Lebanon.

Although the criteria utilised by UN ESCWA to establish levels of multidimensional poverty in Lebanon are not the same as those utilised by OPHI and UNDP (the latter publishing an annual report on multidimensional poverty at global level, that did not include Lebanon for the year 2020), it was interesting to observe in OPHI and UNDP report that lack of cooking fuel in rural areas of Arab countries (as defined in this report) is the largest contributor to UNDP/OPHI-defined multidimensional poverty. In Iraq, a regional country, multidimensional



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poverty is driven by lack of adequate education, more than the other two dimensions: health and standard of living. *The fact that Lebanon is not included in the global research might have two explanations: either Lebanon is not involved in the poverty assessment system coordinated by UNDP, or its poverty situation was one that arose suddenly and might not last long.* The latter hypothesis is difficult to support given the historical deficiencies in Lebanon's development underlined in this research.

The study of Lebanon's historic development vis-à-vis the three most relevant poverty dimensions indicated by UN ESCWA's report was an interesting project, but the global climate change appears to step in, and deprivations, at least the temporary ones, might also emerge in developed economies as well. It will be interesting to observe whether MPI will be developed and adopted as a framework for assessing physical deprivations in all countries, including developed economies, or it will remain a tool associated to developing countries.

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## CONSIDERATIONS REGARDING THE INTEGRATED APPROACH TO DEFENCE RESOURCES MANAGEMENT

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*The integrated defence resources management is an organisational approach developed in order to provide a tailored and suitable response to the security challenges within the Romanian society. It was assumed by the Ministry of Defence and it aims to bring a holistic image of the resources potential. The general purpose of the integrated approach is to put together the military and civil institutions in order to support and enhance the national security system by handling the designated resources. In order to develop and implement a managerial approach you have to start with the core elements of the approach. The subject covered in the article is centred on the basics and try to cover three main issues: the fundamental elements of the integrated approach, the factors that are interdependent and interacting within the defence resources field and resilience of the defence resources area.*

*Keywords: management; integrated approach; defence resources; resilience;*



### GENERAL AND METHODOLOGICAL FRAMEWORK

Whether we are talking about the agrarian or the industrial ages or we are analysing the years of the current age, marked by digitisation, the human society can constantly include, destabilising interests and situations, their nature being, in general, economic, social, diplomatic or military. In this respect, the contemporary security environment is going through a period of accelerated changes, with a strong fluid character, as a result of the instability of international relations, of the evolution and dependence on technology, but also as an echo of the direct relationship between the available resources and the state’s stabilising potential. The level of vulnerability has increased significantly; the exposure of the entire social spectrum to destabilization has been increasing.

In the context of the multiple crises caused by repeated pandemic waves, of some increased instability situations resulted from unsustainable international political-military decisions, the challenges of identifying and securing resources are progressively increasing. In this direction, this scientific material represents the synthesis of a research approach whose object of study is represented by the *integrated approach to defence resources management*. The article contains some of the main ideas and conclusions of the personal dissertation work about defence resources management (Nicoară, 2021).

Within the current challenging context, this article’s proposed objectives point towards *highlighting the fundamental elements of this managerial approach, as well as towards identifying the advantages of implementing an integrated approach and the means to increase the resilience defence resources’ field*. The premises this approach is based on, are, on one hand, that *integration is the basic principle in supporting and maintaining the unity of effort in achieving the goal/objective/mission set out in military actions/operations/campaigns, regardless of their level, and on the other hand, the resources*

*In the context of the multiple crises caused by repeated pandemic waves, of some increased instability situations resulted from unsustainable international political-military decisions, the challenges of identifying and securing resources are progressively increasing.*



*Referring to the SARSCoV-2 coronavirus pandemic, we see the increasing level risks and vulnerabilities. The economic impact is already producing effects, both at the level of political-strategic decisions and in the micromanagement, strategies developed at organisational level. The effects cannot be temporally defined, as they have the potential to act in the medium and even in the long terms.*

*and, implicitly, their careful integrated management are defining aspects of a competitive approach.*

We know that defence resources have always been a matter of interest. If in normal times, the resources themselves, their accessing process, as well as the management tools built around them have excited the attention of the political level of the society, in present times, all these have acquired vital characteristics. The current pandemic, as well as the turbulent international environment, are forcing us to enter a new stage and to try a different interpretation of the reality. We must understand the present times and the future ones through the lens of the new security conditions. The reaffirming of the force-centric policies, the economical weakening of some states and the rearranging of global influence vectors contribute to the creation of new regional and global geopolitics and geoeconomics benchmarks.

In this respect, the pillars on which Romania has based and maintains its security policy (we refer here to the strategic partnership with the USA, the membership to the North Atlantic Treaty and to the European Union, not necessarily in this order) are subject to considerable transformations and require a constitution or validation of the adaptability of states. On the other hand, the security of our country is threatened by a number of destabilizing factors that produce considerable effects.

Referring to the SARSCoV-2 coronavirus pandemic, we see the increasing of security level risks and vulnerabilities. The economic impact is already producing effects, both at the level of political-strategic decisions and in the micromanagement, strategies developed at organisational level. The effects cannot be temporally defined, as they have the potential to act in the medium and even in the long terms. The measures that the Romanian state was forced to implement in order to face the new challenges, aimed both at the administrative apparatus (rethinking the interaction between the components of the public administration, assigning new responsibilities or competences, etc.) and at how to relate to the resources necessary to solve the new challenges. In this context, in which the pandemic manifests itself through repeated waves of infections, the Ministry of National Defence has identified itself through the provided support, both in human resources (specialists in the medical, logistical or administrative field) and through the involvement of transport capabilities or critical situations management.



*Integrated resource management, whether we refer to the main components of defence resources at the strategic level or we are talking about the categories of resources used at the tactical level, represents a coherent response designed to prevent possible crises generated by the instability of the contemporary security environment.*

Therefore, the main motivation in choosing this research direction, the one in which the defence resources provide the integration framework and the object is represented, in fact, by their management, is given by the vital character. The unique place occupied by defence resources is reflected at the level of the defence sector as well as by the direct link between the achievement of organisational objectives and the quality of management of available resources. Whether we are talking about the management of the defence resources components – at the political-military level, or about the management of material assets from the military units' warehouses, the way in which the issue of resources is understood and solved is equally important.

Taking into account the multidisciplinary nature of the present topic and the intended purpose, here are both the applied hypotheses and the brief presentation of the methodological framework under which the research was carried out.

I consider the following statements as hypotheses of the present approach to defence resources management:

- resource management is the premise/foundation of the planning process at all levels: strategic, operational, tactical;
- careful planning of resources by the strategic level is an essential condition for resources management at operational and tactical levels;
- integrated resource management, whether we refer to the main components of defence resources at the strategic level or we are talking about the categories of resources used at the tactical level, represents a coherent response designed to prevent possible crises generated by the instability of the contemporary security environment.

In order to outline an expressive picture of the resource components of the integrated defence resources management, I consider that the following issues related to the field of defence resources need clarifications:

- a) What are the main decision-makers in the resource's allocation?
- b) What are the defining elements of the integrated perspective of defence resource management?
- c) Which are the potential factors in increasing the resilience of defence resources?



## THE INTEGRATED PERSPECTIVE OF DEFENCE RESOURCES MANAGEMENT

The evolution of the global security environment forces us to adopt an extremely cautious and reserved attitude on how to manage all categories of resources. The integration of specialised structures with attributions and competences on resources management as well as the their productive relation, the understanding of the need to implement a functional architecture at the level of the structures responsible of resource management (a system that has as objective the functional interconnection between the resource and the beneficiary through a network of structures with explicitly established roles and responsibilities) are real requirements for success in solving any type of security challenge.

The issue of resources is one, first and foremost, of a strategic level. The need for a coherent approach at political level, the challenge of judicious and timely use of resources, as well as the construction of functional relationships, at inter-institutional level, in order to come up with strong solutions to identified needs for defence resources are forms of response that come to prevent the challenges of the contemporary security environment.

In this respect, integrated defence resources management, through its specially identified and nominated components in the *Defence White Paper 2021* (Carta albă a apărării, p. 41), is a response to the instability and uncertainties of the present, in terms of social and security climate. Also, the integrated approach to resource management at the operational and tactical level comes to support, punctually, effectively, the force structures involved in different national or multinational operations.

The defence resources management is, in fact, a response provided at the political-military level, through programmatic documents, a reaction conceived as a result of the inflections of the contemporary security environment. Regarding this domain from Romania's perspective, the essential premises for the actions planned to be carried out are ensured through the proper resources management, in order to maintain an optimal security climate, at national level.

The legal framework governing the area of defence resources is based on the obligations, requirements and recommendations resulted from: the defence planning process of the North Atlantic

Treaty Alliance, the strategic concept of the Alliance as well as its political directive. Also, the security strategy of the European Union as well as other documents for planning operations are taken into account in building and updating of regulations. The national level strategic scenarios and the directions of our country's defence policy is intended to be built on, are also taken into account.

Thus, the strategic level documents, starting from the main pillars on which Romania bases its behaviour in the field of security are: the strategic partnerships (mainly the one with the United States of America), the signed commitment within the North Atlantic Treaty and the activation within the European Union, have the role of conceptually developing the main policies in the fields of national security and defence. Objectives are set, policies are developed, strategies are described and activities are nominated to lead to their achievement.

In the field of defence resources, the general framework at strategic level is included in the *Government Program* and in the *National Defence Strategy (2020-2024)*. At the department level, actionable directions are developed in the *2021 Defence White Paper*, the *Military Strategy*, the *Defence Planning Directive (2018-2027)*, the *Major Programs*, the *Annual Plans* and the *PPBES Specifications*.

While the *National Defence Strategy* assesses the international security environment and identifies potential risks, threats and vulnerabilities while setting out priorities and objectives, the *Defence White Paper* develops policies on integrated defence resource management. Also at the department level, through the *Major Programs* – documents that include a significant time frame (10 years), the Ministry of National Defence **allocates the resources** to achieve the established objectives (modernization, endowment, peacetime training, missions' preparations, infrastructure, international cooperation, etc.).

Analysing the provisions of the present legal framework, those of departmental level in particular, we can see in the recent years, the coherence in the approach of resources management, materialised in the perspective of **integrated defence resources management**. Thus, having as main objective *“the optimisation of the planning, allocation and use of the resources processes by the Ministry of National Defence”*, resources management is carried out in a modern,



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multiannual and integrated approach. It is based on the components of defence resources: human resources, financial resources, defence procurements, research development and innovation, infrastructure and information.

The essence of this type of defence resources management, promoted and developed in the Romanian Armed Forces, is based on an integrated multi-domain management: force planning, anti-aircraft defence, command, communications, control, logistics, resources, defence information, standardisation, medical, research and development etc.

Knowing the geopolitical context in which our country can be framed as well as the regional security one and analysing the directional strategic level documents (Program for Government, National Defence Strategy 2020-2024, Defence White Paper 2016-2020 and White Paper of Defence 2021-2025) we identify the followings as priorities in managing defence resources:

- alignment with the requirements imposed by membership in the North Atlantic Alliance (maintaining the functionality of existing capabilities as well as generating and supporting new ones);
- folding on the security needs imposed by Romania's membership to the European Union;
- strengthening the strategic partnership with the US, by sharing human resources and by creating capabilities compatible with those of the US armed forces.

These commitments imply a double positioning of our country in relation to the defence resources: on one hand, they bind our country to provide access to other states to the capabilities of the Romanian armed forces and, on the other hand, they facilitate Romania's access to the resources of all the actors who have assumed these commitments.

If interoperability with the NATO armies' structures is a priority according to which the national defence capabilities were designed and developed, the major defence programs also centring in this area, I admit that the current trends in security at regional and even global level require the national political-strategic level to consider the opportunity to invest resources in the development of complementary and interoperable capabilities with those of the European Union armies.

The instability of the international environment, its identified threats and risks, as well as the uncertainties arising on a global scale regarding the establishment of new poles of geopolitical influence or the consolidation of others already outlined, produce effects (in the short, medium and long term) on the way defence resources for are managed.

Rethinking the way of planning, allocating and using resources, at the strategic level, is based on some defining features. Among these I mention:

- the economic developments of states in recent years;
- the financial difficulties as a result of the pandemic;
- the need for multinational financing of security capabilities;
- synchronised application of power instruments at strategic level;
- integration at the level of the interinstitutional mechanisms, of both the approach and the procedures.

It is the defence policy that sets out the national security objectives as well as the obligations assumed at international level. Both the development of robust defence capabilities, the increase of strategic credibility within the partnerships and alliances, as well as the provision of support in the emergency situations management to other public authorities, make it mandatory to cost efficiently allocate resources.

The adequate use adapted to the Romanian defence system of a managerial approach compatible with the defence systems of the member states of the alliances represents one of the premises for achieving the defence objectives. To this purpose, the military specialists considered it is time to develop an integrated defence resources management that would meet the requirements of the Romanian defence system. In the sense of adapting to the concrete conditions of the society, this integrated defence resources management involves a rigorous analysis of economic developments as well as the identification of both our country's and our main partner states financial difficulties. Rethinking the allocation and the use of resources, prioritizing investments as well as financing the maintenance of the existing capabilities and generating others considered useful are activities that need to be synchronised, within the integrated defence resources management processes.



*It is the defence policy that sets out the national security objectives as well as the obligations assumed at international level. Both the development of robust defence capabilities, the increase of strategic credibility within the partnerships and alliances, as well as the provision of support in the emergency situations management to other public authorities, make it mandatory to cost efficiently allocate resources.*

*These commitments imply a double positioning of our country in relation to the defence resources: on one hand, they bind our country to provide access to other states to the capabilities of the Romanian armed forces and, on the other hand, they facilitate Romania's access to the resources of all the actors who have assumed these commitments.*



There are many challenges that this defence resources management meets and there are implications in different domains. Thus, in addition to those resulting from the need to carry out a coherent analysis of all the alternatives for allocating the identified resources, proving cost-effectiveness, the challenges also refer to the need to satisfy the requirements of both the military organisation as a whole, and of the society. This approach aims to optimize the actions taken in relation to the identification, allocation and use of resources, as well as to increase the performance of the military organization by articulating all the activities carried out in a single, integrated manner.

Above its conceptual dimension, the integrated defence resources management refer to the timely and efficient use of the necessary resources in order to establish and use military capabilities necessary to ensure Romania's national security. Moreover, talking about management we understand the related approach of the planning, organising, command and control phases of the entire process.

I consider that the main challenge that can be highlighted at the level of managing defence resources is the optimal allocation of limited resources, identifying and using real alternatives, in the medium (and long) term, in order to maximise national security, in times of instability and uncertainty.

Starting from the premises regarding the development directions of the contemporary society with an unprecedented technological evolution – the technological revolutions causing both disruptive effects but, at the same time, creative impulses (Ullman, 2021, p. 30), of difficult to manage climate changes, as well as of a significant instability of international relations (of economic, diplomatic or political nature), this managerial approach requires the expansion of the spectrum of possible responses generated. The growing number of those arguing their plans to solve possible crises with defence area resources requires a real prioritization of needs. We will turn our attention to the same available resources, whether we are talking about a climate change generated crisis, one that is following a pandemic context or the need to protect the population from terrorism.

On the other hand, in order to be able to develop an integrated system that offers coherence, efficiency and effectiveness in resource management, two significant steps need to be taken. The first of these is the need for differentiation and specialisation of entities with roles



and duties in this area. Explicit roles, differentiated and punctual tasks are assigned to some nominated organizational structures, through differentiation and specialization (example: at strategic level, for the human resources component – General Directorate for Human Resources Management). It is also necessary to highlight the entity's level of authority in relation to different components or categories of resources, within the defence resource components.

After the specialisation of the entities involved in resource management, it is necessary to integrate all the actors involved in an overall architecture. This integration sub-phase enables the establishment of command-and-control relations, the construction of information flows, the detailing of the responsibilities for each branch, the necessary procedures implementation, the explicitly establishment of cooperation methods in order to ensure the decisional coherence related to the judicious use of resources.



Figure no. 1: Stages in the development of an integrated management (author's view)

The identification of entities/structures with an active role in the resources allocation and management will be based both on the ones available in the public domain area but also on the potential of the private environment. This combination of public and private environments can also be a winning solution in the sense of increasing the resilience of defence resources domain in the contemporary social context.

The 2021 Defence White Paper identifies the overall objective of integrated defence resource management as “to optimise the process of planning, allocating and using ministry of national defence resources”. The essence of this type of management, at the strategic level, starts from the concept of *integrated defence planning*, which designates, in fact, the coordination of the process of developing and maintaining military capabilities in order to carry out the defence policy and to allocate financial resources.

*The identification of entities/structures with an active role in the resources allocation and management will be based both on the ones available in the public domain area but also on the potential of the private environment. This combination of public and private environments can also be a winning solution in the sense of increasing the resilience of defence resources domain in the contemporary social context.*

*The main challenge that can be highlighted at the level of managing defence resources is the optimal allocation of limited resources, identifying and using real alternatives, in the medium (and long) term, in order to maximise national security, in times of instability and uncertainty.*



The stated purpose of implementing and using this type of resource management is to ensure national security, in any kind of conditions (normality, uncertainty, post-conflict, etc.), through the optimal allocation and use of resources, in a medium or long-time frame.

I believe that the value of the integrated approach to defence resource management is given by the potential to ensure and manage unitary, efficiently, judiciously and economically all resources intended for defence purposes.

An integrated defence resource management system establishes the overall, global framework to allow the combination of the set of activities following each resource component, into a functional and coherent unit. This will take into account the integration, within the security area, of responsibilities, levels of authority, duties, processes, activities, as well as its own requirements and those external to the field. The influences that manifest on this general framework, which, in essence, is intended to be an integrative one, are not at all few: starting from the availability of Romania's resources, continuing with the legislative framing of the way of managing the entire spectrum of activities related to the defence resources and to the human resource capacity to understand the necessity of implementing such a management, all these are reflected either in the form of limitations and constraints or, on the contrary, as strengths.

Referring to the need to maintain a healthy security climate, we understand the need to involve a significant number of state institutions, whose activities are based on defence resources. One of these institutions is represented by the Ministry of National Defence which is, in fact, the main pillar of the integrated defence resources management.

