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THE REPRESSION OF A DANGEROUS PHENOMENON. ABOUT *SELF-INFLECTED WOUNDS* IN WORLD WAR ONE

Col. (ret) Prof. Ion GIURCĂ, PhD*
Col. Liviu CORCIU, PhD Candidate**

Having the War for Romanian Reunification experience still fresh in the social memory, Constantin Kirişescu, invoking the respect for truth principle stated that: „not all our army's human material reached the peaks recognized by the foreigners and praised by us”. Some of those deployed, lacking moral resilience and being insufficiently instructed, had been however thrown into battle also demoralising their comrades, a possible explanation according to the great historian for cases of fleeing, mass surrender or self-inflicted wounds which, in some regions, brought upon themselves the most severe repression measures. We thereby aim to find answers to these aspects regarding our war during 1916-1920, such as: why did they appear, why was the repression of this phenomenon necessary and what other things were involved?

Keywords: self-inflicted wounds; repression; court martial; punishment; military justice.

Considering the Romanian Army's defeat in the 1916 campaign also on a matter of morale decrease, Constantin Kirişescu was amongst the first historians of the War of Reunification who also approached such delicate topics, in spite the fact that his renowned work has been completed when there was a current of glorification "no matter how", which began in the inter-war period and reached the climax after World War II.

Such a topic is *self-inflicted wounds*, phenomenon seemingly originating due to conditions of the controversial measure regarding troop-bolstering, adopted since Romania joined the WWI, when through mobilization, new units have been formed by diluting¹ the existent ones.

Thus, some of those mobilized, most devoid of physical or moral resilience, having poor military training, had been thrown in battle causing a decrease of the spirit among their comrades, a possible explanation, according to the cited historian, for the cases of fleeing, mass surrender or "self-inflicted wounds" which brought upon the most severe repression measures².

Along the following lines, we intend to provide details regarding the connection between self-inflicted wounds and, according to Constantin Kirişescu's assertion, the severe repression

measures adopted, attempting to find answers to questions from this work's brief.

First of all, we must outline, if still the case, that self-inflicted wounds did not appear only amongst Romanian soldiers, but it rather has a general and universal character, the phenomenon being detected in reports and statistical data ever since the beginning of World War One, the most industrialized and destructive war until then.

Secondly, viewed strictly as a clinical manifestation, self-inflicted wounds have been associated by specialists with extreme psychological conditions, regardless of the country or social environment from where the soldiers suffering such traumas were coming. About those we talk today using the PTSD acronyms (post-traumatic stress disorder) which were unknown to the medical practices of that time.

Due to the manifestation of those extreme psychological conditions, some soldiers, most of them youngsters, prematurely and violently reached a severe form of mental exhaustion, and also their physical limits, being capable of resorting to a wide array of desperate³ gestures, such as self-inflicting wounds, thinking, sometimes wishfully that they would get out alive.

Self-inflicted wounds in the British and French Army

According to some sources⁴, in the years of World War One, about 729 Canadian soldiers from the British army resorted to this extreme act wishing to avoid duty, although it is considered that their

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number is far from the real one, many cases being unrecorded, other declared as legitimate wounds, caused by enemy.

Unlike other crimes, such as *desertion* or *cowardice in front of the enemy*, in Her Majesty's Imperial Army, self-inflicted wounds were not deemed as a crime punishable by death⁵, except when was done in the first line of fire⁶.

Due to this reason, the deed itself, even though in some cases seems complementary, not a main act, does not appear in the official statistics concerning those British soldiers, regardless of nationality, who had been sentenced to death and executed in the years of World War One.

This is an explanation why some of the Canadian soldiers from the example quoted above⁷, although had been put on trial because they inflicted wounds upon themselves by shooting the upper limbs, hadn't been sentenced to death, but received between 7 and 42 days of body punishment, known within military regulations⁸ as *Field punishment no. 1*. Often applied to British soldiers in World War One, the punishment entailed binding the guilty soldier up till two hours a day, having his arms and legs cuffed to a fixed object, such as the wheel of an ammunition wagon or the gun carriage of an artillery cannon.

Back to topic, ever since the beginning of the war, cases have been reported⁹ concerning self-inflicted wounds among the British colonial troops of the Indian Army Corps, precisely between October 1914 and April 1915, when the number of cases of malingering¹⁰ and self-inflicted wounds among these soldiers has been significantly deemed.

Initially analyzing the period between October 22nd and November 3rd 1914, statistical data had shown a 57% higher hospital-admission rate among British soldiers, originating in India compared to their comrades originating in the British islands, concerning the upper limbs that suffered wounds, thus leaving room for suspicion that these wounds had been self-inflicted¹¹.

Lacking clear evidence to this matter, the report does not exclude that this type of manifestation could have been a possible illustration of an "allergic" psychological reaction among Indian soldiers, considering that they had been brought to another continent, to a different culture and had been thrown into a war, so different compared to anything some of them had already faced.

The report also mentions variations of recorded cases, concerning a decrease in the morale of the troops, another trait of this phenomenon, that seem directly proportional to the ongoing events on the battlefield. Therefore, an increase in cases of self-inflicted wounds has been registered as a manifested moral decrease subsequent to the involvement of the Indian Army Corps in the first Battle of Ypres (October 19th- November 22nd 1914), one of the fiercest clashes on the western front in the first part of the Great War. A sudden decrease in the cases registered after November 22nd 1914 followed, a single increase being recorded, again, in May 1915, but only among the troops freshly deployed on the French front, unaccustomed to the life in trench warfare.

Unlike the British, such accusations were severely handled in the French army. The late nineteenth century French legislation regarded self-inflicted wounds a conscription-specific phenomenon¹², which was related to malingering. Therefore, being regarded by soldiers as common practice among civilians, its repression fell under the jurisdiction of common law courts until 1914.

Special military courts—*les conseils du guerre*—established in 1914, at the beginning of the war, were meant, among other objectives, to discourage the soldiers from practicing self-infliction of wounds which could have kept them away from the first line, through clear examples, and more than 35 executions¹³ were conducted based on this assumption due to so called *mutilation*.

General Michel-Joseph Maunoury, former commander of the French 6th Army at the beginning of the war, especially known for "The taxis of the Marne" episode, due to the means by which the troops have been deployed to the front, transmitted his subordinates the following directive on February 8th, 1915:

"Some councils of war have shown an excessive indulgence regarding the accused ones and those proven guilty of committing very dangerous crimes such as robbery, abandon of post or self-inflicting of wounds. Such indulgence, which cannot be excused and which cannot be explained other way than blameful weakness, is one of the gravest dangers for army discipline. It leads to repeating the same mistakes and can become, if tolerated, a germ of defeat"¹⁴.



The self-infliction of wounds phenomenon in the Romanian army

In the Romanian army, the self-infliction of wounds was also regarded by military commanders as a *crime* (meaning a criminal act), an offence equal to desertion, and in order to stop this phenomenon, believed that could affect the military combat power itself, drastic measures had to be taken right away.

It seems that in the 1916 campaign, self-infliction of wounds became a real phenomenon among the Romanian regiments dislocated on the front, that being the reason why these dangerous deeds had to be punished accordingly. In accordance with some Romanian commanders, self-infliction of wounds was a "contagious" phenomenon diminishing the combat spirit while according to those involved, although painful, it was a certain way of escaping, at least temporary, from the horrors of the first line of fire.

The very first cases which occurred among the Romanian soldiers have been spotted at the beginning of the campaign, not on the main front – in the Carpathians or in Transylvania, where the recurring victories of Romanian troops were cherished by the public opinion, but on the Danube front and in Dobruja, where the Romanians suffered recurring defeats in the autumn of 1916.

The evacuation without fight of the Bazargic city on September 4th, the fall of the fortified stronghold of Turtucaia, on September 6th and the abandonment of Silistra, on September 8th, whose defence had become "useless and dangerous"¹⁵, have scared the public opinion and worried the General Staff, ensuing therefore changes in command of the great units involved.

Freshly appointed in command of the 9th Infantry Division, succeeding General Ion Basarabescu, who was relieved due to major command errors, General Nicolae Petala forwarded on September 7th 1916, a report registered as no.231 to the South Army Group commander, General Alexandru Averescu, informing him that: "two-thirds of the evacuated wounded soldiers suffered only hand wounds, especially the left hand or foot wounds. I believe that these people inflicted the wounds upon themselves in order to flee from the battlefield. I respectfully ask you to consider ordering a medical expertise and bringing justice upon these deserters from duty; because if they also go unpunished among the rest of others, who abandon their chief

and flag, evil shall spread to extents we don't even expect and with such troops we will soon lack of any combat power"¹⁶.