On the other hand, the essence of this type of management is given by integrated defence planning. This concept refers to a particularly complex process aimed at coordinating the development of specific capabilities, in order to achieve the objectives of the Romanian defence policy. In order to achieve them, specific directions of action are established. These directions correspond to the areas of interest (national, regional, NATO, EU, etc.) and address the organisational levels within the institutions of the national defence system. Their synchronization within an integrated management framework can only ensure, in addition to adequate functionality, an efficient use of available defence resources.

## POTENTIAL INFLUENCES IN DEFENCE RESOURCES MANAGEMENT

Taking into account the contemporary context described in the previous chapter, we have identified the following factors that exert a real influence on the way in which the resources management is conducted:

- significant reduction of some key categories of resources;
- the instability of the relations between the global powerbrokers;
- former empire's desire to extend their spheres of influence;
- the migration phenomenon taking into account the limited resources, the consequences of the long-term military confrontations, the governance in specific areas of the globe;
- terrorism and hybrid warfare, (with asymmetric threats and unconventional actions), extensive multinational conflicts (with variable geometry and with implications in all areas of PMESII<sup>1</sup>). The extended national disputes transformed into multinational conflicts, with both state and non-state actors, have considerably influenced the global security environment and have generated the need for strategic reassessments. In this sense, the possibility of a conventional front is very small and tends to zero.
- SARCoV-2 coronavirus pandemic that has led to a generalized crisis: from significant problems identified in the health system, to divergent relations between allied states and to a significant economic downturn. Also, the involvement of significant resources in the research area, in order to identify real solutions regarding the immunization of the population, as well as the fight for the fastest access to the research products, led to tense reactions worldwide. The economic level decrease of many states, the significant number of deaths, the damage to certain sectors of the economy (tourism, food, etc.) as well as the significant increase of others (pharmaceutical industry, digital technology, etc.) contributed to the destabilization of economic relations between states.
- weakening the population's trust in supra-state institutions;

<sup>1</sup> Political, Military, Economic, Social, Information, Infrastructure.



*The extended national disputes transformed into multinational conflicts, with both state and non-state actors, have considerably influenced the global security environment and have generated the need for strategic reassessments. In this sense, the possibility of a conventional front is very small and tends to zero.*

*The value of the integrated approach to defence resource management is given by the potential to ensure and manage unitary, efficiently, judiciously and economically all resources intended for defence purposes.*



*An integrated approach to all resources is needed in order to strengthen the resilience of defence resources domain, and to prevent or manage the impact of such threats with the purpose of reducing or eliminating their consequences. It is necessary to align the resources intended for defence and the competences assigned to the various responsible institutions, in an integrative formula, under a unified coordination.*

- technological evolution (the emergence of disruptive technologies and the need to adapt to the evolutionary trend);
- destabilising climate changes.

I consider that these factors destabilise the security of the Romania and, at the same time, increase the need for resources. They can act directly, through direct influences on the Romanian society/ status, but also indirectly, by acting on other states, endangering their stability, security or integrity. Thus, an integrated approach to all resources is needed in order to strengthen the resilience of defence resources domain, and to prevent or manage the impact of such threats with the purpose of reducing or eliminating their consequences. It is necessary to align the resources intended for defence and the competences assigned to the various responsible institutions, in an integrative formula, under a unified coordination. In addition, customising the components of defence resources (human, financial, research, procurement, infrastructure, information to which we can add those considered by us to be taken into account – digital resources) we will notice the need to involve specialized institutions (Army, Gendarmerie, etc.), the academic environment, the media factor, or some non-governmental institutions, in this mechanism of building resilience, etc. This whole area must be integrated into a comprehensive, strengthened and coordinated unified mechanism.

This paradigm of integrated management can play a significant role in increasing the resilience of defence resources domain. Through real tools, this managerial approach can facilitate a mapping of available resources, thus significantly increasing access to a general picture on the potential support needed to be used to solve a possible crisis.

The consolidated information flow through predetermined channels, the internal and intra-institutional procedural framework implemented, the informed reporting to specialists from different fields, contribute to the implementation of an efficient decision-making process. Through an interinstitutional, joint effort, undertaken within the limits of an appropriate legal framework, real objectives can be set to be achieved in an integrated management process.

In the current security context, accepting the coronavirus pandemic as the main trigger of a possible crisis, and understanding through the crisis “the possibility of sudden changes that induce the threat to the fundamental values, the segment of emergency and uncertainty”

(Chifu, 2021, p. 11), I consider necessary some clarifications regarding the capacity to address and manage crises, in the field of defence resources, in order to avoid destructive effects on the national defence and security system.

The need to increase the level of resilience arose as a result of state and society’s need to adapt to the evolutionary implications of the security environment. The resilience of defence resources can be accessible through the use of a variety of instruments. Speaking of the strategic level, where, for the most part, resources are planned to be allocated in order to achieve the set objectives, the instruments that can be used are mainly based on defence specialists training, experience and knowledge. Thus, the allocation of resources for defence is based, mainly, on the availability of the human resources component at the level of the defence resources management. These instruments to increase the resilience of defence resources consist of:

- normative manifestations (both pre-existing to the onset of the crisis and those conceived and implemented with its onset);
- strengthening reserves and analysing their timely use (from all resource components);
- existing capabilities that may be involved in crisis management mechanisms;
- involvement of both public and private sector actors;
- identifying possibilities for creating stable technological chains, even national ones. Due to the pandemic context and the multiple crises caused, a significant number of equipment, products or technologies can no longer be produced due to the rupture of technological chains. The minimal or even stopped production on certain segments led to difficult access or even to the impossibility of taking possession of some essential equipment or goods. Thus, the reference to the most robust commercial relations could ensure the functionality of the production chains for some major importance equipment or products.

In essence, the instability of the international environment, the threats and risks identified at its level, as well as the uncertainties arising, on a global scale, regarding the establishment of new poles of geopolitical influence or the consolidation of others already outlined,



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have effects (in the short, medium and long terms) on the way defence resources are managed. The need for the most profound possible understanding of the security environment, the identification of all problems related to the provision of resources for defence, their proper management, in an integrated manner, as well as the development of the resilience of the field of resources will contribute, significantly, to the achievement of the set national defence and security strategic objectives, enabling efficient use of the available resources.

## CONCLUSIONS

The integrated approach does not refer to the overlapping departmental solutions on the allocation of resources but, the composition of a general concept, the establishment of a coherent national vision on its level of ambition in relation to the withheld resources and instruments. Strategic objectives can be set with a single, unified perspective. They can be carried out efficiently using resources and means from different social domains (research, human resources, infrastructure etc.).

Moreover, inside the military organisation, we can speak, on the one hand, of a vertical integration of the implemented management, in which the developed strategies align with the fundamental strategy of the military organization, and on the other hand, from an operational point of view, of a horizontal integration, materialised by a high compatibility of the policies and practices developed in terms of resources. In any of the situations imposed by the security context, whether we refer to a single military structure, or to joint forces, the interconnection of the components and their legal, procedural, linguistic compatibility or at the level of instruments, provide functionality to the defence resources management, giving it the value of an integrated process.

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Inside the military organisation, we can speak, on the one hand, of a vertical integration of the implemented management, in which the developed strategies align with the fundamental strategy of the military organization, and on the other hand, from an operational point of view, of a horizontal integration, materialised by a high compatibility of the policies and practices developed in terms of resources.



## ORGANISATIONAL CULTURE – MODELING FACTOR OF MILITARY LEADERSHIP –

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*Organisational culture embodies not only a system of beliefs, values, and attitudes of the people forming the organisation, it is also a formative or shaping factor of its leadership as leadership, in its turn, shapes culture.*

*Leaders are responsible for creating systems on which culture develops and norms are reinforced in the workplace. Culture, in response, influences the organisational environment and the strategies built to fulfil the organisational vision and mission, the policies and processes that allow this process. An organisational culture that promotes excellence, fairness, team spirit, characteristics underlain by open, two-way communication, induces the people formed in such an environment to embrace and promote its characteristics.*

*Inevitably, the military organisation is subject to these functional principles, its members being shaped by the organisation specifics, and military education, as part of this organisation, can make a major contribution to the development of culture and the formation of leaders.*

*We will try to demonstrate these ideas based on the analysis of the specialised studies mentioned in the article, but also on personal empirical observations.*

*Keywords: organisational culture; leadership; education; communication; efficiency;*



## INTRODUCTION

In this paper we will address, based on the analysis of several specialised studies and the person empirical observations, the impact the *organisational culture* has on training and developing members of organisations, with the emphasis on the impact on leader training.

Leading an organisation means directing and motivating individuals to carry out their tasks, a process by which staff is trained, directed towards meeting the organisation's objectives. Leadership is a process through which the personnel is trained and guided towards achieving the goals of the organisation. Those who are able to make this possible through the qualities they have, not just through the authority conferred by the position they hold, can be called leaders.

The military leader is that commander who can exercise their personal qualities in any situation, who knows their subordinates, their specifics, how each person can be used in the most efficient way. A leader knows how to activate the interaction of the group so that it transforms into a team concentrating the action of the people towards the achievement of the objectives using professional expertise, charisma and soft skills like communication skills.

The concept of *organisational culture* was introduced in the specialised literature in the middle of the 20<sup>th</sup> century, by Eliot Jaques, in his book *The Changing Culture of a Factory* (Jaques, 1951), a book in which the evolution of an organisational community is presented and analysed. The concept has become very popular among academic communities and management specialists, and over time, it has been defined and analysed from several historical and disciplinary perspectives, highlighting different areas of interest (Eisenberg. M. & Goodall JR ). HL, Trethwey A., 2006, pp. 20-25):

- comparative management – which is characteristic to the intercultural approach;

*Leadership is a process through which the personnel is trained and guided towards achieving the goals of the organisation. Those who are able to make this possible through the qualities they have, not just through the authority conferred by the position they hold, can be called leaders.*



*Organisational culture is “a pattern of basic assumptions – invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration – that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems”.*

- anthropological vision – from this perspective culture is something organic, emergent and impossible to control;
- organisational symbolism – which considers that taking care of the organisational culture is important only in terms of several components: language, stories, myths, nonverbal communication and communication relationships;
- critical or postmodernist vision – which illustrates organisational culture through the numerous differences in the methods of the continuous struggle for control and power in organisations;
- cognitive vision – according to which organisational culture is “a pattern of basic assumptions – invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration – that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (Schein, E.H., 2004, pp. 13-28). This is the vision that guides most analyses, although there is no integrative definition anywhere in the specialised literature.

The definitions of the *organisational culture* can be divided into two categories: *functional* and *interpretive* (Lang R., Stegar T., Weik E., 1994, pp. 6-8):

- functional definitions see culture as part/element of the organisation;
- interpretive definitions consider organisational culture as just a mental construction.

Ott S. (1989) argues that a concept as complex as organisational culture can be defined by two methods: the inductive method, the theoretical definition will be obtained from experience and the deductive, which starts from a general theoretical framework and analyses reality all the time, by reference to theory, which is ultimately modified, adapted.

Therefore, the perspectives from which the *organisational culture* can be analysed are:

- organisational culture is similar to societal culture;

- it is composed of elements such as: values, beliefs, assumptions, perceptions, behavioural norms, artifacts and patterns of behaviour;
- it is socially constructed; it is the unseen force behind organisational activities;
- it is a social energy that guides the members of the organisation to action;
- it is a unifying theme that gives meaning, direction and mobilizes the members of the organisation;
- it also has the control function of the organisation because it can be used to encourage or discourage behaviours.

Unfortunately, no consensus on the description of this concept has been reached yet, and there are divergent views upon its components, the relationships among them, its attributes and the ways of analysing, administering or changing it. The fact that it is a concept and not a tangible element increases the difficulty of defining it; it can be more than a component of the organisation, it is also a process, *the culture of the organisation is not just another piece of the puzzle, it is the puzzle*. However, without taking into account a specific perspective, the organisational culture concept appears to be a particularly slippery construct when trying to define and operationalize it.

### ORGANISATIONAL CULTURE TYPOLOGY

Taking into account the functional approach, which sees culture as a constituent element of the organisation, we can go deeper, below the surface image that organisations promote, reaching the features that characterize and differentiate organisations from each other. Culture is a much more complex element of the organisational mechanism and it can be considered the modelling and driving force that exists behind organisational activities.

Within the organisation, the founders and then the leaders are responsible for creating systems that develop the organisational culture and strengthen the rules in the workplace. This action is not unilateral, as culture can influence leadership to the same extent that leadership influences culture.



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*The values of the organisation must also be the values of its members since this is the only way to have an organisational system of values and only when: individuals know that a certain belief, given norm is supported; most members of the organisation are in agreement; the values of the organisation are intensely supported from within.*

Organisational cultures that promote excellence, fairness, team spirit will encourage those who share these values, will shape the newcomers in this spirit and will marginalize those who do not fit. Culture creates organisational environment and influences the nature of long-term plans that lead the organisation towards its vision. Culture also dictates the policies and processes that enable the organisation to fulfil its daily mission.

Very relevant is the definition given by Johnson & Scholes (Johnson G., Scholes K., 1993, p. 96) which defines *organisational culture* as an element of influence that is composed of leadership styles, stories, myths, rituals, symbols, the type of power characteristic of the organisation, the organisational structure, the decision-making methods and the management systems. Even if this construct has so many variables within, variables whose power and importance may differ from one group to another, the dominant organisational culture will always highlight the common denominator. The most important term in this definition is *influence* because it highlights what is pursued through culture, namely, modelling or influencing the members of the organisation to the direction of fulfilling the goals of the organisation.

Following the analysis of the above, we can conclude that there is limited agreement on the elements of organisational culture and this consensus refers only to *norms, values, beliefs, rituals* and shared *meanings*, which are perceived as sufficiently stable so that, following interaction with members and the structure of the organisation, to create patterns of behaviour. The values of the organisation must also be the values of its members since this is the only way to have an organisational system of values and only when:

- individuals know that a certain belief, given norm is supported;
- most members of the organisation are in agreement;
- the values of the organisation are intensely supported from within.

The degree and manner in which these criteria are met will make culture an important and relevant element in the analysis of the organisation.

Therefore culture:

- the connection with an organised group of people;

- it is the projection of the collective mind and, thus, it must be transmitted and learned by the newcomers;
- represents a solution for internal integration and adaptation to a social group.

Therefore, there is a great diversity of elements that make up the organisational culture, some being more visible than others, more influential or more important. The determinants of each organisational culture are given by the system of common values, symbols and meanings of the group. Through culture, values, symbols, meanings are transferred into material objects and ritual practices. Under these conditions, culture shows *“what is important for a particular group and how the members of the group should think, feel and behave. By developing a common understanding of events, objects, words, and people, members of the organisation develop a common sense of experiences that facilitates their coordinated action”* (Smircich, L., 1983, pp. 339-358).

The military organisation also obeys these functional principles, its members being shaped by the specifics of the organisation, and the military education system, as part of this organisation, can make a major contribution, in an active manner and with high efficiency (due to the moment on time in which the educational process takes place the age of those involved and the duration of exposure) to the development of culture and training of members of the organisation and future leaders.

The quality of being a tool of influence mentioned above helps culture shape all new members of an organisation and the leaders are the outpost of this influence because they create and facilitate the circulation of organisational values. The military education and training system, by virtue of its basic mission, *“trains officers, military foremen and non-commissioned officers with professional and transversal competencies in accordance with the requirements and the needs of the military structures which correspond to the specific qualifications of the military occupations, having the potential to become creative, innovative personalities, determined to attain performance, to generate value and to assume their military career responsibly”* (DGMRU).





*Among the skills and qualities needed by a leader, which can be structured and developed through the education system, we mention the power of concentration, trust, transparency, integrity, passion, firmness, consistency, empathy, communication, analytical and decisional thinking because learning is not just storing information also means developing and training the mind.*

The quality of being a leader has two sides: the innate and the created one and both can be cultivated and developed from the first years in the military education system, be it high school, post-high school or university level of education, taking advantage of the fact that this is the first contact with this system, the newcomers do not belong to any other organisational culture and that they are at the age when the training processes are most successful. Adolescence, the age between approximately 14-18 years, and the transition to adulthood from 18 to 22 years are the main stages in the formation of personal and professional ideals, being the ages at which one prepares and outlines self-image and self-esteem and the decision for the future profession.

Among the skills and qualities needed by a leader, which can be structured and developed through the education system, we mention the power of concentration, trust, transparency, integrity, passion, firmness, consistency, empathy, communication, analytical and decisional thinking because learning is not just storing information also means developing and training the mind.

Knowledge integration is a process through which learners gather different types of information and experiences, identifying and establishing relationships and extending the frameworks for connecting them. They must not only accumulate knowledge from individual episodes of experience, but also integrate the knowledge they acquire in time, location, circumstances and the different formats in which knowledge appears. In fact, this is about education which is a process of facilitating learning or acquiring knowledge and skills. Often, we do not place enough emphasis on values, beliefs, traditions, and habits that are essential to a good education. Quality education should help bring about lasting positive change in human life and behaviour, and future leaders will develop in school the ability to influence, motivate, and enable others to contribute to the success of their organisations. Changes in thinking and attitude can become themselves values of the organisational culture of the military education and training system. There is a huge need of transformational leaders who can earn the respect of subordinates, who are able to motivate and persuade their people by personal example and communication and not by use of hierarchical status.

## MILITARY ORGANISATIONAL CULTURE – FUNCTIONAL PRINCIPLES

The knowledge and acceptance of the organisational culture by all members is decisive for its functioning, the cultural factor having a strong impact on the management functions and on the actions of the leader. The stronger a culture, the easier it is for employees to accept and trust the values of the organisation. A strong culture is a culture that attracts and retains talents, it is also the one that makes people get involved, which gives energy to its members, in fact it is the one that supports the success of the organisation.

When we analyse the culture of several organisations, we notice that no two are identical. Over time, several types of organisational culture have been identified, but, as Charles Handy (Handy CB, 1995) said, there is no organisation that has a *pure organisational culture*, which is usually a mixture of traits belonging to the types presented by Hardy (1995) (culture of power, culture of role, culture of tasks and culture of people) and other types identified later by other scholars (culture of academia, baseball team, club and fortress or macho culture, work hard culture, play hard, bet your company culture and process culture, distance from power, individualism vs. collectivism, masculinity vs. femininity, uncertainty avoidance index, long-term orientation), with the mention that some are more prominent than others. As can be seen from the facts mentioned above, there is a multitude of types of cultures this leading to countless possibilities to combine their characteristics.

In reality, there is no organisation that has a unitary organisational culture, within the dominant culture there will always be subcultures developed based on the specifics of the different groups that make up the organisation, which will be formed in the shadow and after the establishment of the main culture and can share, to a lesser or greater extent, the characteristics of the dominant culture Here we can talk about the small groups formed by the staff in a certain office, department, workshop, laboratory, etc. which constitute relatively small groups, in which several people work and which positively or negatively influence the whole. Several researchers have been concerned with the analysis of organisational cultures trying to fit



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*The military organisation obviously has a specific culture that derives from the purpose and tasks of the military to society and was formed by the interaction of functional imperatives (such as: the threat from outside, its resources and members) with legal (laws and regulations) and social (civil culture) imperatives.*

them into typologies. One criterion by which they can be classified is the impact they have upon organisational performance, a criterion that leads to the division of cultures into *positive cultures* and *negative cultures*.

It must be remembered that there is no *perfect* or *best* type of culture. Even if it is considered that a strong culture is preferable to a weak one, sometimes it can become rigid and closed again preventing the organisation from adapting to the requirements of the environment. In other words, the right culture is the one that faces the competitive environment and at the same time leads to the fulfilment of the organisation's goals.

The military organisation obviously has a specific culture that derives from the purpose and tasks of the military to society and was formed by the interaction of functional imperatives (such as: the threat from outside, its resources and members) with legal (laws and regulations) and social (civil culture) imperatives. The armed forces represent an organisation with a very high degree of specificity, a very obvious feature. The specificity results from the role that the military has in society. Within the military organisation there is a set of symbols, rituals that provide identity and accompany the initiation of new members. The role of the military creates a series of particular psychological and personality traits, determined by the particular way of life and which are essential for the manner in which the military will behave in certain situations. The armed forces "de-assemble" its new members into pieces and then assembles them on its cultural model, obtaining at the end of the training period a leader and a soldier. Those who cannot get used to the new form are either eliminated or self-eliminated, because in the military, compared to civilian organisations, it is very difficult to be different.

This type of organisation which, by the nature of its mission, often puts people in extreme situations characterised by the following three types of issues:

- high risks;
- extraordinary emotional, intellectual and physical demands, which can strengthen emotionally and physically those who have to face them, but at the same time can also destabilise them;

- the activities and the rhythm in which they are carried out require both certain skills and knowledge, as well as positive relationships between the participants, especially of special mutual trust.

These specific characteristics result in the fact that in the military organisation the results are based more than in other organisations on the quality of its members and the relations formed between them, which emphasizes the importance of training its members from the first moments, i.e. the schooling period.

In order for the tasks and missions to be performed in the best possible conditions, it is necessary for those involved to:

- be able to act in special conditions (high degree of difficulty, high risk, physical difficulty, etc.);
- accepts the risks arising from this type of activity;
- be able to act efficiently in the complex conditions mentioned above;
- be formed in such a way that they can maintain a relationship of mutual trust.

Analysing the military organisation in terms of the constituent elements of an organisational culture we can say that it is a centralised organisation, characterised by a great distance from power, depersonalisation and objectification of authority. Communication is done from top to bottom, there are strict regulations, and formalism and bureaucracy predominate. As a result, the organisational culture of the armed forces is based on a strictly structural leadership, from top to bottom, with a very well-defined chain of command. The relevant information for the action is transmitted from top to bottom, the competence to initiate the action is strongly limited at the base of the hierarchical structure, the important decisions being always taken by those at the top of the hierarchy.

We can probably find most of these elements in other bureaucratic organisations where hierarchy and formality are the key elements.

Therefore, military culture has in itself a duality that makes it a special example in organisational cultures. Military culture has two sides: during peacetime it tends towards routine and bureaucracy, and in case of emergencies it has to face the greatest turbulence.



*Military culture has two sides: during peacetime it tends towards routine and bureaucracy, and in case of emergencies it has to face the greatest turbulence. Because such missions are quite rare, military training and education is based on simulations, assumptions, and operations. The low level of feedback from the social environment can lead most military cultures to a strong self-orientation, to a tendency to ritualise behaviour.*



*The art of leadership is the way in which leaders influence, persuade and direct their subordinates to carry out an activity that will effectively lead to the achievement of objectives. At the same time, the science of leadership means the elaboration of several action strategies, but the choice of the most appropriate one also depends on the experience, inventiveness, courage of the military leader. Science without art is not enough as art without scientific knowledge means only empirical guidance.*

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### THE NEED FOR COMMUNICATION FOR THE DEVELOPMENT OF FUTURE MILITARY LEADERS

The military leader, as an exponent of culture, must be formed in the spirit of these values. Their activity focuses on planning, organising, coordinating, controlling and motivating individuals to carry out their work tasks in order to achieve their goals. However, for this activity the leader cannot rely only on inspiration, vocation, devotion, because leadership does not only mean solving problems when they arise, but also anticipating them. Under such conditions, experience must not turn into conservatism but become a positive factor. The art of leadership is the way in which leaders influence, persuade and direct their subordinates to carry out an activity that will effectively lead to the achievement of objectives. At the same time, the science of leadership means the elaboration of several action strategies, but the choice of the most appropriate one also depends on the experience, inventiveness, courage of the military leader. Science without art is not enough as art without scientific knowledge means only empirical guidance.

A large part of the motivation activity, but also of the other functions of management is based on communication. Communication is present at all organisational levels and is necessary for all activities. As early as the second half of the last century, a study found that managers or leaders are largely busy communicating with members of the organisation, occupying 70 to 90 percent of their daily time with team or group interactions (Mintzberg, 1973; Eccles & Nohria, 1991).

The development and popularization of technology in the last 20 years has accentuated this situation, new communication technologies such as mobile phones, e-mail, video conferencing, social sites, etc. which apparently facilitate communication also lead

to an increase in the time used by this activity. This vast percentage of time spent by managers and leaders in communicating important issues highlights the importance of communication skills for leaders who want to strengthen their leadership positions. Studies have been done since the middle of the last century to demonstrate the importance of communication for leadership. It was highlighted that a person who can communicate well and has a good decision-making capacity and team coordination is more likely to reach a senior management position (Bowman, Jones, Peterson, Gronouski, & Mahoney, 1964, pp. 6-18). Communication skills help create a better understanding of organisational needs and goals, facilitate team building and trust in the organisation. Thus, the development of communication skills should be a priority for managers who want to achieve leadership excellence and career development. A leader should ensure that the communication process is continuous and also ensure the appropriate use of both informal and formal approaches.

Communication at the leadership level is a complex process that starts from the development of a communication strategy through which to obtain the knowledge of the organisation's objectives by all its members, staff motivation and control of difficult situations. This type of communication includes three major aspects: the basic, the managerial and the systemic. The basic one includes elements of verbal or written communication necessary for the management of medium and large groups. The managerial one includes cultural, motivational, planning and control elements, establishing and maintaining the relations with the team members, and the systemic one refers to the communication with the stakeholders, crisis communication, image creation.

An organisation that encourages the idea of leaders ready to communicate proactively and openly will win in two ways: it will achieve its goals and have staff involved who trust the organisation's mission.

Communication training should be part of the school curriculum during high school. One must understand the complex purpose of communication that goes beyond the simple level of information transmission, now aiming to create meaning in the mind of the receiver.





*Effective managerial communication means the transfer of the message taking into account the understanding and capacity of the receiver. Unfortunately, there are many situations in which the insecurity and obtuseness of people having leadership positions has led to the failure of planned objectives because they have not been clearly or sufficiently explained or because no feedback has been requested or accepted from those involved.*

Effective managerial communication means the transfer of the message taking into account the understanding and capacity of the receiver. Unfortunately, there are many situations in which the insecurity and obtuseness of people having leadership positions has led to the failure of planned objectives because they have not been clearly or sufficiently explained or because no feedback has been requested or accepted from those involved. We must give up the type of manager who has no communication skills or no interest in this field, that type of manager who does not accept feed-back from subordinates, who sees communication as a waste of time and who prefers to lead using only an arrogant tone, though and from a position of power. This faulty kind of communication can lead to demotivation of staff and to conflicts. However, through the education system communication skills for future leaders can be systematised and developed, pupils and students can be taught the value of communication, what a communication plan is, what the right techniques and tools for communication are depending on the environment, public and purpose.

Future leaders need to learn that before starting communicating, they need to be clear about their goal. They need to be confident in the message they are communicating and the members of the organisation, the target audience, need to trust what they are being told. If the speaker does not seem to believe the message they are sending, if they have a negative or disconnected attitude, the team will not be motivated to perform their tasks. Leaders' communication must be clear, concise, containing the essential elements of the activity, but attentive to the thoughts, ideas and feelings of others.

A leader may not have the time to communicate with all members of the individual team, so they must develop the ability to interact with those who make up the organisation, even if they are in groups, as if addressing each individual.

## CONCLUSIONS

Organisational culture, through its components, acts upon military leadership, the latter internalizes the organisational culture and forms and adapts the leadership style, individual and collective behaviours, attitudes in full consensus with it. In conclusion, we can say that no

leader can be truly competent unless they generate individual and group attitudes and behaviours through their activity, tailored to specific situations and they further organisational values. Similarly, organisational culture through the promoted values, using rigor and constancy, leads to the formation of an individual and collective behaviour fully adapted to the specifics of the military organisation. The impact of culture on organisations should not be overestimated, but it should be borne in mind that cultural paradigms specific to the training and living environment of individuals (here we include the time spent in military education and training) are highly restraining and strongly affect the functioning of the organisation.

Therefore, ensuring the compatibility between the individual culture of the members of the organisation and the organisational culture becomes a functional necessity for the organisation. Compatibility must be formed or cultivated in the activity of managing the processes that support the functioning of the organisation or earlier, within the education system.

Finally, a commander who is not able to communicate and understand the value of communication and use it in accordance with organisational values and goals, will not be a true leader. Communication has the value of soft power, but it can bring even better results than a hard and strong approach. If all these elements and techniques of communication were introduced in military education from the first years of high school, the benefits could be seen from the first generations of graduates, which benefits the entire system. Effective communication is a characteristic of effective leadership no leader can perform activities effectively unless they are an excellent communicator who know how to use their ability to coordinate, influence, and motivate their organisation.

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## MILITARY EDUCATION – BETWEEN TRADITION, MODERNITY AND FINDING A PURPOSE –

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*The military education system is based on the experience drawn from many decades of trials, adaptation and reforms, derived from the specific context of their times, each with their specific advantages and disadvantages. Over time, attempts have been made to align Romanian military education with modern trends, but this process was faced with difficulties in combining the modern concept with those derived from tradition, the concepts from abroad with elements specific to Romania. These difficulties have sometimes been accompanied by the dispersal of energy and resources into short-term actions that lacked focus towards a clearly established medium and long-term goal. Can it be said that the current regulations and legislative norms, as well as the models taken over time from the tradition of Romanian military education and other states, are sufficient to clearly outline the direction that should be followed by the Romanian military education system? The aim of this article is to propose an analysis of these issues and outline some conclusions related to identifying the future directions of the Romanian military education.*

*Keywords: training; education; resources; objectives; tradition; challenges;*



## INTRODUCTION

The process of training and educating officers is a constant challenge for any of the world's armies. Forming and developing the necessary competencies on hierarchical levels and in close correlation with the other categories of personnel means a very good knowledge of both the general defence and security environment and of the pedagogy in all its forms. The current system of Romanian military education and training is the result of numerous transformations over time, reflecting in each historical moment the characteristics of society as a whole, derived from political, cultural and security contexts specific to the moment. These were accompanied by specific requirements and expectations from the military environment regarding the training of military personnel, leading to a series of attempts, adaptations and reforms that took place over time *in an attempt to align Romanian military training with trends considered modern at that time. The process was fraught without difficulties, derived from the need to combine modern concepts with those derived from tradition*, concepts of foreign orientation (German, French, Anglo-Saxon) with concepts and elements specific to Romania. These difficulties have sometimes been accompanied by the dispersal of energy and resources into short-term actions that lacked focus towards a clearly established final goal, in the medium and long term. This article aims to analyse these issues and formulate conclusions in order to identify some main directions to guide the Romanian military education in the future, starting from the premise that a military system cannot develop beyond the quality of the level of education of its leaders, fighters and specialists. The study methodology is based on the analysis of the programmatic documents and the legislation in force, on interviews with military and civilian personnel within the Ministry of National Defence, as well as *on the analysis of lessons learned.*

Military education is an extremely complex, dynamic and challenging subsystem to the national education system (National Education Law, art. 34). In the current international and national context, the power of knowledge becomes an absolute prerequisite

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Education is carried out in an organised, formal way, under the guidance of instructors and teachers, using pedagogical methods such as transferring knowledge, tools, storytelling, discussions and/or through direct research, or informally. Every experience that has a formative effect in the way an individual thinks, feels or acts can be considered an educational act.

and is asserts its importance in human interactions, in all forms of organizations: circles of friends, families, associations, public or private organizations, enterprises, state or supranational. Knowledge is the main subject of epistemology helping us to understand what we know, how do we learn and what does it mean to really understand what we know.

Education can be defined as the process of facilitating learning or the acquisition of knowledge, skills, personal values, moral values, personal beliefs, habits. Education is carried out in an organised, formal way, under the guidance of *instructors and teachers*, using pedagogical methods such as transferring knowledge, tools, storytelling, discussions and/or through direct research, or *informally*. Every experience that has a formative effect in the way an individual thinks, feels or acts can be considered an educational act.

The law on national education identifies a series of objectives of education and professional training, as follows: “the development of competencies, understood as a multifunctional and transferable set of knowledge, skills / abilities and aptitudes, required for:

- a) a) personal fulfilment and development, by achieving the life goals, according to the interests and aspirations of each person and the desire to learn throughout the entire life;
- b) b) social integration and active citizen participation in society;
- c) c) finding employment and participation in the functioning and development of a sustainable economy;
- d) d) the formation of a conception of life, based on humanistic and scientific values, on national and universal culture and on the stimulation of intercultural dialogue;
- e) e) education in the spirit of dignity, tolerance and respect for fundamental human rights and freedoms;
- f) f) cultivating sensitivity to human issues, to moral, civic values and the respect for nature and the natural, social and cultural environment” (art. 4).

Starting from these general aims, the military training system must identify its own objectives, which will guide the training and education activity. In this context, it is useful to highlight the distinction between two commonly used terms, that are sometimes considered as having a synonymous meaning, but which refer to activities with distinct goals and purposes.

Thus, the concept “*process of tuition*” is less used in the literature, more commonly found being the phrases “*educational process*”

or “*instructive-educational process*”, with the meaning of a complex activity of teaching and *learning*, which is intentional, programmed, organised and conscious. The concept of Romanian *military education* has two distinct components, the academic component and the vocational component. The academic component is provided by university and post-graduate educational institutions (service level academies and the “*Carol I*” National Defence University), while the vocational part, representing the practical part of the training process, is achieved through a combination of university institutions and training centres (Țirdea-Păunescu, 2018, p. 4).

Within the general concept of *military education*, the distinction between the concepts of *training and education* needs to be emphasised and clarified. Training refers to the acquisition of knowledge and skills specific to a particular field, necessary for the performance of duties. *Education* refers to the acquisition of information, knowledge and skills that constitute the theoretical foundation of a field. In the military field, training can mean, for example, the acquisition of knowledge and skills related to the preparation and execution of a parachute jump, or the knowledge, acquisition and implementation of procedures and regulations. An officer’s education can refer to the *acquisition of values and the definition of ethical and moral landmarks, understanding the theoretical aspects of the concept of leadership, psychology, communication, resource management, but also the development of skills such as analytical and synthetic ability, intellectual flexibility, systemic thinking, critical thinking, communication skills*. It would be tempting to simplify the subject by stating that training refers to the practical part and education to the theoretical part, but we must keep in mind that training cannot be done without a theoretical foundation, and education cannot be done effectively only through lectures, without exercises and practical applications. The difference between the two concepts is given by their purpose and final objectives, and within the military education system, they must be approached in a correlated and unitary way, throughout the whole professional trajectory of the military, avoiding their use as synonyms.

The training process is more complex than the simple “*teaching-learning-assessment*” process, because it involves the inclusion in the analysis, in addition to defining teaching objectives, steps such as setting content, applying appropriate methodology and ensuring the assessment and the situational factors that determine a certain evolution of process. The formative activity is reflected in the results



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of the training which, after they are controlled and evaluated, indicate the shortcomings, deficiencies and desynchronisations of the didactic components and actions. Through feedback, the regulation of the instructive-educational process takes place. The outputs of the system become inputs for a new cycle.

### OBJECTIVES OF MILITARY EDUCATION AS PART OF THE INTEGRATED DEFENCE RESOURCES MANAGEMENT SYSTEM

From the perspective of the documents that substantiate defence planning and the long-term vision of the Romanian military system, the military education and training system is managed through the human resource management process, which takes into consideration two main aspects: *“planning of the career development in order to achieve the organizational objectives and the accumulation of command/ leadership experience, by the assignment of functions at different levels of the military hierarchy”* and *“rigorous planning of human resources, so as to increase the degree of competition and professional performance, to reproduce and generate military values”* (White Paper on Defence, 2021). The military education and training system can be located mainly in relation to the second statement, regarding the planning of human resources, as its main task is to ensure, through the training and education process that the personnel attracted to the military system through the recruitment process is up to the quality standards necessary for the fulfilment of missions.