General Nicolae Petala took a division affected especially in respect to morale since up till then it hadn't been involved in major confrontations out of which to have suffered considerable losses among personnel or military equipment¹⁷. However, as the report tells, apart from 75% of the wounded having self-inflicted wounds, there were the others, without specifying a number, who one way or another fled the battlefield unpunished, which is deemed as defying the commanding authority, a situation which confirms what historian Constantin Kirişescu was asserting.

In this report, one can find most of the military offences regarding morale, such as desertion, self-infliction of wounds, respectively, fleeing from battlefield, reason which at least in the current article may be regarded as an element of reference.

Firstly, it indicates how far this phenomenon could go and shows also a status quo, and on secondly, it displays a morale pattern of the Romanian troops in Dobruja, in the autumn of 1916.

Not only the 9th Infantry Division commander was fearing that this phenomenon could have become so "contagious" that it would irreversibly affect the units' combat power, but also the most unit commanders from Dobruja, and even, we can assert that the entire military hierarchy, the case not being unique.

According to an Order registered to no. 217, September 11th 1916, General Alexandru Hartel, commander of 5th Infantry Division, rapidly dislocated from Transylvania to Topraisar, was transmitting to his subordinates that most of the wounded from the front had only the upper limbs affected and was ordering that military medics to report all such cases, to figure out whether the wound was self-inflicted or not. If found guilty of such deed, they were about to undertake drastic measures in order to stop that state of things: "Also let the troops under your command know that these people will be brought in front of the war council, declared deserters and mercilessly executed"¹⁸.

The 2nd Infantry Division, commanded by General Alexandru Socec, also freshly brought in Dobruja from 1st Army's reserve, was encountering the same problems, requesting the subordinated



units through September 18th 1916 by Order no. 433, to report cases concerning soldiers with wounded left hands or feet, that might have been the cause of self-harm aiming to "escape" the front¹⁹.

A couple of weeks later, the phenomenon also appeared on the Transylvanian front in the second phase of the campaign, since the enhancement of enemy resistance, intensification of enemy contact and last but not least, decline in the number of Romanian victories, which resulted in retreating to initial starting-positions poised for offensive being about to defend the passes of the *Eastern* and *Southern* Carpathian mountains.

On October 15th 1916, within the Northern Army, General Ion Istrati, 7th Infantry Division commander, issued an Order classified as *personal-confidential*, registered to no. 560, which was stated: "The HQ is noticing that the number of soldiers with hand wounds is increasing dreadfully and believes that most of them mutilate themselves knowingly, intending to avoid enemy contact. I hereby order all those proven to have shot themselves on purpose to be immediately executed by the commanders in charge. The Ambulance medics will also recognize such wounded soldiers and will arrest them, responsible for non-performing the current order being the hierarchical supervisors. This order will be communicated to the troops"²⁰.

Analyzing issued orders and comparing those issued on the Dobruja front to "Order no.560" issued by 7th Infantry Division commander, similarities appeared, but there are also substantial differences, able of indicating that phenomenon evolution, which seemed widespread enough on both Romanian fronts, was directly proportional to the depreciation of soldier's morale and, in the meantime, a secondary effect of military situation worsening on the front.

First, we need to outline the contribution of the Ambulance medical personnel usually located in the near reach of the battlefield, who were interacting with the wounded, and were therefore receiving the order to identify and sort them according to criteria, this time other than strictly medical ones.

Probably, from here on division commanders referred to a necessary and mandatory medical expertise, without which thoroughly considered repression of recorded cases wouldn't have been possible.

According all division commanders with orders involved in the current analysis, medical

personnel played a key role identifying the culprits of such deeds. They had to identify suspicious wound types that could have been self-inflicted, to draw up nominal tables with wounded soldiers suspected of self-inflicting wounds, which were to be sent to the higher echelon, drastic measures to be taken in order to stop this state of things.

But how did such wounds look like? How could the military medics have figured out they are facing a soldier potentially guilty of malingering?

In a report forwarded to the Chief doctor of 3rd Regiment "Olt", of 2nd Infantry Division, the medic of 1st Battalion, 2nd lieutenant Dumitru Sfințescu, described some of these traits: "Locationally speaking their wounds are suspect and they represent characteristics of wounding through shooting from little range, which means perforating wound with large and irregular holes, with soft-tissue rupture and the surrounding area being partially burnt and darkened by smoke on a 2-3 cm radius circle"²¹.

For his part, lieutenant Gheorghe Franculescu, the medic of 3rd Battalion of the same regiment, reported similar characteristics of self-inflicted wounds: "For all these wounded the penetrating holes of the bullet were located in the palm area, irregular and all of them displayed a large area of 2-3 up to 6 cm, intensely black, surrounding the wound, more grayish towards the peripheral area. There, this black area could be erased; towards the center, precisely around the wound, the black color could not be erased, the epidermis being impregnated with gunpowder particles or cauterized"²².

Having analyzed the issued orders, but also from the description of these types of wounds, it stands out that medical expertise was crucial when separating those wounded in battle, from those with self-inflicted wounds. Considering that these, according to the assertions of "Order no. 560", weren't about to be exempted from justice in councils of war, but, at least in 7th Infantry Division units, were about to be executed on the spot by their commanders.

It is obvious that when identifying suspect cases of voluntary self-infliction of wounds, military medics had a crucial role, not only strictly through the medical act, which could decide life or death of those accused of having done such deeds. There are special workpapers when such an episode is being described, a medico-judicial error, we could say, which cost the life of some soldiers sentenced to



death and executed without the authorities having had the certainty that they had been guilty²³.

This is the case of a French military medic who with a simple issued document sent innocent people to their deaths. Thus, after a quick medical examination procedure undergone on the French front on the night of 10th/11th September, 1914, the Chief-medic of French 15th Army Corps has been presented 16 soldiers with wounded hands or forearms. After a quick examination he recognized six soldiers guilty of having self-inflicted wounds, eight soldiers with wounds caused by the enemy and two suspect cases.

On September 18th 1914, in Verdun, 29th Infantry Division council of war sentenced six soldiers to death according exclusively to the medical certificates filled up by that Chief-medic, and the following day two of them were executed, while the remaining four were sent to prison.

After a couple of weeks, out of the arm of an arrested soldier a piece of German shrapnel had been extracted, which caused the execution of him and the other three condemned to be suspended.

Although, the soldier's penalty had been changed to 25 years of service and subsequently cancelled forever by the Cassation Court, the case had been recorded as the first public row based on the topic regarding the errors of the French military justice.

Made by order investigation bodies, and having all the competencies of military police, including arresting and submitting to councils of war those suspected to have inflicted wounds upon themselves, Romanian military medics saw their vocational role to handle and cure those suffering modified.

Some of them were reserved, even without knowing about the example of the French confrere, eloquent being the case of 2nd lieutenant medic Dumitru Sfințescu who wrote in a recording report: "Nevertheless, I am mentioning that medical examination of wounds can only provide clues regarding small range, in this case of shooting and it falls upon the judicial investigation to determine the guilt of those suspected"²⁴.

However, if in the initial phenomenon phases, medics were about to give verdict according to expertise, after having drafted lists with the affected, which they would forward to upper echelon, later, in 7th Infantry Division's case, medics were granted

even the right to arrest those they considered being guilty of self-infliction of wounds.

Why did wounded soldiers have to be arrested, even if they inflicted the wounds upon themselves? A possible answer can be found in a report registered to no. 777, from September 29th 1916, of 2nd Infantry Division commander towards the General Staff, showing that once passing the sorting points organized by battalion ambulances, wounded soldiers were allocated to campaign hospitals and from there, depending on case seriousness, to internal hospitals, without accounting for any of them.

Better said, once through the sorting points of the military medics, soldiers accused of having inflicted wounds upon themselves in order to escape the front, were very difficult to identify and to be brought in front of the military courts: "Restrictions provided in confidential order could not be applied to these men", reported 2nd Infantry Division commander, General Alexandru Socec, "because they were already evacuated probably from Cerna-Voda or Fetești hospital (...). I kindly ask you to intervene so that right after they would be healed, they would be reassigned back on the front even though they would no longer be able to serve actively- being an example for the future noticing that self-infliction of wounds can be recognized and the culprits are sent to justice"²⁵.

The second common trait of the analyzed reports is referral to repression measures themselves for those guilty of such deeds. These indicate different levels of action, ranging from them being sent to justice, how General Nicolae Petala proposed to General Alexandru Hartel's more severe approach, who was requesting the culprits to be sent before the councils of war, declared as deserters and shot mercilessly and even to the extreme measure of summary executions adopted by General Ion Istrati, who requested the subordinated units that the guilty should be immediately executed directly by their commanders.