From the point of view of identifying a direction for the military education and training system, increasing the level of professional performance and *reproducing military values* is a relevant goal, generally valid, even if perhaps too generic (of course, it is expressed in a strategic-level document and it can be further refined). But the question arises as to what does it mean to increase the degree of competition of human resources? The military training system should generate competitive graduates compared to those of equivalent specialisation and rank from other armed forces (taking into consideration the duration of their military career), or compared to graduates of civilian training (taking into consideration their professional evolution after retiring from the military)? *The answer to this question is one of the factors with a direct influence on the development direction of the military training system.*

In addition to this general objective regarding human resources management, the same document details the main directions of action for the modernization of the military training system: *“the management of the military education system will seek to change the training and education paradigm, by redirecting the resources towards training and educating specialists capable of achieving success in a constantly changing operational environment, with the professional skills necessary to carry out missions now and in the future”*. (Ibid.).

From this formulation emerge three distinct approaches, related to the management of resources related to the educational and training process, to the output-related objectives (graduates of various forms of training) and the time horizon considered. These approaches are fundamental factors in shaping a high-performance military education system, leading to a process of analysis, decision-making and requiring more complex and detailed guidelines than those identified in the aforementioned document.

In view of the three approaches outlined above, the courses of action set out in the *White Paper* can be grouped as follows.

From the point of view of *resources*, the above statement mentions the need to redirect resources to increase the efficiency of the educational and training process, in correlation with the requirements of the operational environment. In this regard, it should be emphasized that an effective military education and training system involves not only aspects related to human resources management (seen mainly in terms of its exit elements, namely the graduates), but also the management of input elements (financial, material, information resources).

Thus, the input elements involved in the quantitative and qualitative fulfilment of the education and training process are the following:

- human resources: teachers, auxiliary teaching staff and administrative staff. Human resource management sometimes loses sight of this component, focusing only on the output elements (the graduates), but the efficient and effective management of human resources in the education system is of crucial importance for the quality of the output elements. Ensuring an optimal proportion between teachers and administrative staff, attracting and motivating high-performance military and civilian teaching staff to remain in the military education system, ensuring opportunities for career development and professional development, the use



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of experiences and lessons learned throughout the military career by officers who have participated in various missions or held positions in international structures without blocking their evolution in the military career, are just some of the aspects that should be considered. The development of an effective training and education system should be done in a structured and integrated manner, correlated with the objectives of the military system, on the short, medium and long term.

- material resources: logistical-didactic base, preparation time. Regarding this aspect, the *White Paper on Defence* mentioned *“modernization of infrastructures and endowment of military educational institutions with teaching materials corresponding to the new platforms and systems of armament and military equipment”*.
- financial resources;
- information resources: concepts, programs, education management documents, information supports, organisational memory.

From the point of view of the *objectives and outputs*, the *White Paper on Defence* mentions a number of seven directions of action in order to modernise military education and training. Some of these directions of action are not related the process of modernisation, because they represent the classic foundations of a civil and/or military education/training system. For example, *“encouraging and rewarding excellence in learning”* is a foundation of any successful education system throughout the education cycle, starting right from primary school. *“Maximising the level of specific competencies, by developing study programs aimed at obtaining a military qualification”* is a basic objective of military education, the reason of its existence. *“Structuring educational content by areas of competence, in order to ensure, progressively and correlatively, the knowledge, skills and fundamental attitudes specific to the leader, fighter and specialist”* is also the classic foundation of a military education system, the starting point of teaching activity, after establishing the graduate profile and not a direction for modernisation.

Nor is *“the training of lifelong learning skills and the continuous professional development of military personnel”* a factor of novelty as a concept. For example, in the period immediately preceding the First World War, the officer’s training path involved graduating from the officer school, then special service-based schools, such as

the Special School of Cavalry, followed by internships in another service. Later selected officers attended the Higher War School and a complementary course, within the General Staff. This complementary course consisted of practical activities in various offices/sections, in order to familiarise participants with the activities of each section and acquiring *“knowledge on the functioning of the nerve centre of the armed forces, with an end-of-course goal of selecting officers who meet the skills needed to be officers of staff”* (Pantazi, 1999, p. 17). As another example, before 1989, by order of the Minister of National Defence, officers in positions of commanders in the students subunits in military schools and high schools (platoon, company/battery, battalion/division), as well as the military staff in education departments, were required to complete a 4-month internship in the operational units every 4 years, in order to maintain the level of training in their branch and at the same time to get familiar with the reality outside the military education system.

If this concept of lifelong learning is not new, reforming the structural framework and the specific ways of putting the concept of lifelong learning into practice can indeed be an element of modernity, by integrating and correlating this process with the current day professional activity, its requirements, but also with the military career guide.

The directions of action that are real steps towards modernisation refer to *“the adoption of digital technologies, to facilitate learning by simulating as close as possible the conditions in which future military will act”*, *“the adoption of modern learning strategies and the use of adequate teaching methods and technologies, in close correlation with the transformations of the operational environment”* and *“capitalising on the lessons learned from international missions (theatres of operations, positions in international structures) and the knowledge acquired by military personnel who have undergone training programs abroad”*.

All the directions mentioned above are valid and relevant, but it would be useful to make a distinction between *“reform”* (with the meaning of identifying and eliminating dysfunctions, including by applying classical educational design methods) and *“modernisation”* (introduction of elements with novelty aspect), because the actions necessary for the implementation of the two concepts are different. The reform mainly involves a managerial, systemic and unitary, output-oriented approach, while modernisation can be achieved both from



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a managerial point of view (purchase of modern teaching equipment and materials, rethinking the contents of curricula), but also individually (at the level of teacher/instructor), being oriented towards methods and means.

### THE QUALITY AND EFFECTIVENESS OF THE ROMANIAN MILITARY EDUCATION/ TRAINING SYSTEM

In the context of the objectives and output elements, it would be useful to clarify some aspects that are not the subject of programmatic documents, but have considerable implications on the quality of Romanian military education.

When using the term military education/training objectives, the systemic objectives, correlated with strategic defence objectives, are the ones most often taken into account. *“Training, educating and ensuring the professional development of leaders, fighters and specialists, able to achieve success in a constantly changing operational environment, with the professional skills necessary to fulfil missions now and in the future”* is the systemic goal presented in the White Paper on Defence, but also in other programmatic documents. However, the question arises, which competencies should be adapted to the operational environment (national competencies or NATO-relevant competencies) and which of them should be acquired as a matter of priority, at specifically what level of education? Although these objectives often overlap, there are situations in which some of them will have to be prioritized over the others. As an example, *taking into account the limitation given by the time factor during a training cycle (such as military university education), which curricular area should take precedence - English language proficiency or acquisition of skills and knowledge related to the military specialty?* Should officers be trained exclusively in accordance with the Alliance’s doctrines, or the possibility (of course, low in probability and undesirable) of the need to ensure national defence outside the alliance should also be considered, bearing in mind that part of the training/education should also address the future operational environment (with a time horizon of 30 years), which generates the need to also study the doctrines of other, potentially unfriendly, states.

The programmatic documents state that the military education system, as part of the national education system, follows the Bologna

principles and is subject to the national educational policies and quality standards. This can create difficulties in harmonizing the different objectives pursued on the two levels, civilian and military. The knowledge and skills derived from the requirements of a dynamic operational environment are not identical to those derived from the Bologna principles, in terms of curricular area, organization of education, teacher evaluation criteria, training duration, etc. The limited duration of the study period must thus be carefully thought out for the harmonisation of the two directions, which generates many challenges, such as the transfer of a significant share of the specific military training towards training schools/application centres. Another example is that for an academy graduate, the continuation of his/her studies by participating in a master’s program (required by the Bologna cycle) often overlaps with the first steps in his/her military career (through the appointment in an officer position), with the related challenges derived from the adaptation to a new environment, the needs to acquire position-specific information, the lack of experience. All these challenges may have as a result the decrease of the educational effectiveness. The service level objective, or the objectives of the commander of the military unit where the officer will be assigned, is to ensure his/her adaptation to the requirements of the position (through practical activities, but also by studying specific regulations and procedures), as soon as possible. The objective at the level of the military system should be to have officers with a solid theoretical basis, values, principles and skills to be used throughout the career, which means that the officer should dedicate his/her time to attend courses and study the master’s program disciplines. The overlap of these two types of objectives, given the time constraints, entails compromises in the quality of the learning act, in one of the aforementioned areas.

Also, the requirements regarding the evaluation criteria for the university teachers, based on the Bologna principles, are different from the performance evaluation criteria for instructors/teachers who train the officers for meeting the operational environment requirements. For example, in the latter case, the evaluation criteria should be based on sharing the experience in theatres of operations/ international positions, development of practical applications, war games, simulations, etc., while the evaluation of academic staff based on the Bologna principles emphasises the research activity (articles in publications with impact factor, research projects, etc.) and less the teaching activity. Thus, a contradiction arises, between the objectives



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of the teaching process and the career objectives of academic staff. Given the specifics of military activity (even in support areas such as resource management), the results of classroom work (development of lessons, textbooks, applications, research projects in line with the needs of the military) cannot be capitalised through publication (due to the level of classification), forcing the academic staff to focus on areas of less relevance to the military in order to meet the criteria for professional evaluation and generating a counterproductive dispersion of effort, time and energy.

An effective military education/training system thus involves the harmonisation of the two aspects, academic and training, so as to highlight the advantages of each, avoiding a false dichotomy between university education, perceived as less useful, and training. As I stated at the beginning of the article, the two issues are interconnected and should not be addressed separately. For this, it is necessary to clearly establish the role of the academic staff (civilian and military), but also of military instructors, in order to effectively benefit from the strengths of each category, in a joint effort.

In certain circumstances, the creation of a collaboration framework between civilian/military university teachers and military specialists is the most effective way to achieve the training objectives. For example, the development of a resource management application (for a specialty course) was based on collaborative work between civilian researchers at the Institute for Defense Analysis, Washington D.C. (who contributed with the design part, specialised studies and software development), civilian and military academic staff at National Defense University, Washington DC (who contributed with the pedagogical and course design insights regarding the materials) and military specialists (at strategic and operational level, who contributed with the practical experience). If the project had been left only to the teachers, they would not have had the practical experience and maybe the level of classification necessary to have access/understand some more complex aspects. The drawback of letting the project only in the care of subject matter experts is that their time restrictions (considering that they were also working full time in their assigned positions) would have hardly allowed them to put in the full 10 months of work that were necessary to achieve it. Another drawback is that they generally lack the didactic and pedagogical skills necessary for the optimal organisation of the theoretical and applied part.

The transmission of skills such as critical thinking, systemic thinking or creativity is one advantage offered by civilian academic staff, because they are not the product of the military system, which emphasises a strict hierarchical structure and obedience to orders, and places less importance on mental flexibility and intellectual curiosity. Military instructors can make an essential contribution by sharing practical experience and lessons learned by participating in missions in theatres of operations or in various specialised positions in structures in the country and abroad.

### THE ROLE OF THE TEACHING STAFF WITHIN THE MILITARY TRAINING/EDUCATION SYSTEM

In order to increase the effectiveness of the military education system, it would be useful to redefine/update the role, competencies and limitations of the teaching staff (instructors and academics) and administrative staff. Thus, there is a need to align with the values, traditions but also with the new approaches specific to the alliances of which Romania is a part, emphasising the elements that lead to national performance. In this sense, it would be useful to analyse the correlation between the structure of teaching staff in NATO and EU countries and the level of education/training, in order to adapt external models to national specificities to increase their own performance.

Clearly defining the role of each category of teaching staff is useful and necessary both to increase the performance of the education system, but also to motivate and retain highly competent teaching staff in the system, by creating a professional development framework.

The career of a university teacher (following the Bologna principles) involves more than the transfer to a teaching position (without going through all the university degrees), with the fulfilment of the minimum requirements, of people who had another professional career until that moment. No matter how performant that respective specialist may be in his/her field of competence, he/she does not have the skills, knowledge and didactic and pedagogical experience necessary for the teaching activity. Subject matter experts have their role in the educational/training process, that is to share their practical experience, but as a complement to the theoretical foundations laid by university teachers, and cannot work as a substitute for them. This outlines the need to start a clear and precise process of identifying all the knowledge, skills and abilities to be gained through the education/training process, dividing them into clear disciplines, and assigning



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*The role of military instructors and military professor (trainer) corresponds best to the requirement of “capitalising on the lessons learned from international missions (theatres of operations, positions in international structures) and the knowledge acquired by military personnel who have undergone training programs abroad”.*

them to be taught by the appropriate type of qualified staff, through education or training, according to the level.

By its nature, the academic career implies stability and the gradual completion of successive phases, but for the military academic staff, this can generate a series of problems, related to the correlation between the teaching career with the military career, which requires greater mobility, but also the financial motivation of young teaching staff, who may be more attracted by the higher level of pay in an operational unit.

Some of these shortcomings can be addressed through the use of military instructors, but this requires clarifying their role. The concept of *military instructor*, as an idea, originated from other armed forces, in which the military instructor is often a non-commissioned officer and had/has the role of preparing the military (soldiers, non-commissioned officers, officers) for the development of activity-specific skills and abilities. In other words, the predominant role of military instructors is in the training area. The military professor (with the status of trainer, not of academic staff) is usually an officer from operational units, with a high degree of theoretical and practical knowledge in the field, recognised in the branch, assigned in the position of trainer for a maximum of 3 years, which has of the necessary and sufficient pedagogical skills required by the didactic activity.

The assimilation of the positions of instructors with the academic staff can only lead to confusions and the creation of an unfavourable image for both categories of teaching staff (instructors and academic). The role of military instructors and military professor (trainer) corresponds best to the requirement of *“capitalising on the lessons learned from international missions (theatres of operations, positions in international structures) and the knowledge acquired by military personnel who have undergone training programs abroad”* (White Paper on Defence, 2021).

In the absence of a clarification of the role and purpose of this category of teaching staff, the potential of non-commissioned officers’ knowledge and skills is under-utilised and the important contribution they can make to the military training system is ignored. As an example, officers participating in the US Special Forces Qualification Course are predominantly trained by non-commissioned officers who have been part of SOF teams and have extensive practical experience. Even though they apparently train officers with a higher level of education, the aim is to bring a new, practical perspective on how an SOF team works and what skills and competencies each member



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*As for the military professor (trainer), one of his\her strengths is the practical experience, gained in theatres of operations or in various national or international positions.*

contributes to, so that officers can apply theoretical knowledge in practice. The reason why this experience is not transmitted by an officer is a very pragmatic one: *“a captain stays in the team for two or three years, before being promoted to another position, while a non-commissioned officer can stay for 13 years. The purpose of the non-commissioned officer is to help the officer understand the dynamics of the team, the role of each member and the place of the officer in that team”* (Mattson, 2012). *“An officer must be able to consult with the non-commissioned officer and the rest of the team... while the role of the officer is predominantly in the planning part, the role of the non-commissioned officer is to ensure the unity of the team and take care of its members”* (Ibid).

As for the military professor (trainer), one of his\her strengths is the practical experience, gained in theatres of operations or in various national or international positions. By definition, the military professor should have more mobility than the academic teaching staff, as the dynamic operational environment means that after 5 years as a military professor, that officer must return to the operational part, in order to keep up to date with the latest developments in his/her area of expertise. The practical experience in Iraq is useful for the study of theory, but the Iraq operational environment cannot be compared with the one in Afghanistan, and if the purpose is to transmit practical experience and not the study of theory, by definition the military professor cannot remain in position for more than a few years. A career of 20-30 years as a military instructor would have limited benefits both from the point of view of system performance and also from the point of view of the officer, who opted for a military career and not a university career, and staying too long in that position only leads to loss of professional development opportunities. Of course, there is the important issue of how to select the best officers for the role of military professor, but also how to motivate them to postpone for a few years their professional career in the operational field.

## FORMING MILITARY LEADERS

The stated goal of the military education/training system of *“forming and ensuring the professional development of leaders, fighters and specialists capable of achieving success in a constantly changing operational environment, which have the professional skills necessary to fulfil the missions now and in the future”* would be worth



analysing in more detail. Thus, a distinction must be made between the training of fighters, the training of specialists and the training of leaders, because the educational process and the specific objectives for each of them differ. For example, it is the purpose of the Military Technical Academy to train specialists, but can it really be said that it trains fighters? What is the meaning of these expressions? The training of a chemical engineer, for example, involves a preponderant allocation of time for theoretical and practical training in the field, which leaves less time for the training necessary for a fighter. A chemical engineer officer or a finance officer cannot be expected to have the same physical or tactical performance as an infantry officer, because that is not the requirement of their positions. Some military specialisations, or training courses, have by design a stronger education component, requiring a theoretical, academic approach, while others require an approach with a stronger training component.

*Leadership training is an essential component for every armed forces, as adapting to changes in the operational environment requires a combination of pre-existing knowledge and skills, the basis of which must be laid in view of a longer time horizon and following the tactical level, as well as the operational and strategic ones.*

Leadership training is an essential component for every armed forces, as adapting to changes in the operational environment requires a combination of pre-existing knowledge and skills, the basis of which must be laid in view of a longer time horizon and following the tactical level, as well as the operational and strategic ones. An effective and efficient leader is formed, building on specific pre-existing personality characteristics, with leadership skills acquired starting from a solid theoretical basis in terms of leadership, psychology, communication, resource management, capacity of analysis and synthesis, critical thinking, systemic thinking, etc. (which form the education component), followed by the development of practical skills in the aforementioned fields (forming the training component). Not every specialist or fighter will have leadership skills, nor should this be pursued, as each person can contribute to the efficient functioning of the system through specific skills. We need leaders as well as fighters and specialists. That is why the formation of leaders is a much more complex process, which involves a unitary and inter-correlated approach between the education system, the human resources management system and the personnel management in each military unit.

*“Structuring educational content by areas of competence, so as to ensure, progressively and correlatively, the knowledge, skills and fundamental attitudes specific to the leader, fighter and specialist”* is an essential direction for action to achieve a successful education system, but there is the need to clarify what are those competencies for each level (the graduate’s profile). Also, the educational process

must be correlated with the various stages of the military career, starting from a systemic, long-term approach. Certain knowledge and information that will be taught, for example, in a resource management course for a battalion commander can be understood and acquired much more effectively if there is a minimum level of knowledge in the economic field acquired from the academy. One of the objectives of the education component of military education/training system should be the formation of a minimum level of general culture in areas with which the officer will have subsequent contact: resource management, leadership, communication, psychology, security and military environment, etc. It is possible, for example, for a graduate of the Military Technical Academy to reach a position during his career that is directly related to the field of logistics, regardless of the initial specialisation, and a basic course in resource management, which might have seemed completely uninteresting during his university studies, shall prove to be extremely useful. An officer’s professional path during his military career should be clearly outlined from the beginning, and the knowledge and skills taught in the educational process correlated with current and future needs.

Last but not least, the achievement of systemic goals must be seen in correlation with the career goals (and to some extent also with the personal goals, in the sense of maintaining the motivation) of students/trainees. Ignoring these objectives and focusing exclusively on systemic objectives can only lead over time to a decrease in the quality and qualification of human resources in the armed forces. Rewarding excellence in learning by awarding marks/grades/distinctions is not enough to motivate excellence in learning, nor to keep the top-performing officers in the military system. The motivational factors of the new generations need to be better understood; for them values such as patriotism are not necessarily a priority, compared to performing a stimulating activity, having opportunities for advancement, the recognition of merits or obtaining a certain material level (Macovei, Argintaru, 2016).

The limited possibilities of capitalising the experience and knowledge of top graduates of study programs abroad by appointing them to positions corresponding to their qualification, regardless of rank, the reduced possibilities of financial stimulation, the lack of effective social support for the family, the rigidity of the system, are all factors that lead to the loss of the most valuable officers (either through leaving the military system for more attractive career opportunities,



*An officer’s professional path during his military career should be clearly outlined from the beginning, and the knowledge and skills taught in the educational process correlated with current and future needs.*



*Defining and mastering national and European military and cultural values is part of the tradition of military education, which will be used as a benchmark by the military throughout his career.*

or by not using their skills and knowledge to their true value) and retaining in the system a majority of military personnel motivated only by job stability.

Finally, from the point of view of the time horizon, an important factor for an effective education/training system is the clear definition of the curricular area, depending on the level, in order to ensure a progressive and correlated education/training. The end state declared by the programmatic documents (*White Paper on Defence, Concept on the modernisation of military education*) is to ensure the training of the military to achieve success in the present and future operational environment, to be able to use high performance technology and to be deeply attached to the national and European military values and cultural institutions. Defining and mastering national and European military and cultural values is part of the tradition of military education, which will be used as a benchmark by the military throughout his career. However, taking the operational environment as a benchmark generates a series of challenges. The preparation for the current operational environment is achieved through professional and training courses (especially after graduation, and throughout the career). Their purpose is to transmit information and generate skills currently valid in order to solve current problems that the military is facing in the current position or in the next position. The nature of these courses brings them closer to the training side than to the education side.

Training and educating the military personnel in order to adapt to the operational environment of the future, involves however a medium and long-term approach regarding how knowledge and skills are structured and presented, presuming the development of a systemic vision, flexible thinking, changing the mindset, skills such as critical thinking, analytical ability, decision making on various levels of power, use of modern technology. But how far in the future should we look when developing this type of education? A career course for higher ranks, such as colonel or general, cannot ensure the development of all these skills, for objective reasons, given the time limitation, but also due to the different set of knowledge, skills and experience the students start with. Changing the way of thinking, developing the skills of using modern technology and the analytical spirit are endeavours that should take place throughout the military career, through various forms of education/training, starting from the basic foundations set during the undergraduate studies and depending on the specific career stage and skills of each military personnel.

## CONCLUSIONS

The development of a high-performance military education/training system is a difficult and complex process, due to the multitude of influence factors to be analysed, but also to the time horizon to be considered, including objectives, resources and time factor. Thus, we must start from the past (elements of tradition and foundations that have permanent validity), passing through the present (adaptation to the requirements of the contemporary operational environment, at all levels), but with the ultimate goal of well-defined objectives for the future.

Perhaps the most appropriate conclusion for this article is a statement by the great philosopher and pedagogue Emmanuel Kant *“a principle of pedagogy that people who make plans in education should keep in mind is that children should not be raised according to the current state of the mankind, but according to a better state, possible in the future, that is according to the ideal of humanity and of its entire mission. This principle is of great significance. Parents should not only raise their children for the sake of the world today, as bad as it is. They should also give them a better education so that it results in a better state in the future”* (Kant, 1886, p. 40).

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*“A principle of pedagogy that people who make plans in education should keep in mind is that children should not be raised according to the current state of the mankind, but according to a better state, possible in the future, that is according to the ideal of humanity and of its entire mission. This principle is of great significance. Parents should not only raise their children for the sake of the world today, as bad as it is. They should also give them a better education so that it results in a better state in the future”.*



## PROFESSIONAL MILITARY LEADERSHIP DEVELOPMENT FROM THE PERSPECTIVE OF NATIONAL RESILIENCE

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*Leadership, along with discipline, ethics, organisational culture and specific socialisation practices, is one of the most important pillars (Brown, Treviño, 2006) of the military profession. As such, professional military leadership is one of the key aspects emphasised at strategic level. One prominent example in this respect is the Romanian Military Strategy of 2021 (2021, pp. 3-4) which views it as one of the means of securing organisational and national resilience in a volatile, complex, and uncertain environment. Furthermore, as the 2020-2024 Romanian National Defence Strategy states (2020, p. 32), resilience is one of the key areas targeted by the NATO-EU cooperation agenda where Romania pledges to contribute. Following the strategic acknowledgment that professional military leadership is needed in order to meet future challenges in the defence and security field, the current article discusses the ways and means by which professional military leadership development can further the end of securing organisational resilience in the defence and security field, and hence that of consolidating national resilience.*

*Keywords: military professionalism; leadership development; national resilience;*

## INTRODUCTION

The definition of *resilience* can be established and delineated in relation with the target of resilience efforts. From this perspective, resilience is associated with the national dimension – national resilience – or with the line of demarcation between personal and public space: individual, community, social, organisational etc. resilience or with the type of adversity against which a subject or interdependent entities prepares, like CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosives) resilience, conflict resilience, disaster resilience etc. Consequently, resilience conceptualisation is context-dependent, representing a feature of dynamic systems (Kourti, 2017) and is multi-dimensional. What is more, it can be better expressed as an outcome (Gibson, Tarrant, 2010), rather than output. As such, resilience is the ability to grow, develop along change and its uncharted territories, and not despite it. From such a perspective, the concept is associated with flexibility and ever-changing conditions that require systems of management that nurture these qualities over maintaining stability (Ib.). A system level approach to defining resilience equates it to the capacity to adapt system responses and strategic approaches when confronted with changing, unpredictable and highly interconnected environments (Havránek, 2018).

Resilience is also viewed as a never-ending journey between the “*resilience of the old*” and the “*resilience of the new*” (Folke, 2016), and the determined departure from the former and transition and consolidation of the latter through periods of gradual adaptation and times requiring fundamental transformation and change. Such a two-fold perspective involves merging the capacity of a system to go back or “*bounce back*” to its old way of functioning after having undergone major events, with the same system’s capacity to move forward and mould a new way of existence. The key words assuring the link between “*resilience of the old*” and “*resilience of the new*” are *response* and *recovery*.



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*Resilience is associated with the national dimension – national resilience – or with the line of demarcation between personal and public space: individual, community, social, organisational etc. resilience or with the type of adversity against which a subject or interdependent entities prepares, like CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosives) resilience, conflict resilience, disaster resilience.*



The literature in the field differentiates between *general resilience* (Walker et al., 2009, Biggs et al., 2012, Carpenter et al., 2012) and *specific resilience*.

*General resilience* provides the necessary collective memory of the past, along with the necessary flexibility, innovation required for change, and transformation by which threats and risks can be treated as opportunities. The enablers of general resilience are: diversity, modularity, openness, reserves, feedback, nestedness, monitoring, leadership, trust (Carpenter et al., 2009). It is a long-term effort that incurs short-term and medium-term costs.

*Specific resilience* is concerned with identifying the actions to be undertaken, or the what-to-do component (Carpenter et al., 2001) and the target beneficiary (Lebel et al., 2006, Robards et al., 2011, Brown, 2014). Worth noting though, in relation with specific resilience, is that even when contextualised by particular organisations, its main components incur general elements identifiable regardless of particular system characteristic. For example, resilience associated with national security is viewed as the maintenance of vital services and the continuation of life as close as possible to the normal after actions aimed at preventing or countering the effects of attacks or of disasters (House of Commons Defence Committee, 2009, p. 4). In the same line, resilience in the context of emergency preparedness is defined as the *“Ability of the community, services, areas or infrastructure to detect, prevent, and, if necessary to withstand, handle and recover from disruptive challenges”* (Cabinet Office, 2012, p. 23).

The North Atlantic Treaty Organisation (NATO) definition of resilience focuses on the capacity of a society to withstand and recover from a major disruptive event such as natural disasters, critical infrastructure failure, and armed attack in no time (Committee on the Civil Dimension of Security/CDS, 2021).

Three key words are associated with resilience as a defining element of social-ecological systems, namely: adaptability, transformability and persistence. They actually concern answering the question *“what for?”*. Thus, resilience acquires meaning when associated with terms in phrases like: *“resilience for adaptability”* and *“resilience for transformability”* (Folke, 2016).

One of the main goals underlying the effort of building resilience lies in the fact that regardless of how well designed a system may be,

*General resilience provides the necessary collective memory of the past, along with the necessary flexibility, innovation required for change, and transformation by which threats and risks can be treated as opportunities.*

there are always blind spots that allow for its disruption and, possibly, destruction. Focusing on resilience is focusing on how to resist, recover and adapt when confronted with adversity.

Secondly, it is worth noting that *“Resilience is embedded in people’s behaviour, and it is built by proactive approach to mobilising resources, abilities to respond and perform under a variety of conditions”* (Tasic et al., 2019). As such, increasing attention to leadership development and institutional consolidation from a resilience perspective becomes another major goal.

It is noteworthy that resilience thinking runs counter stability, predictability. It is the outcome of employing various types of capabilities and strategies that are context-dependent to survive disruptive events or to adapt to incremental changes, achieve robustness coupled with agility and thrive in the long run. Nonetheless, as a British Standard 65000, Guidance for Organisational Resilience (BSI) report on 2018 trends in business across the world (BSI, 2018, p. 16) unveils, in times riddled with continuing uncertainty, securing product resilience via innovation, horizon scanning and adaptation is not under the radar of organisations. In this respect, we can also state that, given the current Covid-19 challenges, it is difficult to assume that, at this moment, organisations all over the world, the military one included, can take clear-cut steps towards building resilience as a way of thinking and acting while struggling to secure the *“resilience of the old”*, namely what granted stability and predictability before uncertainty and volatility began to manifest as disturbing factors. In the mentioned situation, resilience defined as the capacity to bounce back is being tested by the unfolding events. Hence, resilience defined as moving forward towards adaptation and transformation is not necessarily openly considered yet. What is more, according to De Smedt, Giovannini and Radermacher (2018), the capacity of a system to bounce back from a shock is not necessarily a positive aspect if previous system direction was not sustainable. In our opinion, the same statements and evidence stand true for the defence and security field and, inherently, for defence establishments, too.

Concerning the approach to resilience at the state level, the *Romanian National Defence Strategy 2020-2024* (RNDS, 2020) regards resilience from the perspective of what it takes to assure the concept



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*Resilience is embedded in people’s behaviour; increasing attention to leadership development and institutional consolidation from a resilience perspective becomes another major goal.*



*Resilience as an outcome is defined by the remarks made concerning the features contributing to making a state resilient in what we may call a “reading between the lines” conceptual approach stating the following: “...a resilient state, capable to efficiently, proactively and adequately adapt to the unpredictability of the evolutions (i.e. conventional, economic, financial, and also cyber, hybrid or associated to pandemics and environmental changes) in the global security environment and able to manage in a consistent and efficient manner any associated risks and threats”.*

becomes an outcome, as well as from the perspective of resilience as capacity.

Resilience as an outcome is defined by the remarks made concerning the features contributing to making a state resilient in what we may call a “reading between the lines” conceptual approach stating the following: “...a resilient state, capable to efficiently, proactively and adequately adapt to the unpredictability of the evolutions (i.e. conventional, economic, financial, and also cyber, hybrid or associated to pandemics and environmental changes) in the global security environment and able to manage in a consistent and efficient manner any associated risks and threats. To that end a powerful state is needed to assure an optimal framework for the development of participative democracy, assurance of citizens’ rights and liberties, and to encourage people and civil society’s participation in solving all societal problems, those concerning national security included”. (Ib., p. 8). Furthermore, resilience in relation to the existence and actions of a “powerful state” is enabled by rapid and efficient reaction mechanisms, along with the development of solid security culture, and hence with the observance of national security values (Ib., p. 10). Resilience as an outcome is viewed in association with good governance. Inherently, such a relationship is consolidated as a result of employing strategic leadership principles like flexibility, adaptability and rapid reaction capacity, which contribute to anticipating, planning and preparing for the worst-case scenario. (Ib., p. 6).

Resilience as capacity concerns the inherent ability of various entities (i.e. individuals, communities, regions and states) to resist to various disturbing events and to “bounce back” to a normal state. To that end, the multi-layered collaboration among private-public, citizen-community and civil-military entities becomes a stringent necessity. Furthermore, positive transformation targeting sustainability is also an important part of national resilience. (Ib., p. 11).

National defence capacity and Romania’s membership of NATO are viewed as guarantees to securing the state’s security posture. Additionally, as part of Romania’s approach to national resilience in relation to the defence field, the strategy mentions, among other courses of action, the facilitation of the implementation of the cooperation agenda between the European Union and NATO in the fields of “cyber defence, countering hybrid threats, resilience, strategic

communication and military mobility” (Ib., p. 32). Consequently, we deem necessary to conduct a conceptual investigation into the definitions of national resilience provided by the EU and NATO in order to better identify the premises that underlie professional military leadership development from the perspective of the aforementioned concept.

## NATIONAL RESILIENCE THROUGH THE LENSES OF THE EUROPEAN UNION AND NATO

### • THE EU PERSPECTIVE ON RESILIENCE

From a defence and security perspective, resilience is conjured up as the result of a “whole of society approach” (CDS, 2021), or as “total defence”. Both presume that the values of democracy are promoted and upheld by state authorities, while the latter work together with defence and security organisations, civil and private entities, and the population, to counter potential threats in a logic resembling the logic of diminishing returns. The policies in the area of total defence aim at strengthening civil preparedness in order to secure the continuity of government functions regardless of how disruptive events may be. They target the enhancement of civil protection for times of conflict/war, on the one hand, and crisis preparedness for preventing and managing crises in times of peace, on the other hand. Examples of explicit and committed adoption and use of the two concepts are Estonia, Norway, Finland, Israel, Sweden, Switzerland and Singapore.

At the level of the European Union resilience is defined as the ability of an individual, community to resist, adapt and recover fast from adverse conditions and major shocks. Resilience in EU’s approach is a complex concept that encompasses society as a whole (European Commission, 2014): “...understanding and building resilience requires taking a broader perspective and considering society as a whole. Such a <system view> should encapsulate the entire production process of societal well-being, to ensure that not only economic, but natural, social and environmental resources are also harnessed in an efficient, sustainable, fair and responsible manner” (Alessi et al., 2018, p. 5).

Furthermore, state resilience is based on democratic values, people’s trust in institutions and sustainable development (European External Action Service, 23 June 2016), and societal resilience depends on government accountability, education, culture and youth. In terms



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*Adaptive capacity consists in the ability to be flexible and generate incremental changes that do not contribute in any way to increasing the level of discomfort already manifest, whereas transformative capacity is required when the extent of damage inflicted or the time length the disturbance lasts makes it no more possible to manage the system in an as is form and hence generates the need to engineer large scale changes.*

of its purpose, resilience at the EU level is acknowledged as a guarantee of peace, security and development (European External Action Service (26 June 2016).

Concerning the behaviour of the EU member states when confronted with the financial and economic crisis unfolded between 2007 and 2012 (Alessi et al., 2018) from a resilience perspective, and hence the approach to socio-economic resilience as an after-action evaluation informing on the main takeaways, the Joint Research Centre (JRC) proposes a resilience framework (Manca, Benczur, Giovannini, 2017). The definition the latter builds upon regards resilience as the ability of society or of a system to continue delivering well-being sustainably despite de major shocks or hindrances it may encounter.

According to the JRC framework, societal resilience requires three types of capacity, depending on the level of stress induced (i.e., “disturbance intensity”) and the time the latter manifests (i.e., “time of exposure”), namely: absorptive capacity, adaptive capacity, and transformative capacity. Absorptive capacity requires the employment of capabilities to resist the stress of an event that manifests at a rather low level of intensity and for a short period of time. Adaptive capacity consists in the ability to be flexible and generate incremental changes that do not contribute in any way to increasing the level of discomfort already manifest, whereas transformative capacity is required when the extent of damage inflicted or the time length the disturbance lasts makes it no more possible to manage the system in an as is form and hence generates the need to engineer large scale changes. The strategies for sustaining the three types of capacities are prevention (e.g., mitigation or transfer measures to reduce identified risks), preparation/ protection (e.g., management reserves for unforeseen situations, establishment of coalitions/agreements), promotion (e.g., investments in assets, policies aimed at facilitating flexibility in various socio-economic areas) and transformation (e.g., policies focused on an outcome and their inherent gradual implementation). Depending on the envisaged capacity, the strategies can be coupled. Thus, to maintain the existing stability, prevention, preparation/protection, and promotion strategies are needed. To achieve stability after a stressful event, as well as to ensure flexibility to adapt, preparation/ protection and promotion strategies must be put in place. Last but not least, to enhance transformative capacity, protection, promotion



and transformation initiatives must be employed. Worth mentioning in relation to the three types of capacity is that they are not necessarily sequential, nor opposing or competing one another. They are supposed to work together on multiple levels (e.g., individual, organisation, community, state, region etc.) at various degrees of intensity (i.e., low, medium, high) (De Smedt, Giovannini, Radermacher, 2018).