What the three division commanders were not taking into account was the fact that when the reports were issued and the orders enacted through which the repression measures were to be established, there was no legal regulating framework, the deed not being foreseen by the *Code of military justice* at that time. As consequence, even if such case would have reached the war councils, they could not



incriminate the deed and could not assign criminal liability.

For this reason, in the "material inferiority and soul depression"²⁶ surroundings, the establishment of a legal regulation framework required "improvising" something in order to fill up this legal blank, taking into account the fact that it seemed completely devoid of solutions.

The whole commanding hierarchy was in favor of eradicating this phenomenon, in fact of every phenomenon that could have affected the combat power of first line units, their morale or the security of the state. Even the king Ferdinand, within the "Captainship Commandment Order no. 2263", dated October 11th 1916, requested: "In the current situation I won't admit talking about retreat. Every flaw, every idea towards retreating unmotivated by real enemy pressure, is to be immediately repressed by capital punishment"²⁷.

Judging by the date "Order no. 2263" was issued, we can assert that the situation king Ferdinand was referring to was difficult for Romania, not only in the 2nd Army, to which he was addressing and which back then had lost Brasov and the troops were retreating, following received order towards Predeal and Bran-Campulung pass. 1st Army was barely holding the line on the river Jiu Valley, in the Northern Army sector, the first battle of Oituz was completely underway, whereas on the Dobruja Front, Constanta had been occupied by the enemy. From here probably the steadfastness with which Captainship Commander of Romanian Army ordered repressing of every flaw by immediately applying of capital punishment.

We cannot conclude that by this order king Ferdinand would have vindicated the summary executions, or the discretionary implementation of death sentence, even though while expressing himself he failed mention the judicial phase of those deemed guilty and, subsequently, implementation of punishment, including capital punishment, only after the competent military courts had decided.

But the legislative framework providing commanders with compatible repression tools to fix the flaws the sovereign was referring to, was still not available. And even if available, the procedure of judging within council of war was hardly accessible, since some units were perpetually facing the enemy, or retreating, and the judiciaries, sometimes in great numbers, had

to be taken from the first line teams, which were weakened enough, or guarded in hospitals and sent, sometimes accompanied by an escort before the military courts.

Most likely due to these reasons, in order to provide commanders at all levels with an useful tool in order to reestablish military discipline, on November 1st 1916 "Circular Order no. 10913" was issued, an "improvisation" as we named it above.

The order was addressed to army headquarters and independent divisions and among other things, modified the sense of article no. 222 of the Code of military justice, regulating the offence of hitting a subordinate, which provided the following: "Every military that hits his subordinate, apart from cases of defence of self or another person, or rallying of fugitives, or being required to stop robberies or devastation, shall be punished by imprisonment from 2 months to 2 years".

Therefore, by "Circular Order no. 10913" of General Staff, radical modification has been brought upon provisions of article no. 222 from Code of military justice, the liabilities of the deed have been diminished to indistinction, and the worst, a crime has gained legal justification, which was transformed from criminal offence to punishment, eliminating at the same time, the boundaries of its jurisdiction.

For all these modifications, the explanation was the benefit of the country, and the order was clearly stating that punishment by hitting had been implemented for every misdemeanor meant to weaken discipline and combat eagerness, taking into account that, according to order signatories, in times of war the state of law had been always suspended. The order mentioned above, signed by General Dumitru Iliescu, countersigned by Chief of Military Justice Directorate, General Gheorghe Cereseanu, showed that: "This state entitles us to provide the given texts with the widest interpretation in order to be able to implement a quick and exemplary army repression, and even to create means in such circumstances, absolutely unprovided by the law-maker. We, therefore, ask you, to regulate the punishment by hitting the way you shall consider, without any other limit than the benefit of the country"²⁸.

It's obvious that by a completely administrative act, a law could not be modified, a norm which underwent the entire legislative procedure and

which had been voted by Parliament and published in the Official Gazette. Moreover, to explain why this order had been issued, it was claimed as a legal appearance, the repression done by our foes to whatever rules of law, as well as the requirement of our army's cohesion, among the necessity of some outstanding exertions.

Logically, if the Chief of General Staff arguments, general Dumitru Iliescu's, had been really truthful, which we can't debate, the counter-measure would have eventually needed to be poised against the enemy, not his own soldiers. According to order's logic, due to rules of law repression done by our foes, hitting one's own soldiers was being thus justified, expecting that this measure would have as effect the strengthening of army cohesion.

The effects of these "liberalization" in combating the self-infliction of wounds phenomenon is difficult, if not impossible to quantify. No data had been collected and there is no statistical analysis regarding this topic during the period analyzed by us to indicate whether the measure lead to positive results or not.

It is certain that, once officialized, hitting as disciplinary method seems to have become in time a current practice, described in memorial papers concerning the period referred to. One case is described, not necessarily as a measure against the self-infliction of wounds, by an officer from the French Military Mission: "When unsatisfied, the colonel, the commander and the captain would unleash their full rage on the sergeants, corporals and soldiers, hitting them in the face with the baton or by fist. If such thing were to have happened to us (within the French army), they would have been shred to pieces"²⁹.

Enacting of legal framework regarding self-infliction of wounds

The legal framework which allowed the repression of self-infliction of wounds had been adopted, however, within an assembly of issued judicial norms as a consequence to the urge of legislative back-up concerning war efforts, the modification of the Code of military justice being required. The bill being enacted ever since the beginning of 1916, during the premier and ministry of war office of liberal Ion I.C. Brătianu, and came to fruition by *Law no. 3245, of December 21st 1916*, concerning repressions, modifications and addenda

needed to be performed to the Code of military justice for times of mobilization and war³⁰.

This modification has brought additional Title II, deemed as one of the most important legislative measures adopted in that period, a judicial act based on elements of military psychology³¹. Suffice it to say, the entire special matter regarding military justice had been modified taking into account the requirements of mandatory repression of deeds, based on the principle according to which the way military justice is organized has a crucial role in strengthening and developing military discipline.

Chapter V of Additional Title II established aggravating circumstances if concerned deeds would have been committed during mobilization or war, and the enhancement of implementable punishment limits to some criminal offences, compared to previously established limits, available in times of peace. In the same context provisions regarding the self-infliction of wounds offence had been added.

Therefore, according to art. 55 introduced by Additional Title II, self-inflicting wounds willingly, or inflicting wounds to another, with his consent, respectively, willingly aggravating own or other's wounds, was punishable by death in times of war and by *confinement* in times of mobilization.

In order to correctly understand the phenomenon, we need to mention the fact that *confinement* was a punishment regulated by art.15 and following of the Criminal Code (1864), the second as importance after *hard labor* (for life or for a determined period of time). *Confinement* consisted the condemned to undergo a mandatory work regime, less severe than *hard labor*, the one in cause being cuffed, confined in a "workhouse" and used for various tasks for which in return the paid sum he earned had to be shared with the state.

Certain is that, a legal framework for combating self-infliction of wounds became available only with December 21st 1916, once art. 55 from Additional Title II had been introduced, thus eligible to judge such deeds were *courts martial*, military courts which had replaced councils of war, and details regarding the way of implementing this law appeared later, on January 24th 1917, when Circular Order no. 15574 was issued. This was signed by the Chief of Army General Staff, general Constantin Prezan, contained collocation: "Issued from Superior Order", which showed that it was



also met king Ferdinand's consent, as Captainship Commander of the Army, and was mentioning the way of implementing of death penalty for self-infliction of wounds with one's own will, or infliction of wounds upon another with his will, and the willingly aggravation of one's wounds or another's.

The order came with instructions for judicial panel members of courts martial, and segregated the ones guilty of committing these deeds in three categories, of which those in case had to respect when applying the law. Therefore, when those condemned for having committed such deeds were requesting pardon, commutation or punishment reduction, one had to take into account whether those who through self-infliction of wounds had become unfit for military service, as well as those who through punishment sentence from court martial had met voting unanimity for condemnation, regardless of being fit or unfit for military service, were to be executed.

The only category of condemned a priori benefiting from clemency were those who received as verdict from courts martial with vote majority, thus meeting the requirement that the performance of the court decision had to be suspended by military commanders of echelons where the structures that had heard the cause were operating, according to art. 144 of Code of military justice.

This category were about to be deployed on the front, allowing them that within active service to be able to benefit from pardon, at the proposal of hierarchical superiors, therefore redeeming committed errors in times of great inner pressure.

Conclusions

In those presented within this essay, some traits of the self-infliction of wounds phenomenon result: its universal character, human nature of attitude, lack of national, social origin or race element. Self-infliction of wounds unfolded based on the subjects' psychic traumas, within military structures with gravely affected morale, and regarding consequences for military action, the phenomenon is dangerous due to its contagiousness potential within combat units, especially within those that during the era were considered as being part of the "lower ranks".