One important idea expanding the concept of resilience proposed by the JRC framework is that of “bouncing forward”, namely the capacity of an entity to seize the opportunity and develop better in comparison with the pre-crisis situation (European Commission, 2018 a).

According to the same study, (European Commission, 2018 b, p.13) a country’s resilient behaviour can be analysed in terms of a number of indicators that can be broken down from a set of general resilience characteristics describing the respective country’s education, digital development, innovation and R&D, labour market policies and support, gender equality, government expenditures, macro-economic performance, financial performance, market development and regulation, quality in government, quality of life, regulatory environment, people’s trust in state institutions.

Measuring resilience in times of stability and comparing different individuals, organisations, nations against a number of fixed parameters does not yield valid, relevant, reliable, all-encompassing conclusions, and nor does it when crossing a crisis. A case in point are the results of a study analysing the level of resilience to the economic crisis of 2007 of the EU member states, which show that, for example, even if from an economic and financial perspective some countries were better off during and after the crisis, when looking at social aspects like income distribution or expenditures on health and education, the same countries experienced negative results (Ib., pp. 17-18).

Worth noting though is that regardless of acknowledgment of the strategic importance of resilience at the level of the European Union, there are voices arguing that the concept is too vague to actually clarify how it relates to national preparedness and to the employment of a “whole-of-society” approach (Wigell, Mikkola, Juntunen, 2021). Nonetheless, the document titled “Strategic Approach to Resilience in the EU’s External Action” (European Commission, 2017) highlights some key pre-requisites for building/maintaining/consolidating

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such a perspective, namely: inclusive and participatory societies; socio-economic resilience aiming at reducing inequalities, vulnerabilities and their root causes, prevention of violent conflict; reliance on good governance structures; respect for democratic values, human rights and rule of law.

• **NATO APPROACH TO RESILIENCE**

The North Atlantic Treaty Organisation definition of resilience focuses on the capacity of a society to withstand and recover from a major disruptive event such as natural disasters, critical infrastructure failure, and armed attack in no time. NATO acknowledges resilience-building as a national prerogative, but it contributes to its consolidation in various ways (CDS, 2021, pp. 1-2).

During the 2016 Warsaw Summit, NATO Heads of State and Government formulated their common *“Commitment to Enhance Resilience”*. The latter acknowledges the need for a whole of government approach, the necessity to involve the private sector and to cooperate with international organisations in order to secure critical civilian and military capabilities in case of disruptive events. The document lists NATO basic requirements in terms of building national resilience, and they are, according to CDS, (Ib., pp. 7-8): assurance of government continuity, as well as of critical government services in relation with the assurance of the continuation of the decision-making process, communication of decisions and capacity to enforce them in times of disruptive events; energy supplies in terms of putting up back-up plans and establishing power grids; effective management of uncontrolled migration; food and water resources and their safeguarding against sabotage and disruption; capacity to sustain mass casualties by the civilian health systems and the assurance of sufficient medical stocks and supplies; civil communications systems (e.g., telecommunications and cyber communications capacity to function in times of crises); transportation systems and the capacity they provide for swift action during disruptive events.

In the same text, the heads of state participating in the meeting note that resilience in the face of new military and non-military threats requires Allies to *“maintain and protect critical civilian capabilities, alongside and in support of military capabilities, and to work across*

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*the whole of government and with the private sector”*, as well as to cooperate with other international organisations, in particular the European Union and partner countries (NATO, 8-9 July 2016).

The key prerequisites needed for building resilience are identified in a 2017 conference on the issue organised by the Allied Command Transformation as follows: persistence (i.e., continuing the efforts of building, enhancing, consolidating resilience even after the recovery efforts following a dramatic event are over), treating resilience as a capacity, resorting to experiments and models, and applying an integrated approach to education and training (Havránek, 2018). Another conference of the same entity organised in 2019 stresses the importance of relying on collaborative efforts to assure resilience, whereas the main tools employed in consolidating this feature are experimentation, war-gaming and interaction testing (Allied Command Transformation, 2019).

In 2021, during the NATO Summit in Brussels, *“improved resilience”* is one of the key points included in the NATO 2030 document meant to drive the efforts of allied nations towards securing NATO core tasks of collective defence, crisis management, and cooperative security in an increasing competitive and unpredictable world order. As part of the proposal, the Alliance emphasises the role of nations in building resilience and associated competences, governance structures, processes and obligations. Nonetheless, fulfilling the minimum NATO requirements in the field of resilience is the baseline for all allies, as already agreed (NATO, June, 2021).

In terms of its own resilience, the Alliance notes the need to strengthen its internal ability for common consultation, decision-making, swift and decisive action and adaptation as needs may require. The approach proposed for building on allies national resilience is a whole of government approach that involves not only national governments, but also private entities, societies and populations at large (NATO, 14 June 2021): *“Disruptive events that bring about a lot of cascading effects (such as blackouts, disruptions of public transportation etc.) do not discriminate among the state actors: resilience is therefore needed at the state and institutional level, but civilians have a role in stepping up resilience as well”* (Havránek, 2018, p. 21). Nonetheless, the shared values of the Alliance remain at the basis of all resilience building efforts and these values are: democracy,



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the rule of law, individual liberty, and human rights, as highlighted by NATO Secretary General Jens Stoltenberg in a speech delivered before the 2021 NATO Summit in Brussels.

The purpose of NATO in securing resilience is to grant credibility to the defence posture assumed by the Alliance, as well as to the Alliance capacity to fulfil its basic tasks. Therefore, the areas where resilience is sought by the Alliance are civil preparedness; government continuity; critical infrastructure protection; cyber defence; military capabilities investments; CBRN threats preparedness.

### STANDARDS FOR ORGANISATIONAL RESILIENCE AND THEIR RELEVANCE FOR LEADERSHIP DEVELOPMENT

The most relevant international standards for organisational resilience supporting the aim of this article are the British Standard 65000, Guidance for Organisational Resilience (BSI, 2014), and the ISO 22316:2017, Security and resilience — Organisational resilience — Principles and attributes (ISO 22316:2017).

The BSI is an industry-focused document endorsed by the British Government. It is the first standard focusing in precise terms on the ways and means by which resilience can be developed and maintained at organisational level. ISO 22316 was developed later than the British standard and it claims to have a more general approach that can be applied and harmonised with any size and type of organisation (ISO 22316:2017). However, both standards are complementary and share a number of concepts, principles and approaches to resilience at organisational level (Business Continuity Institute/BCI, 6 April 2017).

While the BSI defines resilience as an organisation's ability to "anticipate, prepare for, respond and adapt" to changes and disruptions that assures its capacity to survive and thrive (British Standards Institution, 2018), ISO 22316 equates the concept to the ability of an organisational entity to "absorb and adapt in a changing environment to enable it to deliver its objectives and to survive and prosper" (ISO 22316:2017).

Placing resilience at strategic level is viewed by ISO 22316 as an outcome of good business practices and effective risk management. Furthermore, the standard takes a behavioural approach to resilience. It specifies that even though the concept itself is the sum of established management disciplines, the interactions among people,

the way uncertainty is tackled, the manner in which decisions are made and enacted are the stepping stones for resilience building. Last but not least, the standard lists and then describes the main features characteristic of resilient organisations, as follows:

- shared vision, purpose and values guiding decision-making at all levels;
- understanding the organisation's external and internal environment in order to guide priority-based decision-making;
- leadership effectiveness demonstrated via employment of a diverse set of knowledge, skills, tools to achieve organisational objectives, along with leadership empowerment to adapt to changes when needed;
- organisational culture anchored in shared values and promoting positive behaviour and attitudes;
- use of accessible, adequate, understandable, timely conveyed information and knowledge as critical resources for learning and decision-making within the organisation via established systems and processes;
- prioritisation and allocation of resources in accordance with the organisation's vulnerability status and its needed capacity to respond in times of change;
- the design, development and coordination of management disciplines contributing to achieving organisational objectives from an uncertainty-based perspective;
- a living performance management system focused on ongoing improvement and whose measurement criteria reflect the changing conditions;
- change management, while continuing to deliver on organisational values and vision.

In the case of BSI, leadership plays the key role in building and securing the excellence of an organisation's product or service, the reliability of its processes and the moulding of people's behaviour. Nonetheless, for an encompassing approach to organisational resilience, leadership alone is not enough. It has to be associated with specific action targeting people, processes and products.

Consequently, the knowledge, tools and techniques associated with leadership, product, process and people describe 16 areas of concern for any organisation, as briefly presented in *table no. 1* (British Standards Institution, 2018 a, slide 3; 2018 b, p.10).



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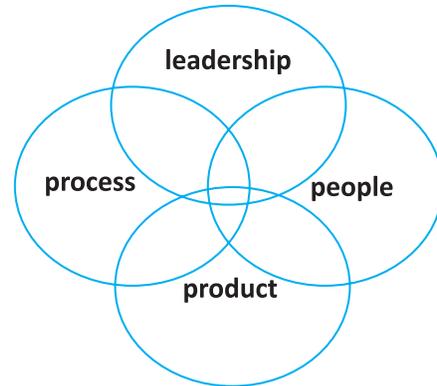


Figure no. 1: Key elements of organisational resilience

Table no. 1: Areas of organisational resilience

LEADERSHIP	PEOPLE	PROCESS	PRODUCT
<b>Leadership</b> (i.e., “culture, visibility and performance of senior business leaders”)	<b>Culture</b> (i.e., shared values and behaviour, consolidation of trust and employee engagement)	<b>Governance and Accountability</b> (i.e., clear governance policies and senior leaders ‘accountability to stakeholders)	<b>Horizon Scanning</b> (i.e., the regular habit of the organisation to analyse and identify future threats, risks, opportunities)
<b>Vision and purpose</b> (i.e., definition and communication of purpose and its alignment to strategic resource allocation)	<b>Community</b> (i.e., the organisation’s relations as part of a community, social responsibility)	<b>Business Continuity</b> (i.e., the existence and qualitative formulation of a framework and related policies and procedures)	<b>Innovation</b> (i.e., innovation is part of the organisation culture)
<b>Reputational risk</b> (i.e., the approach of the organisation to reputational risk management)	<b>Awareness and Training</b> (i.e., viewed by levels)	<b>Supply Chain</b> (i.e., the governance, security and management of the supply chain from a qualitative perspective)	<b>Adaptive Capacity</b> (i.e., ability to immediately and effectively adapt when confronted with change and uncertainty)



LEADERSHIP	PEOPLE	PROCESS	PRODUCT
<b>Financial management</b> (i.e., in terms of qualitative management of an organisation’s financial aspects )	<b>Alignment</b> (i.e., in terms of exogenous factors influence and their related threats, risks, opportunities)	<b>Information and Knowledge</b> (i.e., information capital and knowledge sharing measured qualitatively)	
<b>Resource management</b> (i.e., effective management and deployment of resources as needed)			

Any organisation aiming at its survival and sustainability also focuses on progress, and as part of that it resorts to methods by which to optimise its performance and adapt via innovation.

One of the tools employed along with the guideline is the *The Organisational Resilience Tension Quadrant* (Denyer, 2017, p. 5; British Standards Institution, 2018 a), which acknowledges the basic tensions organisations face when confronted with novelty, uncertainty and shocks. On the one hand, there is the need of every organisation to prove its robustness via defensive techniques aimed at protecting its product/services like preventative control and mindful action. On the other hand, any organisation aiming at its survival and sustainability also focuses on progress, and as part of that it resorts to methods by which to optimise its performance and adapt via innovation. Worth mentioning is that regardless of the predominant approach, consistency and flexibility are core areas present in both circumstances. Thus, consistency of goals, processes, practices is assured by preventative control and performance optimisation, whereas flexibility of ideas, perspectives, initiatives is rendered by mindful action and adaptive innovation. Building strong defensive, agile and adaptive capacity requires the ability to manage the tensions arising from the simultaneous and balanced management of these types of capacities. Consequently, the organisations capable of doing that thrive by proving their capacity to think in a paradoxical way, while those who cannot are “as strong as their weakest link”. Nonetheless, as the 2018 BSI report shows, even though the guideline focuses attention on four key areas,



The application of the BSI standard can be viewed as both a progressive approach and overlapping knowledge, tools and techniques with organisational best practices, depending on the maturity level of an organisation in terms of securing resilience. Thus, for resilience defined as an organisation's capacity of "bouncing back", the most elementary actions concern preventative control, mindful action, and performance optimisation.

namely leadership, people, process, product, factors like the need to juggle with the tensions inherent in the dynamic environment an organisation is part of (i.e., taking a defensive action and maintaining consistency of approach while also showing flexibility and willingness to seize opportunities) leads to taking time and attention away from other priority areas.

Based on the BSI guideline for securing organisational resilience, a study published in 2017 (Denyer, 2017) proposes that in the case of leadership, besides the *Plan-Do-Check-Act* methodology that assures the consistency of approach, a 4Sight methodology (foresight – anticipating, predicting and preparing for what is to come, insight – interpreting and acting on the as is context, oversight – monitoring, reviewing and analysing change and hindsight – learning relevant lessons from the experience gained).

The application of the BSI standard can be viewed as both a progressive approach and overlapping knowledge, tools and techniques with organisational best practices, depending on the maturity level of an organisation in terms of securing resilience. Thus, for resilience defined as an organisation's capacity of "bouncing back", the most elementary actions concern preventative control, mindful action, and performance optimisation. However, for an organisation to move forward and thrive, adaptive innovation and paradoxical thinking are required, as proposed by the taxonomy of resilience-focused actions at organisational level presented in *figure no. 2*.

Besides listing the principles and elements contributing to organisational resilience, both standards list a number of management disciplines that need to be developed and consolidated at the level of an organisation, depending on its profile, maturity and definition of resilience. Most of these disciplines overlap fully or partially, while there are few mentioned on an individual basis by the standards, as it is shown in *table no. 2*.

In our opinion, *table no. 2* is representative and could be very well used when analysing the development frameworks for organisational managers and leaders. Thus, from the common core of disciplines (i.e., column one in the table), as well as from the different disciplines listed on an individual basis by each framework (i.e., columns two and three in the table), we advance the proposition that, based on the three traditional levels by which leadership development is approached

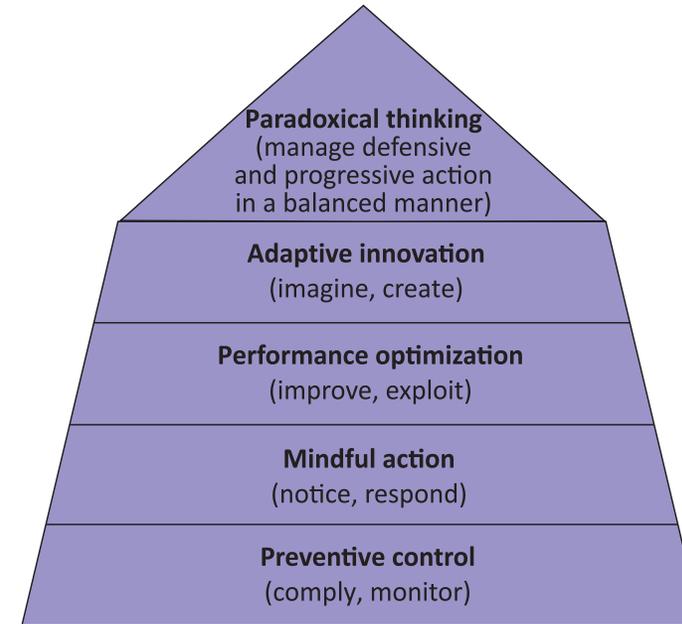


Figure no. 2: A BSI organisational resilience guideline-based taxonomy of action for building organisational resilience

Table no. 2: List of management disciplines contributing to organisational resilience according to the British Standard 65000, Guidance for Organisational Resilience (BSI, 2014), and the ISO 22316:2017, Security and resilience – Organisational resilience – Principles and attributes (ISO 22316:2017).

Common disciplines in BSI, 2014 and ISO 22316:2017	BSI, 2014 particular management disciplines	ISO 22316:2017 particular management disciplines
asset management	stakeholder and collaboration management	communications management
business continuity management	human resource planning	human resources management
crisis management	information, communications and technology continuity	information, communications and technology
cyber security management	reputation management	governance
emergency management	horizon scanning	strategic planning
environmental management	change management	



*In the case of the Romanian military, professional leadership development is subject to a number of external drivers and internal enablers as part of the professional military education system.*

*Romania's membership in NATO and the European Union establishes from the very beginning a set of expectations generating specific roles and responsibilities at the level of the overall public administration structures in general, and for the military in particular.*

Common disciplines in BSI, 2014 and ISO 22316:2017	BSI, 2014 particular management disciplines	ISO 22316:2017 particular management disciplines
facilities management		
financial control		
fraud control		
health and safety management		
information security management		
physical security management		
quality management		
risk management		
supply chain management		

(i.e., strategic, operational and tactical), the first column could be used for tactical and operational levels, whereas the disciplines in columns two and three could be used for operational and strategic levels. Obviously, depending on every defence establishment's core missions and its subsystems' features, some of the disciplines may be more prominent than others. Nonetheless, what remains valid, regardless of the standard chosen to guide resilience building efforts, it is noteworthy that the selection and prioritisation of a given standards' management disciplines and their deployment via educational and training solutions must depend on the direction provided by the strategic framework of the organisation and the competences needed to accomplish that organisation's mission.

**KEY PREREQUISITES FOR PROFESSIONAL MILITARY LEADERSHIP DEVELOPMENT FROM THE PERSPECTIVE OF NATIONAL RESILIENCE**

In the case of the Romanian military, professional leadership development is subject to a number of external drivers and internal enablers as part of the professional military education (PME) system. In terms of the most important external drivers, Romania's membership in NATO and the European Union establishes from the very beginning

a set of expectations generating specific roles and responsibilities at the level of the overall public administration structures in general, and for the military in particular.

In relation to the concept of national resilience, both NATO and EU approaches emphasise the importance of values. For example, the EU acknowledges the importance played by values like democracy, people's trust in public administration entities, sustainable development for the state resilience, while whole government accountability, education, culture and youth represent major pillars contributing to societal resilience. As for NATO, the organisation promotes values like human rights, equality, rule of law, democracy expressed through free, open elections, recognising those as the backbone of any nation or system. The key to making the mentioned values work towards securing a resilient approach and mindset is their sharing, acceptance and practice in a coherent and all-encompassing manner, since *"The resilience of our core values and principles depends on how strongly we believe in them, and how much we are willing to sacrifice to maintain them"*. (Havránek, 2018, p. 17). Consequently, considering the topic of the current article, we believe that the promotion of these values as an integrated component of the professional development of military leadership in the Romanian armed forces is one of the key pillars of any approach in this area. Furthermore, we deem that the promotion of these values as part of a cross-cutting approach at the level of the disciplines covered at tactical, operational and strategic level is the best way of meeting the pre-requisite.

Another common thread at the level of NATO and the EU concerns the system approach, which generates the need for employing an integrative perspective on the roles, responsibilities and the actions of the actors with a role in securing national resilience. Furthermore, the same system approach mandates the values to be upheld in resource allocation and use, namely efficiency, sustainability, fairness, responsibility. In this respect, the key prerequisites contributing to developing and sustaining such a perspective have been delineated in the Allied Command Transformation conference of 2017 and they concern the need for persistence, the employment of experiments and models, the use of and the integrated approach to education and training and, the most important in our opinion, a capacity-based approach to resilience. From this perspective, the aforementioned values represent the key element assuring organisational resilience. Consequently,



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they add up to the values defining the necessary premises for assuring national resilience and as such they must be emphasised as part of the professional development of military leaders.

The values and the approaches identified as the salient features of NATO and the EU outlook on national resilience can become reality under the condition of national systems' focus on assuring their own alignment, adaptability, compatibility and interoperability at strategic, operational and tactical level. The latter represents another important pre-requisite that generates added value for the design/re-design/review of the educational and training system targeting the development of professional military leaders. One important note in this respect is the fact that the acknowledgment of the need to develop leadership as a capacity securing national and organisational resilience must be highlighted in all strategic documents that drive the direction of the military system and enable its mission accomplishment.



Figure no. 3: External drivers and national enablers of the Romanian professional military education system

In relation to the internal enablers of the professional military educational system, they are determined by the mission and structure of the armed forces as driven by the Romanian military system strategic documents: the 2020-2024 Romanian National Defence Strategy (2020), the Romanian Military Strategy of 2021, and the Defence White Paper (2020). Furthermore, as a result of the military representing an important part of society, several more frameworks drive its PME system, namely the legal provisions of the Ministry of Education established through Law no. 1/2011 and its subsequent changes and additions,



the quality requirements established for educational systems by the Romanian Agency for Quality Assurance, the professional standards established by the National Qualifications Authority. Last but not least, the MoD specific framework and its features play an important role in shaping the PME. Worth mentioning is that all initiatives and actions concerning the latter target the achievement of a balance between the need for alignment, harmonisation with the national educational requirements and standards, on the one hand, and meeting the demands in the defence field, on the other hand.

• **LEADERSHIP DEVELOPMENT AS PART OF PROFESSIONAL MILITARY EDUCATION: KEY ASPECTS**

Leadership development is part of the professional military education system. The latter is developed and sustained by the existence of a number of capacities, as follows: a strategic framework; baseline funding in budget estimates (i.e., resources); an integrated human resource management system; a professional development system; a competence model in line with a formally acknowledged definition and understanding of military professionalism/educational standards; integrated education and training (E&T) policy, processes and systems.

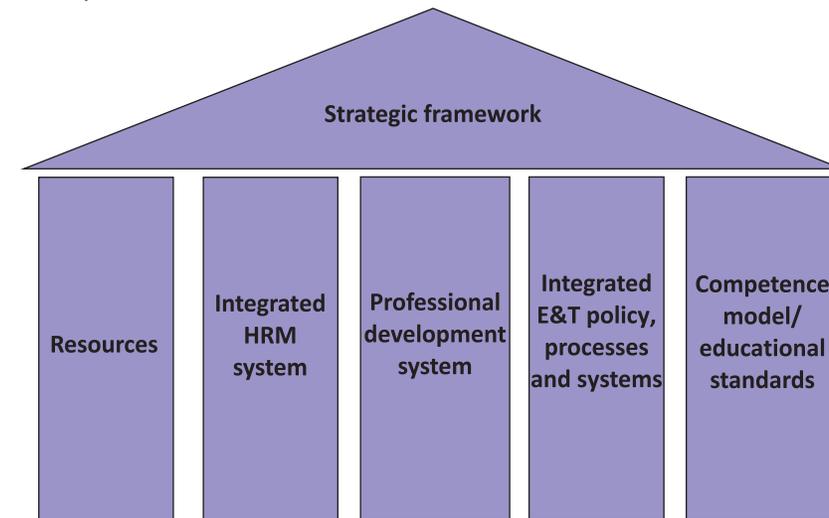


Figure no. 4: PME system requested capacities

Concerning the strategic framework and its relation with the development of military professional leadership as part of a national approach to resilience, we can notice that essential documents like



the Romanian National Defence Strategy (2020), the Romanian Military Strategy (2021), and the Defence White Paper (2021) establish the minimum necessary framework in this respect. Nonetheless, what we believe as being further necessary is an open discussion with all relevant stakeholders about the concept of professional military leadership from the perspective of national and organisational resilience and as part of the professional military education system. Based on that, a formally acknowledged position in the form of a concept-based approach that takes into account the integration and further breakdown of the strategic framework directions in terms of the defence establishment’s major role in securing Romania’s security posture into clear-cut needs and requirements driving the tailoring, development, refining of existing/new educational and training solutions for leadership at all levels is necessary.

*An integrated human resource management system is also necessary as an important pillar sustaining the strategic approach to professional military leadership development.*

An integrated human resource management (HRM) system is also necessary as an important pillar sustaining the strategic approach to professional military leadership development. The key to consolidating such a system is the integration of the top four functions of HRM characteristic to traditional military, namely recruitment/conscription, selection, education and training, career management with strategic policies in the HRM field reflecting the evolutions on the labour market and the impact of environmental factors on the military system, HR planning, compensation and benefits, performance management and release of personnel.

We believe that an integrated human resource management system is able to provide for the professional development system the necessary end goal based on which basic accession requirements into the system are better delineated. Moreover, an integrated system drives an intrinsic match between the educational and training offer, on the one hand, and the tactical, operational and strategic requirements, on the other hand. Last but not least, the same system – anchored in a formalised approach to professional military leadership development – assures the successive, orderly, consistent multi-level development of competences.

Furthermore, integrated education and training policies, processes and systems establish specific requirements. They assure that the professional military education system and, inherently, professional military leadership development is built as a continuum. Additionally, the policies, processes and systems in the educational and training area of the HRM overall system are also supported by competence

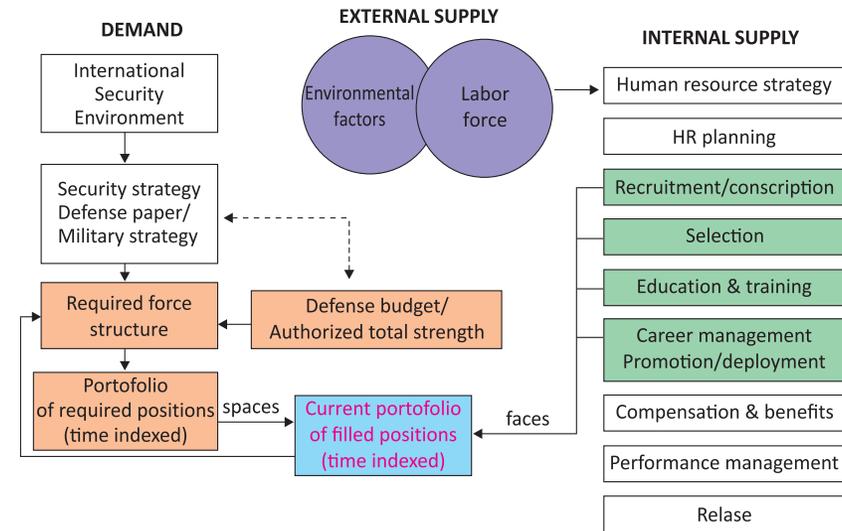


Figure no. 5: Functions of Human Resource Management from the perspective of demand and supply [Adapted from Bucur-Marcu, Fluri, Tagarev (eds.) (2009) Defence Management: An Introduction. Security and Defence Management Series, no. 1. DCAF]

models/educational standards reflecting both the needs of the system, and also the new requirements acknowledged at strategic level, national resilience being a case in point. Concerning the latter aspect, we believe that a depiction of the continuum of education and training similar to the approach proposed by the BSI organisational resilience guideline-based taxonomy of action for building organisational resilience depicted by figure no. 2 would be extremely useful in guiding decisions. In addition, a reflection and discussion of the list of management disciplines contributing to organisational resilience proposed by the two internationally used standards in the field of organisational resilience (i.e., table no. 2) would be a good framework towards identifying the areas of concern for professional military leadership development from a resilience perspective.

A qualitative approach to the PME and professional military leadership development also incurs three more major milestones. The first one concerns the employment of a student-based model of learning in the sense of clearly establishing students’ performance criteria by level of complexity and henceforth designing the curriculum and assessment methodologies. That should be complemented by clarifying the role of scientific research in terms of generating value-added products based on the formulation of clear-cut needs and requirements. The second milestone is related to academic instruction



*The policies, processes and systems in the educational and training area of the HRM overall system are also supported by competence models/educational standards reflecting both the needs of the system, and also the new requirements acknowledged at strategic level, national resilience being a case in point.*



and management, which refers not only to the quality and mix of the academic staff (e.g., instructors, civilian academics and subject matter experts), but also to the role played by agile support structures and processes. Last but not least, accreditation of the PME system components not only at national level, but also in terms of Romania's membership of the EU and NATO would consolidate the qualitative approach to education and training in the military.

## CONCLUSIONS

The contribution of the Romanian defence establishment to securing and guaranteeing national resilience through its approach to leadership development is and could continue to be multi-fold. Firstly, taking a resilience-based approach to defining the competences of the future military leaders can better ensure armed forces' competitive advantage by linking capability requirements with learning outcomes. Secondly, the development of a professional military force means developing learning individuals and providing people in decision-making positions and not only with the necessary skills and knowledge to discharge their service responsibilities effectively. Last but not least, further reflection on professional military leadership development from the perspective of national and organisational resilience can enhance the culture of professional development and personal responsibility in the armed forces.

The success criteria by which interventions in the field of professional military leadership development can be assessed are their relevance to the strategic framework, their timeliness and feasibility.

According to Biggs et al. (2012, 2015) there are seven principles that can guide the building and consolidation of resilience and they are as follows:

- (P1) maintaining diversity and redundancy, but not at too high levels though in order to encourage options that can be managed for adaptation and transformation;
- (P2) managing connectivity by managing the sources of information, their reliability and by observing the tension between too much connectivity and modularity;
- (P3) managing slow variables and feedback;
- (P4) encouraging the understanding of the system as a complex adaptive one;
- (P5) encouraging learning and experimentation;
- (P6) enlarging participation;
- (P7) promoting polycentric governance systems.



The use of the aforementioned principles in the Romanian professional military education system would encourage its capacity to absorb new concepts, like national and organisational resilience, and hence continue to remain relevant and provide added value even in times of change and disruption.

To conclude, the basic requirements leading to approaching professional military leadership development from the perspective of national resilience are:

- A strategic approach to leadership development generated as part of a comprehensive consultation and collaboration of stakeholders;
- The allocation of resources to support the building, consolidation and/or enhancement or maintenance of a resilient posture from the perspective of the relationship between needs, requirements and educational and training solutions;
- The development of adequate instruments to support a resilience framework in the field of education and training and the provision of the necessary checks and balances by which the framework is maintained at optimal standards.

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*The development of a professional military force means developing learning individuals and providing people in decision-making positions and not only with the necessary skills and knowledge to discharge their service responsibilities effectively.*



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## LEGAL ASPECTS OF THE EXERCISE OF PUBLIC SERVICE WITHIN THE NATIONAL DEFENCE SYSTEM

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*The development of the attributions of the public authorities that play a significant role in the functioning of the national defence system is achieved through human resources. The legal regulation of human resources used by the national defence system offers a wide diversity that includes both militarized categories of personnel and those with civil status. This approach distinguishes the category of civil servants, with or without special status, who work within the central and territorial authorities of the national defence system. Starting from the provisions of the fundamental law, the Constitution of Romania, the analysed regulations take into account provisions of The Administrative Code, The Statute of Military Personnel, The Law on the Preparation of the Population for Defence, The Law on the Remuneration of Staff Paid from Public Funds, which, together, give particularities to the integrated implementation, through human resources, of the functions of the national defence system.*

*Keywords: defence; juridical domain; military domain; public service; human resources;*



## INTRODUCTION

The ever-stronger expression of the role of the state in ensuring the good development of social life has materialised in the last century by the elaboration and multiplication of legal instruments appropriate to the achievement of the public will. Although it has a long history in revealing and consolidating the state edifice, the law has recently undergone an extensive process of transformation that has integrated the most diverse perspectives and areas and has generated new directions of action, including in the field of state defence. The assertion, in the context of globalisation, of the imperative to ensure the collective dimension of defence, together with the achievement of national defence, brings to the fore the need for juridical instruments and procedures adequate to the evolution of the security environment, both by the adoption form and by the normative content.

According to the Constitution of Romania, for the organisation and the functioning of the national defence system, both the legislative authority and the administrative authorities have adopted a series of regulations that produce juridical effects on the human resources of defence (military personnel, soldiers or military hired on a contract basis, administrative public servants, and civilian personnel).

As underlined by the *Romanian Military Strategy* of 2021, the objectives that the Romanian state has set in the field of defence are achievable “*only by attracting and maintaining a sufficient and properly trained human resource*” (G.D. no. 832/2021, annexe, p. 30), which means that the current challenges in the field of defence that the legislator must address are the legislative adaptation and harmonization so that the human resources are constantly prepared for an adequate response to neutralise the risks and threats to state security.

With a pronounced administrative component for exercising state public offices, the public authorities with responsibilities in the field of national defence use specialised human resources to which specific regulations apply both for the public administration and for the military system, as appropriate. Given that distinct categories of rules

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Consisting of “the set of measures and activities adopted and carried out by the Romanian state in order to guarantee the national sovereignty, the independence and the unity of the state, the territorial integrity of the country and the constitutional democracy” (Law no. 45/1994, art. 1), the national defence is articulated to the institutional structures of the state through the national defence system that concretises the democratic control of the armed forces and ensures the transfer of will between the people and the militarised structures.

generate different juridical effects, sometimes diametrically opposed ones, it is important to identify the most appropriate ways to regulate the juridical situations under which personnel working within the structures of the national defence system fall.

### THE LEGAL APPROACH OF HUMAN RESOURCES IN THE ORGANISING AND FUNCTIONING OF THE NATIONAL DEFENCE SYSTEM

The legislative determination of the framework for the achievement of state functions is based on the fundamental law, the *Constitution of Romania*, which, although it does not provide a definition of national defence, establishes important legal benchmarks relevant to the field of defence, which the other sources of public law regulate and ensure their implementation. Thus, the democratic control of the armed forces, the right and the obligation of the citizens to defend the country, the quality of public servants of the military are established constitutionally.

Consisting of “the set of measures and activities adopted and carried out by the Romanian state in order to guarantee the national sovereignty, the independence and the unity of the state, the territorial integrity of the country and the constitutional democracy” (Law no. 45/1994, art. 1), the national defence is articulated to the institutional structures of the state through the national defence system that concretises the democratic control of the armed forces and ensures the transfer of will between the people and the militarised structures. Structured around four main elements: the leadership of the national defence system, the forces destined for defence, the defence resources and the territorial infrastructure, the architecture of the national defence system is interdependent on the form of organisation of the constitutional system of the Romanian state.

Understood, in a legal sense, as a public service of the state, the national defence particularises its connection to the system of state authorities by the fact that the exercise of the right of political, administrative and military command upon it does not have an exclusive nature or a unique subordination to absolute state authority. In the paradigm of contemporary democracies, the leadership of the national defence system is entrusted to the legislative authority and to the most important executive authorities of the state, based on distinct competencies that have their origin in the principle of separation of

powers in the state.

As stated in the local legislation, the leadership of the national defence system is an “exclusive and inalienable attribute of the constitutional authorities of the state and is achieved by: the Parliament, the President of Romania, the Supreme Council of National Defence, the Government of Romania, the Ministry of Defence and the authorities of public administration with attributes in the field of national defence” (Law no. 45/1994, art. 7). The distribution and the realization of the attributes of the above-mentioned authorities aim at the political-administrative character of the decisions in the field of national defence, decisions that must thus justify their legitimacy and legality, both during peacetime and during a crisis or war situations. At the same time, from the interpretation of the legal provisions, one can understand that the constitutional authorities do not carry out the actual military operations, even if the regulation of the title or the role of these authorities would suggest this.

Ensuring the military functions of the national defence is the attribution of the structures within the forces destined for defence, made up of the armed forces as well as of the protection forces. A significant, indisputable role in these structures is played by the army, which, according to the law, is “the basic component of the armed forces, which ensures, in peacetime and in war, the integrity in a unitary conception of the activities of all the forces participating in the defence actions of the country” (Law no. 45/1994, art. 26). It is relevant for the modality of regulating the exercise of public office within the national defence system to highlight the structuring of the army, from the administrative point of view, into central bodies of the Ministry of National Defence, categories of army forces and territorial military bodies, the corresponding exercise of the attributes within the different structures being correlated with the different status of the staff involved.

Consisting of “the entire population capable of effort for national defence” (Law no. 45/1994, art. 14), the human resources are included within the defence resources, along with the financial resources, the material resources and the resources of another nature specified by the law. Unlike the other categories of resources, the human resources that the state uses within defence have the property of being sized and adapted differently, depending on a wide range of situations, which can range from the state of peace to the state of war.