Self-infliction of wounds involves painful actions, physically and psychologically

traumatizing, but which don't jeopardize life, selfishly aiming to escape first line, and as secondary effect supposedly weakening of army combat capacity.

Against all appearances, officially, during the Reunification War, within the Romanian army, self-infliction of wounds did not represent a phenomenon, or at least this is what we understand from General Gheorghe Cereseanu's synthesis entitled: *Monography of military justice during our war*³².

This work entails the description of activities unfolding in the field of military justice, of legal modifications occurred since 15th of August 1916, when Romania joined war and until June 1st 1918, as well as statistics regarding court martial activities, having several tables annexed.

The first table, entitled "Numerical statistical table of criminals condemned by Court Martials and Councils of war near the great units of operational armies, during the 1916-1918 campaign, until June 1st 1918"³³ presents the sentences given by every court martial, allocated to incriminated deeds.

From the information contained in this table, according to official data, the proportions of this criminal phenomenon specific to the military institution are being outlined, from the 6628 sentences, given between 15th of august 1916 until June 1st 1918, when according to provisions of the Peace Treaty signed in Bucharest army demobilization took place, most of them, 4324 sentences, had been given for *desertion*, which with a really significant percentage, of 65.24% out of the total sentences, can be deemed as a dreadful phenomenon.

The other incriminated deeds, counting 31, for which sentences had also been given, have split the remaining percentage, recording significantly reduced figures. Among these, there were 59 recorded cases of self-inflicted wounds, which stands for a really insignificant percentage of 0.89% out of the total sentences.

The second table, entitled "Numerical statistical table on ranks and deeds punishable by death by the military criminal courts during the war of 1916-1918 executed until June 1st 1918"³⁴, presents the performed death sentences, allocated to incriminated deeds, respectively, to councils of war, court martials. Thus, from the 10 death sentences for cases of self-infliction of wounds,



that had been performed, one of them is assigned to 1st Army court martial, 4 are assigned to 15th Division court martial, and 5, half of the number of those performed to 7th Infantry Division.

However, judging by the spread of phenomenon, the data above can only serve as a guide, taking into account, firstly, the fact that at the beginning of the analyzed period, a number of 11085 cases remained unfinished³⁵, in briefing, under trial, or suspended. Secondly, according to the Law-decree no. 1547 of April 9th 1920, self-infliction wounds belonged to the deeds for which clemency was granted at the end of the war, this assembly of such gestures aiming, more or less declared, to attain a social reconciliation³⁶.

Finally, comparing self-infliction of wounds to desertion, taking to account the seriousness and the consequences of the two, as it was deemed by some commanders of that time, has no real base to rely on, the percentage of the former being truly insignificant.

On the other hand, it is very likely that not all these deeds had been reported or instrumented according to regulatory and legal provisions, the difference between the real number of these cases, impossible to quantify, and the official figures, are given by the worries, "the personal touch" and justice initiative of some of the commanders, among different levels of the chain of command.

NOTES:

1 Alexandru Averescu, *Notițe zilnice din război*, vol. II, Military Publishing House, Bucharest, 1992, p. 15.

2 Constantin Kirîțescu, *op.cit.*, p. 581.

3 Teresa Iacobelli, *Death or deliverance. Canadian courts martial in the Great War*, UBC Press, Vancouver, 2013, p. 44.

4 Sir Andrew MacPhail, *Official History of the Canadian Forces in the Great War, 1914-1919: The Medical Services*, Ottawa, 1925, p. 279.

5 Julian Putkowski, Julian Sykes, *Shot at dawn, Executions in World War One by authority of the British Army Act*, Pen & Sword Books Ltd., South Yorkshire, England, 2006, p. 48.

6 *Cases of malingering by troops*, October 1914 to March 1915 (catalogue reference WO 154/14), <https://www.nationalarchives.gov.uk/education/resources/loyalty-dissent/self-harm-hand-wounding/>, accessed on 03.01.2021.

7 Sir Andrew MacPhail, *op.cit.*, p. 279.

8 [War Office], *Manual of military law. Rules for Field Punishment*, London, 1914, p. 721

9 *Cases of malingering by troops*, October 1914 to March 1915 (catalogue reference WO 154/14), <https://www.nationalarchives.gov.uk/education/resources/loyalty-dissent/self-harm-hand-wounding/>, accessed on 03.01.2021.

10 *Malingering* (eng.), *to feign sickness in order to avoid duty*, The Wordsworth English Dictionary, Wordsworth Editions Limited, London, 2007, p. 546.

11 *Cases of malingering by troops*, October 1914 to March 1915 (catalogue reference WO 154/14), <https://www.nationalarchives.gov.uk/education/resources/loyalty-dissent/self-harm-hand-wounding/>, accessed on 03.01.2021.

12 Emmanuel Saint-Fuscien, *À vos ordres? La relation d'autorité dans l'armée française de la Grande Guerre*, Edition de l'EHESS, Paris, 2011, p. 151.

13 Vincent Suard, *La justice militaire française et la peine de mort au début de la Première guerre mondiale*, *Revue d'histoire moderne et contemporaine*, tome 41 N°1, Janvier-Mars 1994, p. 141.

14 *Ibidem*, p. 147.

15 Constantin Kirîțescu, *op.cit.*, p. 349.

16 Constantin Kirîțescu, *op.cit.*, p. 349.

17 [Romanian National Military Archives], fond *Armata Dobrogei*, file no. 89, f. 2.

17 Constantin Kirîțescu, *op.cit.*, p. 342.

18 [Romanian National Military Archives], fond *Brigada 5 Artilerie, Ordine operative (15 august-1 noiembrie 1916)*, file no. 3, f. 92.

19 [Romanian National Military Archives], fond *Marele Cartier General*, file no. 524, f. 112.

20 [Romanian National Military Archives], fond *Divizia 7 Infanterie*, file no. 144, f. 111.

21 [Romanian National Military Archives], fond *Marele Cartier General*, file no. 524, f. 111.

22 *Ibidem*, f. 112-113.

23 Emmanuel Saint-Fuscien, *À vos ordres? La relation d'autorité dans l'armée française de la Grande Guerre*, Edition de l'EHESS, Paris, 2011, p. 151.

24 [Romanian National Military Archives], fond *Marele Cartier General*, file no. 524, f. 111.

25 [Romanian National Military Archives], fond *Marele Cartier General*, file no. 524, f. 115.

26 Constantin Kirîțescu, *op.cit.*, p. 390.

27 [The General Staff], Historical Service, *România în Războiul Mondial, 1916-1919*, Imprimeria Națională, Bucharest, 1924, pp. 189-190.

28 [Romanian National Military Archives], fond *Marele Cartier General*, file no. 524, f. 145.

29 Marcel Fontaine, *Jurnal de război. Misiune în România: noiembrie 1916-aprilie 1918*, Humanitas Publishing House, Bucharest, 2016, p. 92.

30 *Monitorul Oficial*, part I, no. 224, from 28 December 1916, pp. 7529-7530.

31 Petrache Zidaru, *Tribunalele militare, un secol și jumătate de jurisprudență (1852-2000)*, Univers Juridic Publishing House, Bucharest, 2006, p. 70.

32 [Romanian National Military Archives], fond *Marele Stat Major, III Section Operations*, file 924, f. 1-12.

33 *Ibidem*, f. 9.

34 *Ibidem*, f. 10.

35 *Ibidem*, f. 12.

36 *Monitorul Oficial*, part I, no. 8, from 15 April 1920, p. 586.



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THE LEADERSHIP ROLE IN THE REGION – REGIONALISM – SECURITY EQUATION IN THE BLACK SEA

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This study presents a few considerations about the leadership, the geopolitical and strategic importance of the Black Sea region, and potential threats or risks against security, stability, prosperity, and cooperation. It tries to demonstrate the availability of some solutions for the improvement of peace and stability in this part of the World. Much has been written about leadership in many books, researches or studies, and every day around the world, people discuss the major world problems. Leadership could be the key point to solving the equation region – regionalism and security, and to identifying new ways of building security and prosperity in the Black Sea region, in Euro-Atlantic and Euro-Asian areas. Together, we can build bridges over the Black Sea for the present and future generations.

Keywords: leadership; geopolitic and strategic importance; threats and risks; security and prosperity; the Black Sea region.

The existing imbalances among different sub-regions of the Black Sea represented for the specialists in regionalism and security immutable controversies or endless outbursts of experiments in the laboratories of politico-military analysts. Moreover, both the concept of regionalism and that of security in this region are linked to a multitude of variables whose interaction could put regional leadership in a position easily to be assimilated by riparian states.