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*Through the constitutional duty to defend the country, the Romanian citizens “have the right and the obligation to defend Romania”. The exposition of the conditions for exercising this fundamental provision with a double character, of law and of obligation, is achieved by Law no. 446/2006 on the preparation of the population for defence, an organic law by means of which measures and actions are established in order to ensure “the human resources necessary for the armed forces and for the other forces provided by the public institutions of defence, of public order and of national security”.*

Starting from the premise that *“the human resources are the first strategic resources of an organisation (society, institution, association), in the information society the human capital replacing the financial capital as a strategic resource”* (Neag, Badea, Neagoie, 2010, p. 36), the fundamental nature of the human resources is legally affirmed both by the *Constitution of Romania* and by the regulations adopted by the legislative or the executive authority. Through the constitutional duty to defend the country, the Romanian citizens *“have the right and the obligation to defend Romania”* (The Constitution of Romania, art. 55 para. 1). The exposition of the conditions for exercising this fundamental provision with a double character, of law and of obligation, is achieved by *Law no. 446/2006* on the preparation of the population for defence, an organic law by means of which measures and actions are established in order to ensure *“the human resources necessary for the armed forces and for the other forces provided by the public institutions of defence, of public order and of national security”* (Law no. 446/2006, Article 2 (1)).

From the perspective of the last-mentioned normative act, the fulfilment of the military service, achieved through the two main forms, active and in reserve, represents the most important form of ensuring the preparation for the defence of the Romanian citizens. Performing the military service can be done in compliance with the conditions regarding Romanian citizenship and at minimum 18 years, but it must be emphasised that the lower age limit that means the moment of acquiring the full capacity of exercise of the rights of a natural person is applied only to the right of defending Romania, only to the exercise of a subjective prerogative legally recognised, because, as stipulated by the Constitution of Romania, *“the citizens can be conscripted from the age of 20 and up to the age of 35, except for volunteers, under the conditions of organic law”* (The Constitution of Romania, Art. 55 paragraph 3).

Moreover, the general character of the implementation of the regulation of the compulsory military service was attenuated by the provisions of *Law no. 395/2005 on the suspension of the compulsory military service in peacetime and the transition to military service on a voluntary basis*, which, in the direction of implementing the concept of transforming the army regarding the professionalisation of the human resources of defence and the reduction of the personnel during peacetime, suspends the fulfilment of the compulsory military service,

*“as a long-term and short-term conscript”* (Law no. 395/2005, art. 2 para. 1).

However, if the evolution of internal and external factors requires the imposition of exceptional or extraordinary measures in the context of mobilization, war or siege, *“the fulfilment of the military service as conscript becomes mandatory for men aged between 20 and 35”*, provided, of course, that the criteria required by law for the fulfilment of military service are met (Law no. 446/2006 art. 3 paragraph 5).

Another component of the human resources that the national defence system uses is represented by the personnel that fulfils the military service in reserve, who benefit from their specific status, ensured by the provisions of *Law no. 270/2015 on the status of volunteer reservists*, according to which voluntary reservists represent *“the personnel selected on a voluntary basis, who consent, on the basis of individual fixed-term contracts, to hold positions in the organization statements of the structures within the Ministry of National Defence”* (Law No 270/2015, Article 1).

The approach of the human resources of the defence using the criterion of their professionalisation naturally places the military personnel in the first position. According to the law, it consists of active military personnel and soldiers and military hired on a contract basis. The soldiers and the military hired on a contract basis belong to a separate corps of military personnel, a corps at the basis of the military hierarchy, whose members are recruited in a system based on volunteering, with employment based on a contract *“in relation to the level of training, state of health and aptitudes for the fulfilment of military duties, in positions provided in the organization statements of military units with ranks corresponding to this body of military personnel”* (Law no. 384/2006 art. 1 paragraph 2).

Placed at the highest level of professionalism, the military personnel are defined, in the synthetic expression of Law no. 80/1995 as *“Romanian citizens who have been granted the rank of officer, warrant officer or non-commissioned officer, in relation to their military and specialised training, under the conditions provided by law”* (Law no. 80/1995 art. 1). Exercising essential attributions in the field of defence, in the service of the nation, the military personnel benefit from special status, in the legal content of which duties and rights that confer prerogatives to exercise, on behalf of the Romanian state, of attributions specific to public office, are included. Even if the unanimity



ROMANIAN  
MILITARY  
THINKING

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Public authorities and institutions do the duties that the state distributes on the criteria of material competence and territorial competence by means of public offices, the fulfilment of which is ensured through specialised human resources. In this sense, the public office is considered as “the mission, the social necessity found in the structure of some attributions that should be performed within an institutional framework in order to satisfy the public interest under the best possible conditions”.

regarding the consideration of military personnel as public servants with special status is not met – although the current legislation allows for such an interpretation – the fact that by means of the military personnel, professional human resources, public offices, essential in the field of defence, are exercised is unequivocal.

The interconnection of the national defence system to the system of public authorities is also underlined by the assignment of the exercise of public offices within the administrative structures with the application of the general juridical regime of the public service, established by the *Statute of Public Servants*. An edifying example is provided by the situation of the personnel employed within the Ministry of National Defence, personnel composed of both military personnel and of civilian personnel, according to the provisions of *Law no. 346/2006 on the organization and functioning of the Ministry of National Defence*. The civilian personnel within the system of defence, public order and national security do their duties according to the specific legislation applicable to the category to which they are ascribed, an aspect that is also underlined by the law that unitarily regulates the remuneration of the personnel paid from public funds, which shows that the civilian personnel under discussion consists of public servants and personnel hired on a contract basis. (Law no. 153/2017 on the remuneration of personnel paid from public funds, Annex VI, art. 2, paragraph 5).

### APPLICABILITY OF THE STATUS OF PUBLIC SERVANTS IN THE ACTIVITY OF MILITARY AUTHORITIES

From the general and simplified perspective on the organization and functioning of the system of state authorities, the human resources of the public administration consist of human collectivities that organise and carry out actions for other people (Manda, 2014, p. 117). Public authorities and institutions do the duties that the state distributes on the criteria of material competence and territorial competence by means of public offices, the fulfilment of which is ensured through specialised human resources. In this sense, the public office is considered as “the mission, the social necessity found in the structure of some attributions that should be performed within an institutional framework in order to satisfy the public interest under the best possible conditions” (Săraru, 2018, p. 365).

The notion of public service is inextricably linked to the notions of administrative authority and administrative activity (Apostol Tofan,

2020, p. 317), and the human resource specialised and invested by the state to perform its functions is represented by public servants, who are a fundamental component of any public system, a component that has the potential to influence both the functioning of the state and the quality of the life of the people. “*The public servants are the mirror of the state, the interface the citizen meets so that the state cannot be indifferent to how its image is reflected in the perception of the citizen*” (Vedinaş, 2018, p. 431).

The public servant is a representative of the state power, a specialised agent with responsibilities in ensuring the functioning of public services, in representing the authority and in exercising, where appropriate, the coercive force of the state. Considered a citizen with additional responsibilities, the public servant is “*the tributary of a continuous obligation not to do anything that could compromise, directly or indirectly, his image or that of the institution for the benefit of which he/she carries out his/her professional activity*” (Clipa, 2011, p. 129). Codified by legislation, the rights and obligations of the public servant provided by the legislation represent “*the legal support of the authority and of the prestige of the public servant, being ensured by the state through juridical, material, civil, administrative and even criminal means*” (Apostol Tofan, 2020, p. 341).

It should be noted that not all the human resources involved in the exercise of the attributions of public authorities have the quality of public servants because the notion of public servant does not overlap in all circumstances over the notion of human resources — there are people who, on the basis of a contract under the regulation of the labour law, can be employed *on a contract basis* within an institution or authority, without being vested with the exercise of state public office prerogatives, but only with attributions in relation to the authority or institution with which they have concluded a labour contract according to the regulations in force.

The legislative transformations of the last decade in the matter of regulating the public office were determined by the process of legislative unification achieved in 2019 by adopting the *Administrative Code*. The previous regulation, *Law no. 188/1999 on the status of public servants* was adopted, with some modifications, by the *Administrative Code*, which thus became the basic normative act in ensuring the juridical regime of the public office in Romania. The new regulation also provided for a number of rules applicable to the personnel hired



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*The public office represents “the set of attributions and responsibilities, established under the law, for the purpose of exercising the prerogatives of public power by the public authorities and institutions”.*

*The public offices established by special statutes are specific public offices to which the special legislation is applied with priority, and, in the subsidiary, when applicable, the provisions of the Administrative Code are applied.*

on a contract basis in the public administration and applied in this manner the concept according to which all those working in the public administration, whether they are public servants or hired on a contract basis, are subject to specific rules and requirements resulting from the public service they perform (Vedinaş, 2020, p. 287).

According to the legal definition, provided in art. 5 of the Administrative Code, the public office represents “*the set of attributions and responsibilities, established under the law, for the purpose of exercising the prerogatives of public power by the public authorities and institutions*” (G.E.O.no. 57/2019, art. 5 letter y). From the perspective of the regulated elements, the *Administrative Code* establishes the meaning of the notion of the public servant as “*the person appointed, under the law, in a public office*” (G.E.O.no. 57/2019, art. 371 para. 1).

Through their activity, the public authorities exercising competencies in the field of defence do a public service of national interest and, in this sense, the persons determined by law are assigned prerogatives of public office with the express nomination in the category of public servants. These persons, who are employed within the Ministry of National Defence and who are appointed to the public office, are subject to the juridical regime of the status of public servants provided by the *Administrative Code*. The predominantly administrative nature of the attributions assigned to this category of staff is similar to that of the attributions of public servants in other structures of the central public administration and, as such, the applicable juridical regime is undifferentiated.

However, the regulation of the status of public servants by the *Administrative Code* has a high degree of generality and the common provisions applicable to the public servants in the central public administration cannot be used for juridical situations specific to military hierarchical relations. That is why the staffing of the military component of the human resources of the defence, representing the majority in relation to the others, is made according to special statutes that are based on the derogation established by art. 370 para. (3) and art. 380 of the *Administrative Code*.

The public offices established by special statutes are specific public offices to which the special legislation is applied with priority, and, in the subsidiary, when applicable, the provisions of the *Administrative Code* are applied (Clipa, 2013, p. 120). Moreover, in order to demonstrate the regulation diversity of the analysed object, we have to mention

that, although some categories of budgetary personnel within the state authorities and institutions — as they are understood by *Law no. 153/2017* — do not benefit from regulations specific to public servants, which does not imply the exclusion from the possibility to benefit from a specific statute, in which the rights and freedoms are regulated separately, as is the case of the *Statute of Military Personnel* regulated by *Law no. 80/1995*.

Thus, according to the regulation of art. 382 let. h) of the *Administrative Code*, the provisions of the *Code* regarding the public servants do not apply to the military personnel and, in addition to this, according to art. 380 para. (1) of the same normative act, the military personnel are not expressly included in the enumeration of the categories of public servants that benefit from special statutes, such as, for example, the public servants within the institutions of the system of public order and national security that are mentioned here.

On the other hand, the importance of regulating by their own statute the duties and the rights of military personnel has a legal substantiation of the highest level, the Constitution of Romania being the one that stipulates that “*the structure of the national defence system, the preparation of the population, of the economy and of the territory for defence, as well as the status of military personnel, are established by organic law*” (The Constitution of Romania, art. 118, paragraph 3). The consecration of the status of military personnel by organic law — the most important normative act in the domestic law system, after the Constitution — has important juridical consequences that confer superior juridical force to its provisions and a prevalence over other incidental norms in the structures of the national system of defence.

### THE JURIDICAL DETERMINATION OF THE QUALITY OF PUBLIC SERVANT OF THE MILITARY PERSONNEL IN THE ROMANIAN LEGISLATION

By reference to the legal regime of the common law of the public service, the status of the military personnel has a pronounced special character, reflected both in the general provisions of *Law no. 80/1995*, as well as in the content of the duties and rights specific to the military personnel recognised under the same law. The amendments brought, during its existence, to the normative act mentioned above contributed to the adaptation of its provisions so as to correspond



ROMANIAN  
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to the transformations that the national defence has undergone, but there are still many inconsistent aspects regarding the correlation of Law no. 80/1995 with other normative acts that regulate the public office in Romania.

From the comparative analysis of the provisions of the *Constitution of Romania*, as well as of other normative acts, among which the *Administrative Code* and the *Statute of Military Personnel* are highlighted, one can observe the non-unitary character of the norms referring to the quality of the military as public servant. For example, the references that the *Constitution of Romania* makes regarding the public office and where the military personnel can be found in three of its articles that refer to:

- establishing the principle of equal rights *“the public, civilian or military functions and dignities, can be occupied, in accordance with the law, by persons who have Romanian citizenship and residence in the country.”* (The Constitution of Romania, art. 16 paragraph 3);
- establishing the constitutional limits of the right of association in political parties: *“judges of the Constitutional Court, ombudsmen, magistrates, active members of the army, police and other categories of public servants established by organic law may not be part of political parties”*; (The Constitution of Romania, art. 40 paragraph 3);
- regulation of the fundamental duty of fidelity to the country, as a fundamental duty: *“citizens who are entrusted with public offices, as well as the military, are responsible for the faithful fulfilment of their obligations and, for this purpose, will take the oath required by law”*. (The Constitution of Romania, art. 54).

The interpretation of art. 16 paragraph 3 previously cited shows that, according to the constituent legislator, the public offices can also be of a military nature, which leads to the idea of the existence of military public servants, a category distinct from that of the public servants, considered civilians. This assertion seems to be refuted by the provisions of art. 54, which provides for distinct categories: the public servants and the military, an aspect that can be corroborated with another provision of the *Constitution of Romania*, which refers to the attributions of the President of Romania, who *“grants the ranks of marshal, general and admiral”* and *“assigns people in public offices,*

*under the conditions provided by law”* (the Constitution of Romania, art. 94, letters b) and c), in the sense that the first official qualities, materialized by military ranks, could not be included in the sphere of public offices.

The attribution, through art. 40, para. (3) of the *Constitution of Romania* of the quality of public servants to those who are active members of the army, by applying *the theory of neutrality of public services* takes into account the broad meaning of the notion of public servant, which includes tenured public office holders from several branches of state power. In the restrictive interpretation of the meaning of the notion used in the public administration, reiterated by the *Administrative Code*, the military is no longer considered a public servant, an aspect that is also inferred from the provisions of *Law no. 80/1995 on the status of military personnel*.

The lack of a unitary perspective has led, on the basis of the need to clarify certain litigious issues subject to the decision of the judicial authorities, the expression by the courts of law of decisions containing points of view intended to edify the meaning of the interpretation of legal rules in force on the quality of the military as a public servant. One should note in this regard the *Decision of the Constitutional Court no. 34 of February 9, 2016*, which specifies that the *Statute of the Public Servants “represents the general framework for the public servants (the military being a special category of public servants)”* (CC Decision no. 34/2016 para. 26).

Moreover, the High Court of Cassation and Justice, by *Decision no. 10 of April 16, 2018*, regarding the military, stated that: *“the fact that the Statute of Military Personnel (Law no. 80/1995) does not name them as such does not represent a sufficient argument for the military not to be considered public servants, because, in the case of other categories of personnel, their statutory regulations do not use the term public servants either.”* (ICCJ Decision no. 10/2018 para. 92). From the argumentation of the decision of the High Court of Cassation and Justice, one can notice that the membership of military personnel to the category of public servants is based on the fact that they perform a public service, meant for the defence of the country, they bring their contribution to the functioning of a public administration sector: the ministries and the authorities of central public administration with a role in the field of defence, public order and national security,



*The membership of military personnel to the category of public servants is based on the fact that they perform a public service, meant for the defence of the country, they bring their contribution to the functioning of a public administration sector: the ministries and the authorities of central public administration with a role in the field of defence, public order and national security, are appointed by unilateral administrative act and enjoy the prerogatives of public power in the exercise of their office, being invested with the exercise of public authority, according to the law.*

*“The public, civilian or military functions and dignities, can be occupied, in accordance with the law, by persons who have Romanian citizenship and residence in the country.”*

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are appointed by unilateral administrative act and enjoy the prerogatives of public power in the exercise of their office, being *invested with the exercise of public authority*, according to the law.

## CONCLUSIONS

The legislative harmonisation represents an essential premise for ensuring the functionality of any administrative structure and the adaptation of the juridical norms to the ever-changing reality is a constant challenge both for the legislator and for public or private law enforcement. Connected to the system of state public authorities through specific mechanisms, the national defence is called upon to respond to multiple challenges, some of them being generated right from within the system amid contradictory or incomplete regulations.

The activity of human resources in the field of defence is also achieved by overlapping heterogeneous sets of public positions, juridically assigned to various categories of military or civilian personnel, to which different legal provisions apply, some of which are specific to the military system, while others are based on regulations applicable in other public services of the state. In order to ensure the successful accomplishment of any type of activity within the military structures, it is imperative that the legislative asperities be diminished, in order not to create contradictions in the application of the law, with a subsequent negative effect on the results of the activities that are conducted.

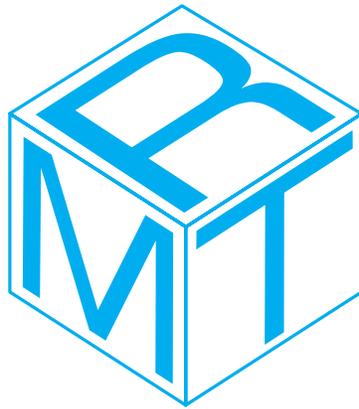
Establishing by means of express legal provisions and recognising at the level of the entire legislation the military as a public servant brings advantages not only in terms of concordance between juridical norms but also in terms of the wider protection of the rights of the military personnel, the better correlation of the juridical regime of the exercise of specific duties, the capitalization on the performances of the human resources of defence at the level of the whole society and the increase of the prestige of the military profession.

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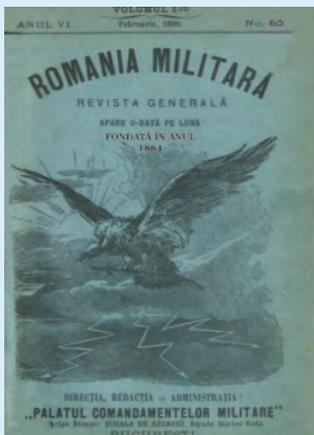
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