The post-pandemic international order will reach new perspectives highlighted especially by the evolution of the Black Sea region from the geopolitical point of view. Security in this region and the Eastern Mediterranean Sea is shaped primarily by Russia's actions, Turkey's politico-military position and, NATO and EU stance on the restrictive measures that should be imposed on Moscow as a result of the crisis in Ukraine. The geopolitical contradictions that govern this region, as a series of key paradoxes that have shaped the region's profile so far and will continue to define its future are making their presence increasingly clear. This article seeks to illustrate and bring to light these paradoxes such as the minor interaction between the economic factors of the countries in

the region, major differences in religion, ethnicity, and language, which influence regional security.

The new issues that regional security in the Black Sea will have will be primarily influenced by a new approach to NATO's regional leadership with the implementation of the new Strategic Concept¹. This Strategic Concept will take into account all changes in the environment security (probably with certain interpretations and accents specific to the Black Sea) and the need for much more applied cooperation in the field of common security. The identity of the Black Sea is a multi-dimensional one, with deep historical reverberations and shaken by multiple political-military and economic interests of many empires and alliances.

The Heads of State and Government of the NATO Member States, on the occasion of the North Atlantic Council meeting to mark the 70th anniversary of its existence, which took place in London on 3-4 December 2019, empowered the NATO Secretary General to initiate a reflection process for an assessment of ways to strengthen NATO's political dimension². On this occasion, some extremely important elements were highlighted, namely the fact that NATO needs to improve its leadership and increase its role in ensuring a climate of security and trust among nations belonging to the same region. In the same spirit, it is necessary to develop a program to accelerate knowledge and skills in areas such as leadership and planning at the command level³.

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Thus, security can be considered as a result of processes that include the *citizen* (physical security), the *group* or society, and the *region*. In this context, regional security in the Black Sea can be considered as a topical one, almost permanently, given the fact that some states in the region are characterized by instability or an intense promotion of national interests.

Region and regionalism, within security. Conceptualization

In the first part of this article, I will first define the equation *region - regionalism* from the perspective of security but also from the specific distinct elements from the Black Sea, and later I will integrate them and highlight the fundamental role of the leadership in state's instruments of power, such as diplomacy, information, military and economic (DIME).

The two concepts are extremely broad, profound, and unclear at the same time. Researchers in the field find them extremely difficult to define with a rigor that is accepted by the entire academic world. The region is a "large territory, which has certain specific characteristics (climate, relief, economic resources, etc.)"⁴. But this definition is incomplete and can be further developed taking into account the geopolitical factor. The international literature defines the region as a group of countries located in the same geographical area, but without clearly identifying its boundaries. The renowned American professor, Bruce M. Russett analyzed the relationship between the political system and the social environment, trying to identify in how many regions the globe is divided by, taking into account the similarities and differences of political systems, social and cultural homogeneity, and last but not least, economic interdependence⁵.

I think that it's wrong if we analyze the regions only geographically without taking into account the political systems that govern the Black Sea region, cultural and social homogeneity, geographical dimension, attitude towards compliance with international law, and implementation of decisions of international fora such as the UN, OSCE, etc.

But these region and regionalism definitions are connected with dynamic and rapidly metamorphosing elements, such as cooperation within the instruments of state power (DIME) and in relation to those in the Black Sea region,

the integration of states in the region within the democratic framework under the auspices UN, EU and NATO, and, last but not least, the construction and development of the region based on the common goals of all governments. Thus, regionalism within this equation can have values between unknown and vaguely defined boundaries, and leadership, as a final result, must cover multiple areas.

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Thus, security can be considered as a result of processes that include the citizen (human physical security), the group or society and the region. In this context, regional security in the Black Sea can be considered topical, almost permanently, given the fact that some states in the region are characterized by instability or intense promotion of national interests.

But these region and regionalism definitions are connected with dynamic and rapidly metamorphosing elements, such as cooperation within the instruments of state power (DIME) and in relation to the states of the Black Sea region, the integration of states in the region under democracy under the auspices of the UN, EU and NATO, and, last but not least, the construction and development of the region based on the common goals of all governments. Thus, regionalism within this equation can have values between unknown and vaguely defined boundaries, and leadership, as a final result, must cover multiple areas.

The first would be the security context in the region, which by definition should be unitary in the Black Sea region. Unfortunately, security in the Black Sea region has different facets, depending on the regional or global interests of each state or

organization that has regional interests or some to project globally. Regional leadership cannot be characterized by identity and convergence.

The second element is the international relations among the states in the region which should be based on mutual respect and trust. These characteristics influence both, regional leadership and security. The attacks by the Russian Federation in Georgia in 2008 and the illegal annexation of the Crimean Peninsula fully contradict both, mutual respect and trust. Moreover, leadership has reached such low levels that without the full involvement of all governmental or non-governmental actors, it would be difficult to reach an acceptable level that would restart the multi-dimensional dialogue of (international) relations.

The third element I consider to be highlighted by the lack of a leading state to take responsibility for building and maintaining a connected level of security on democratic grounds. This state or organization must show devotion, initiative and ingenuity to bring all the factors involved to the same table. They must highlight regional leadership, but without a global actor that facilitates all this and that is unanimously accepted by all states, it is difficult to initiate.

And now the fourth element intervenes, namely the actor/state/organization to support, through his quality as undisputed, and accepted without exception leader. The region should be indivisible from the security point of view and this support element must facilitate the development of relations, security and the citizen's well-being. At any risk, it will use leadership as a support instrument in the clear delimitation and definition of the Black Sea region in the security context. Of course, the *responsibility for initiating* such an approach is enormous, both for the riparian states and for the one that assumes such a construction, but without a *Leader* that all states have to recognize it, the equation becomes a mathematical system with many unknowns⁶.

The criteria for defining the region are multiple. First of all, I emphasize the importance of policy in defining a region. But politics is based on the historical, geographical, cultural elements, the nations that make up the states, the ideology of which it is part, and last but not least, the struggle for politico-military to the detriment of the regional balance of power. The greater the difference between the political spheres of each state, the

more difficult their integration in the region will be. Also, the cultural and social aspects of the states in a region can be decisive in defining the homogeneity of a region. The more homogeneous the elements listed above, the more the states will have common political, military, economic, financial and development objectives.

I believe that another important element is the border permeability, which is fundamental to the identity of the region. Otherwise, different sub-regions or even micro-regions may appear in a region, with contrasting attitudes, volatile politico-military stability and a lack of respect for common regional security.

After the fall of the Iron Curtain, the new regionalism, defined by the relationship, formal or informal, among *states* (but also *non-state actors*) – the relevant *civil society* – and, *private companies* appear more and more obvious. So, "... the new regionalism is not limited to interstate regional organizations and institutions... but rather is characterized by complexity, fluidity and non-compliance due to the multitude of states and non-state actors that form multiple coalitions"⁷.

Today's greatest international relations specialist, Barry Buzan, pointed out that the definition of security has undergone many forms over time, but he considers the security complex as a set of elements whose major securitization and de-securitization processes are so interconnected so that their security problems cannot be reasonably analyzed or solved outside them⁸. The famous professor of Cornell University, Peter Katzenstein, stated that "the name of the region is no longer "real" in terms of geography, but is more "natural" in terms of culture"⁹.

However, regionalism could be disregarded, or even challenged, given the ambiguities it induces and the different end results in the case of analyzes based on similar terms of comparison such as culture, religion, civil society or foreign affairs political interests. But all this fades in the face of the effects that regionalism and regional security produce: stability, democracy, and political and economic integration.

Leadership and the unknowns of the equation

The dynamics of changing the countries' borders around the Black Sea region represent



the reflection of the regional powers and their interests in a much more sophisticated puzzle such as becoming a superpower, a fact imposed by political and military leaders. This change in borders must first be assessed from a legal point of view, as Moscow has shown that national interests take precedence over respect for international legal norms. Russia is now proving that it is playing the role of the regional leader in the field of Black Sea regional security, trying to warn every time the political and military dimension of NATO and the EU. The interest of the whole region is to block or limit Russia's tendency to become a leader in the region, even if it may resort to energy blackmail or control of the Black Sea. Historical experiences and lessons learned over the last century have shown us that balance of power under common leadership could be a viable solution.

The leadership of the Black Sea region must be based on a strong political and economic network, harmonized (legal, economic, diplomatic and financial) with the other neighboring regions, in a convergent and participatory way. Building regional leadership and cooperation in all areas must remain a priority for key actors. Enormous pressure will be exerted on these leaders from outside or inside the Black Sea region, for the benefit of certain interest groups.

The UN has a crucial role to play in global security, which has assumed the continuity of maintaining an international climate of security, respect for human rights and international law¹⁰. The UN, as a global leader, has the capacity to create a network between international organizations that will accelerate the development of a region on the foundations of international relations and that will find a common denominator in promoting security in the Black Sea region. The reality is in fact a lack of cooperation among all riparian states, which, in addition to regional clusters (such as Nagorno Karabakh, Transnistria, Crimea, North Ossetia, Donbas¹¹) which creates a climate of permanent insecurity, impedes the development and promotion of the region on the principles of respect for national and international law, human rights and a substantial civic activity.

Thus, the integration of the Black Sea region in terms of politics, military, economic, financial, legal, and development and research into a much larger space, such as the Euro-Atlantic, gives regionalism,

security, and leadership multiple opportunities for development. Security cooperation between political leaders in the region must be based on the principles of multilateralism, internationalization and free trade in order to achieve both their own goals and those of the states in the region. This duality, *national - regional*, puts in front of the leader two diametrical reference points, but which must lead the region (all component coalitions) towards national, regional and global consolidation, to the detriment of factors that oppose them, such as nationalism, extremism of any kind, xenophobia and false ethnocultural identities.

Conclusions

The greatest researchers who have analyzed the aspects of the region, regionalism and security in the world develop their own theoretical, distinct perspectives, highlighting the new regionalism and approaches to the world order, closely connected with regional governance, neoclassical liberalism and regionalism, and regional security. All of these have been associated over the years with a variety of disciplines, institutions and schools, bringing new perspectives, highlighting leadership as a possible course of action. These theorists have analyzed all the tools that can be involved in developing and solving solutions of the equation in favor of leadership that allows us to use international relations as a simplifying factor of the complexity of regionalism and security. When we can define the connecting elements between regionalism and security, we will find among the multitude of solutions, in a leading place, elements that will convince us that leadership is the main catalyst for mutual trust and security in the Black Sea. The three elements of the equation are in fact inseparable, they must be treated uniformly, at the regional level¹².

Leadership, in connection with the regional unity to which the Black Sea region can aspire, and in the context of intense security cooperation, are elements that put pressure on relevant global actors, so that the new regionalism is promoted more intensely in the Black Sea region.

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THE MILITARY JUSTICE CODE IN ROMANIA AND THE MODIFICATIONS IT SUFFERED PRIOR TO WORLD WAR ONE

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The beginning of military justice in the Romanian Principalities regard the Organic Regulations' era, where provisions concerning military discipline of the newly formed land-militia of both historical provinces were recorded. Subsequently, military justice continued to develop during the reign of Barbu Dimitrie Stirbei and prince Alexandru Ioan Cuza's time, whose reign also concerns, among other military reforms, the unification of military criminal legislation, by adopting a single regulation in both historical provinces. The Military Justice Code was adopted in 1873, being subsequently modified and completed in the years of 1881, 1894, 1905, 1906, 1916 and 1917, in order to keep up with social, economic and legislative changes, but especially with the ever-changing battlefield reality, in the era of turmoil that hit Europe at the end of 19th and beginning of 20th century.

Keywords: military justice; council of war; royal commissioner; desertion; military discipline.

*The Romanian Military Justice Code*¹ was adopted in 1873 and we need to outline that it was neither an original creation of the national law school, nor a sum of experiences generated by the participation of the young Romanian army to different armed confrontations, but a copy² of the French Military Justice Code of 1857, in an era where discipline in the Romanian military institutions "was not as absolutely strict as it should have been"³.

The adoption of *The Military Justice Code* was not a unique event, but part of a whole legislative package regarding the army, proving the constant endeavors towards prince Carol's military institution, he himself being a good connoisseur of the phenomenon.

In fact, among the adoption of *The Military Justice Code*, which had been deemed a step forward towards Romania's military justice⁴ modernization, prince Carol's entire reign, can be identified with the transformation of the Romanian army into a modern one, in terms of military organization, legislation⁵, doctrine and strategy.

The Military Justice Code entailed 269 articles, grouped in four books, which also comprised titles, chapters and sections, as it follows:

- Book I, *About organization of military courts*, comprised regulation of councils of war, also revising military praetors⁶, in three titles, made of six chapters, totalizing 49 articles;

- Book II, *About the competence of military courts*, treated competence of councils of war in times of peace and when besieged, of councils of revision and military praetors, a total of 28 articles;

- Book III, *About the procedure before military courts*, treated aspects concerning the procedure before councils of war, about revision and of military praetors, comprising five titles, a total of 102 articles.

- Book IV, *About crimes, misdemeanors and punishments*, treated offences and their due punishments, comprising three titles, second of which was organized in eleven chapters, a total of 90 articles.

We need to outline the fact that although Book I referred to the organization of *military courts*, the legislator approached differently, nominating, *councils of war*, *councils of revision* and in some cases⁷, *military praetors* among the institutions of military justice. A possible justification⁸ could be that article wording and their content had been taken almost entirely out of the similar French code, adopted in 1857, which was also dividing its content in 4 books, namely: *organization of military courts*, *competence*, *their procedure* and *sanctions*.

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This similitude was also kept when it came to military courts where justice was being administered, which were identically named: *councils of war*, *councils of revision* and *military praetors*.

The fact that the way of organizing and functioning of the French military justice had been taken unmodified, but also other impartial requirements, caused by the modification of the Constitution of Romania, which since 1881 became kingdom, by the necessity of matching with some provisions of the *Law regarding organization of military power in Romania*⁹, even by translation rectifications concerning some concepts and terms, have caused The Code Of Military Justice to be republished¹⁰.

First amendments added in 1881

We should notice the fact that amendments brought on May 24th, 1881 were part of a coherent legislative program which began ever since 1866, whose beneficiary was the military institution. In fact, until the end of the 19th century many judicial norms directly concerning the army had been adopted.

In order to exemplify, we need to mention that due to amendments brought in 1881 to the Code of Military Justice, the functioning framework of the council of war had been also broadened to the army corps echelon, although this echelon was not part yet at that moment of the army structures, in times of peace. No later than 1882, due to another normative act of great importance, *The Law regarding the organization of military headquarters*¹¹, which created the judicial framework for the development and improvement of military structures, the army corps echelon had been introduced in the organizational framework, and thus, inter alia, Romania's territory was to be divided in four areas of responsibility.

Coming back to the amendments brought to *The Code of Military Justice*, let's say that out of 270 articles, 94 had been essentially modified, which caused some opinions according to which we are in fact witnessing a new¹² Code of military justice.

In fact, this opinion belongs to a remarkable collective of law practitioners¹³, who by referring to the 1873 and 1881 editions of the Code of military justice, believe they are among some different judicial entities. However, they share the same content, being elaborated according to a similar

system, comprising both substantive law provisions, as well as common law offences committed in terms of military service, among national procedural law provisions regarding military courts organization, competences and procedures.

In 1881, the main amendments brought to the Code were especially poised at aspects regarding organization, competence, and procedure¹⁴. Therefore, agreeing with the army organization law, which had been divided in the "permanent army" and the "territorial army", the expression "territorial division" had been replaced by "territorial district", in order to avoid confusion among terms.

Moreover, the framework required for the organization of several permanent councils of war had been created, therefore reducing, on one hand, the number of members in the judgment panel from 7 to 5, in order for them to be constituted more easily, and, on the other hand, they could be established also within the army corps echelon, except for division commandments where they were already functioning.

The council of war had removed lieutenants and second lieutenants, and also non-commissioned officers, both in order for efficiency to be attributed to the principle according to which every judgeable person was to be judged by members at least equal in rank as him, principle stated by provisions of articles 10, 13, 14, 15, and also because of a practical aspect which was hindering panel creation, more specifically the mandatory requirement of article 22, regarding the age of 25 of the active noncommissioned officers.

Other amendments concerned form changes, such as changing the name of "lordly commissioner" into "royal commissioner", in fact an adaptation to the requirements of the new Constitution, but also fundamental changes (art. 58), by broadening the competence *ratione personae*¹⁵ (according to person quality) of the permanent council of war.

Concretely, amendment meant addition, apart from the military judgeable persons, civil clerks who were serving in military structures, called "minor civil servants", for all the crimes and misdemeanors related to service.

To the same end, it had been provided that in times of war, "army suppliers and their servants" to be judged by military courts, in order to grant army interest and to be able to punish those who could have not performed their contractual duties.



Article 58, had also been completed, in harmony with 1868 Law regarding organization of military power provisions, by attributing to permanent councils of war, apart from members of the permanent army, territorial army (light infantry and light cavalry) and militia, of town (civic) guard members which were organized at town level, as well as those belonging to armed bands, which were formed from villages, when the latter were to be put under military authority.

One of the most important amendments of the Code of military justice was the addition of the provision that, in times of war, the right of appeal could be suspended, concerning ways of attacking decisions adopted by *the permanent councils of war*, measure imposed by circumstances of army supreme interest. Such being the conditions, maintaining military discipline could have required promptness when it comes to measure implementation, followed by a thorough repression¹⁶.

The measure shall be subsequently practiced, once Romania joins WW1, due to the disadvantageous politic-military situation the country was going through. Suspension of right to recourse had been made by the High Royal Decree¹⁷ no. 2390 of September 16th/29th 1916, one of the most important and, definitely, one of the most controversial measures, consisting of the fact that once the sentence had been given by the council of war, or since January 1917 by the court martial, it became mandatory to be performed, also in case of death penalty.

Having the amendments republished on May 24th 1881, the Code of military justice had been into force until 1894, time when army organization suffered significant changes, which triggered, once more, its revision.

Completions added in 1884

The following amendments of *The Code of Military Justice* materialized once with Law¹⁸ no. 2795 of December 23rd 1883, regarding *The Special Justice Code for Navy Corps*.

The crucial factor that implemented these amendments was the attainment of Dobruja after the Treaty of San Stefano, enshrined by the Berlin Peace Congress (1878), and its integration within the Romanian state through legal (1880) and constitutional (1884) frameworks.

Therefore, on March 9th 1880, the Law regarding the organization of Dobruja¹⁹, which regulated

matters of territory and rights, administration and county and communal institutions, finances, judicial and military power, a judicial instrument which was meant to provide economic development within the area and to facilitate the shift under Romanian administration.

Subsequently, on January 8th 1884, the Constitution was also revised, demanded by amendments generated once with the new configuration of Romanian territory, as well as other political factors. Art.1, of the newly revised Constitution mentioned the new territorial configuration of Romania with Dobruja being called "The Territory on the Right Side of the Danube".

The attainment of direct exit towards the sea, not only through Danube as till then, the development undergone by the fluvial commercial navy and the beginning of the creation of a new naval commercial fleet, among the enhancement of the naval and fluvial borders to over 1000 km, had naturally led to the development of the Navy²⁰.

Without any certainty, a possible explanation could be that back then the role of military Navy was not so important, not only because of the endowment with ships and equipment, but also because of mission complexity.

All countries which were not very industrialized and their armies comprised mostly infantry²¹ were facing approximately the same situation. But starting on 1878, when its numbers couldn't overcome an infantry battalion²², the Romanian Navy underwent perpetual development.

In 1882, The Navy School was established, new training, war and supply ships were brought into service, and in 1884 the first military harbor was arranged at Galați (Țiglina).

Maybe the best image of the military navy development, in only a matter of two decades, stands out from the letter²³ which General Nicolae Dumitrescu-Maicăan wrote to the King Carol I in 1892:

"When I returned from studying abroad (in 1865), the squadron had a single warship which did not work and a 200-men crew.

In 1888, when I left the Corps, The Flotilla had a School for marine training which also allowed the training of officers. The Flotilla had 80 officers, 60 mechanics and pilots of whom many were trained and instructed within the Corps, a 1500



men crew instructed for different specializations: topmen, steersmen, cannoneers, torpedo-launchers, heaters... etc., the squadron had an arsenal for all the required reparations for ships, in order for the reparations not to be done abroad as before; the squadron had a shelter spot, 18 warships and 17 barges, of which many had been built within the arsenal; the squadron had an organizational law and corresponding regulations which allowed a smooth function of service”.

Therefore, because it had been previously adopted, *The Code of Military Justice* did not contain any provision adapted to military Navy, to which only the same general provisions as to land troops could apply.

On these grounds, at the end of 1883, strictly related to the political-administrative measures mentioned, with the progress which Romanian navy, both civilian and military, had made, but also respecting the same legal conduct guideline, the similar French Code of 1858 had been translated, named "Code de justice militaire pur l'armee de mer" and the "Special Code of Justice for Navy Corps"²⁴ had been enacted.

This code comprised 40 articles, grouped in two titles. First 24 articles, grouped under Title I concerned organization (art. 1-16), competence (art. 12-14) and procedure (art. 15-24), and the other articles, grouped under Title II concerned crimes (offences) and misdemeanors in the navy and their punishments (art. 25-39), while art. 40 concerned authority abuse.

Art. 1 of this code mentioned the courts through which military justice was served, squadron personnel being also stated: councils of war, belonging to the territorial district in which the squadron commander resides, respectively, to the *councils of justice on warship*²⁵.

According to art. 3, the judgment panel had to be made of at least two navy officers, the principle of correspondence between the military rank of the council members, which had to be at least equal to the rank of the impeached one, was still in force, according to art. 10 of the Codex of military justice.

The other judicial institution belonging to navy, the council of justice which could be organized on every warship, was only temporary, the judgment panel comprising only the ship commander (or his second in charge), the president, and two of the

squadron officers, as well as a registrar, who could be any member of the crew, all Romanian or naturalized citizens.

We need to outline the fact that in the chemistry of the council of justice on warships, there is no record regarding any position to fulfill the role of prosecutor and public ministry representative, the act of prosecuting being attributed within procedure to one of the council members, who, usually, had to be part of the warship on which the accused embarked.

As art. 12 mentioned, the institution of councils of justice on warships justified their role due to the fact that a judgement court had to exist in order to maintain discipline on military ships, when they were outside national territory, marching or abroad.

If military ships were stationed inside the country, the judgment of the cause was attributed to the council of war, and regarding the competence of judging individuals, it manifested upon lower ranks, more exactly upon those who had embarked without being a commissioned officer, or having received any order that could have placed them among the officers on the ship.

In respect to the competence regarding incriminated deeds, the provisions of *The Special Code of Justice for Navy Corps* reflects the specific of the branch, a field in which mistakes, deliberated or not, could cause grave consequences, both affecting ships and crew.

Therefore, out of the 18 articles of Title II, *About Crimes, misdemeanors and punishments*, four articles apply capital punishment, and eleven of them, whether apply a sentence longer than one year imprisonment, or refer to another personnel category, such as warship commanders or cart officers, outside the competence of councils of discipline on warships.

The provisions of *The Special Code of Justice for Navy Corps* came into force since 1884 until 1937, when a new *Code of military justice* was adopted, all provisions regarding this special justice for Navy being included within the new regulation.

Amendments and Completions added in 1894

When applying the provisions of the 1873 *Code*, military justice was institutionally exercised



exclusively among *the permanent councils of war*, and territorially, only within the four existing Infantry Divisions, in the garrisons of Bucharest, Craiova, Galați and Iași.

Only in exceptional cases, if "the service had been required", other such judicial institution could have been established by royal decree.

General Jacob Lahovary, as ministry of war in the conservatory government, submitted in Parliament in 1894, the project regarding the amendment of the Code of military justice, according to which, courts administering justice within military institution, had been provided with a German²⁶ inspirational institution, the council of discipline, for which there was no correspondent in the French model.

Approved by Law²⁷ no. 1304 of March 25th 1894, Additional Title II which comprises 23 articles has been added to the code of military justice, 32 articles grouped in six chapters being modified at the same time.

We need to outline that amendment was a practical measure, related to procedural celerity of minor causes concerning regiments, and which sought to relieve permanent councils of war, organized, as previously mentioned, in large echelons, from judging misdemeanors which were less dangerous, but many and sometimes belatedly²⁸ solved.

Apart from this situation, the accused were kept in custody for a period deducted from their military service term, which was jeopardizing combat training and in the meantime, was negatively influencing their comrades' morale and discipline, who all this time were enduring military service toughness.

Therefore, we appreciate that the apparition of councils of discipline was imposed as practical necessity, seeking to provide the regiment commander with a simple and quick organizational instrument, the characteristics of this institution being given by competences granted by the law.

First, the competence to judge only a few less significant misdemeanors, secondly, the competence to judge only those deeds for which the Codex of military justice provided a maximum 6 month imprisonment, and thirdly the competence to judge only deeds committed by militaries lower in rank.

Misdemeanors, under the competence of councils of discipline were regulated by art. 10

of Additional Title, which enumerated provisions from Chapter V of the Codex of military justice, respectively art. 224, regarding *non-obedience when called*, art. 224 bis, regarding *preparation of mobilization*, respectively art. 226, par. 1, regarding *first desertion in country in times of peace*.

In the first situation, *nonobedience when called*, could have been any soldier called by the law, or anyone employed by free will, that didn't show up to his destination (unit), within 10 days after the day established by his order of leaving, case when he could be punished by imprisonment between fifteen days and six months.

The second situation regarded "preparation of mobilization" and concerned the garrison commanders who hadn't fulfilled the duties they had according to the regulation on army mobilization and due instructions. On the other hand, speaking of the current competences of discipline councils, art. 224 bis aimed at any lower rank, on leave, in reserve or militia, who was not showing up in front of competent military authorities in order to endorse the military record, for the yearly update of his status, or for specifying any residence change that occurred more than two months ago, under the punishment from fifteen days to two months.

It's obvious that the main aim of this article is to assure military authorities about the observation of rules and duties imposed by the mobilization regulation in order to keep an updated track and to register every move made by reservists.

The situation has been under military jurisdiction until the April 6th 1913 Law²⁹ no. 353 which modified the *Law for recruitment of army*, establishing the attributions of the recruiting council, councils of recruitment revision and bureaus of recruitment and mobilization, the deed of the reservist of not notifying changes of residence, being transferred from military jurisdiction to the competence of common³⁰ civil law, and also adding to the punishment decreed by the Codex of military justice a fine from 10 to 200 lei.

Anyways, the third situation regulated by art. 226, par. 1, "desertion in country, in times of peace", punished with imprisonment between two and six months, every non commissioned officer, corporal, brigadier or soldier, who was missing unallowed from his unit for more than three days since he had been declared missing.



It's remarkable that, unlike the other two analyzed articles, regarding "nonobedience" and "offences towards mobilization regime", which were regulated by one article each, for "desertion", the lawmaker assigned 13 articles (art. 225- 237), grouped in four³¹ sections, fact which could also be interpreted under the aspect of military environment offence "symptomatology".

In order to understand the social size of the phenomenon, it is very important to settle the boundaries between desertion, the way it is perceived today, and 19th century desertion, which had an inoculated subjective etiology ever since conscription, and which changes the concerned deed, "first desertion in country", from offence into a less significant misdemeanor.

Unfortunately, citizens were still reluctant, and this was fully justified, when it came to conscription, recruitment, or military service, and saw it as painful legacy of the Organic Regulation era, when young people were "mandatorily" recruited as land militia:

"Serving militia³² was the most dreadful tribute for the segment of population that had the duty to pay it. The man entered in the barracks was deemed erased from his kin, lost from his family (...). Otherwise, we can neither explain why young people feared hearing about militia so much, nor the many desertions of then and there is no entitlement for the fact, lastly noticed, of difficulty encountered in order to remove from the spirit of the villagers that downright repulsion towards military service".

Resentment persisted even later, in 1865, French officer Gustave Le Cler wrote³³ about the recruitment system found in the United Principalities' Army:

"Recruitment, according to the regulation elaborated in 1860, following the French law is made as arbitrarily as possible. Still, since long ago, a number of random peasants, no matter their age or family status, were taken away, were tied like some wild beasts and were led this way to the district residence".

Moreover, corruption also caused difficulty, wealthy young people often succeeding to be "exempted" also from an elementary education at the level of some state servants, about evidence within recruitment circles of fit young people, civil status, in the absence of any records³⁴ being out of the question: "Is it really possible to determine

classes (social classes) when there are no civil status records? Except for a countryside priest's writings, if we could call that writing".

From the 13 articles which sanctioned desertion, only the first deed, *desertion in country*, was under the jurisdiction of councils of discipline and, consequently, was receiving a lighter punishment, most likely due to the system's understanding of the individual's need for adaptation from civil environment to barracks toughness.

Coming back to the provisions of art. 226 from the Codex of military justice, which regulated *the first desertion in the country*, in times of peace, we need to mention that aggravating circumstances interfered when desertion could have been made during service or with stealing military materials or equipment or the deserter wasn't committing the deed for the first time.

These situations, which were sanctioned by *The Code of Military Justice* by imprisonment from 1 to 2 years, were beyond the expertise area of the council of discipline, according to art. 22 from Additional Title I provisions, which could pronounce only sentences with imprisonment up till six months. This is also, in fact, the second characteristic of councils of discipline, which faced to such situations, it was mandatory for them to pass the competence to councils of war.

Under the aspect of competence regarding people, the activity of councils of discipline concerned all categories of lower ranks enlisted at art. 52, 53,54 from the Codex of military justice, more specifically, soldiers and reemployed persons (par. 1), as well as militia, reservists and armed bands (par. 2). Here we need to emphasize that, when the Codex of military justice appeared, the organization of the national defence system was done under the Law for organization of combat power of June 11th 1868, followed by the law of March 21st 1872.

Therefore, the Prussian model of military organization had been taken over, thus structuring the permanent and territorial army (infantry and border guard corps), supported by militia (all young people that had served in the army and were 36 years of age at most), as well as the town guard (for towns) and armed bands for villages, both of them having men between 36 and 50 years old.

The Prussian military organization model takeover, supported by lord Carol, had been made



not only on political grounds, but also pragmatic, the mixed system of organization made of a permanent core and territorial elements (landwehr and landsturm), being deemed the most adequate for Romania, a small state, whose human and material resources, couldn't afford the upkeep of a large³⁵ permanent army.

Completions added in 1905

Subsequently, by April 12th 1905 Law³⁶ no. 2677, councils of discipline had been also expanded to light-infantry battalions³⁷, as well as Navy, one to each of the two divisions: Sea and Danube, without major differences.

That is why, *The Law regarding the establishment of councils of discipline within light-infantry battalions and Navy*, can be perceived as an act meant to fix two very developed military entities in terms of corps spirit, specifically distinguished among other army corps, with increasingly complex missions, the number of which had steadily increased within army composition. And personnel enhancement also implicitly meant an increase in cases of indiscipline.

The act meant to fix light-infantry battalions, deemed as elite corps, some of them even providing the security of the royal family, concerned hierarchical subordination, meaning that, although they were equally subordinated to the division commander as the regiments, the light-infantry battalions hadn't have until then, the competence to form their own councils of discipline.

The light-infantry were special units of the permanent army, which were part of the Romanian army between 1860-1920, highly skilled and trained, as well as mobile. The first battalion, garrisoned in Bucharest, was established³⁸ by Alexandru Ioan Cuza, having 8 companies of 100 men each.

Subsequently, by Decision no. 63 of 1860, in Moldavia, a well-grounded³⁹ battalion was formed, also organized in 8 companies, which at first was named Riflemen Battalion, and after that Hunters Battalion and which was founded upon the third battalion from 5th Line Regiment.

In 1882, the Romanian army had four light-infantry⁴⁰ battalions, each with a crew in times of peace of 24 officers and 446 corporals and soldiers, which in times of war could reach 1050 militaries, officers and army, distributed as follows: 1st Infantry

Division (Craiova) comprised 1st Light-infantry Battalion, garrisoned in Drobeta Turnu Severin, 4th Infantry Division (Targoviste) comprised 2nd Light-infantry Battalion, garrisoned in Târgoviște, 6th Infantry Division (Focșani) comprised 3rd Light-infantry Battalion, garrisoned in Galați, 8th Infantry Division (Botoșani) comprised 4th Light-infantry Battalion, garrisoned in Botoșani.

Later, apart from the 4 existing battalions, others had been established⁴¹: in 1896, 5th and 6th Battalion, to 1st Army Corps, in 1900, 7th and 8th Battalions, to 2nd Army Corps, followed by 9th Battalion in 1904, so that, when Law no. 2667 of April 12th 1905 came into force, the Romanian army had 9 Light-infantry Battalions, one for each division.

The councils of discipline belonging to hunter battalions and military navy were not fundamentally different in terms of procedure, constitution, and competence, from the councils of discipline belonging to regiments, with some exceptions which we will mention below.

Therefore, if within Light-infantry battalions the situation of council organization was clear, namely in each of the garrisons where these units were functioning, when speaking about military Navy, not every unit, whether it was about ships (warships) or constituted groups of ships, could organize these councils of discipline, but only those two large units representative for military navy, after the organization of February 26th 1896: The Sea Division, with garrison in Constanța and the Danube Division, with garrison in Galați.

The Sea Division⁴² was made of cruiser "Elisabeta", training-brig "Mircea", cannon-ship "Grivita" and two torpedo-ships "Naluca" and "Sborul", while the Danube Division was made of warship "Romania", cannon-ships "Bistrita", "Oltul" and "Siretul", respectively torpedo-cannon ships "Soimul" and "Alexandru cel Bun".

These two great representative units for military navy took over, each according to its destination, and the other services and corps creating the military navy, so that, at the beginning of the 20th century, the Sea Division, a couple of years prior to the entry in force of Law no. 2667 of April 12th 1905, the Sea Division had as subordinates defensive units from sea harbors, and the Danube Division, the defensive units of fluvial harbors and the crews equipment Warehouse⁴³.



It's worth mentioning that both hunter battalion commanders, as well as commanders of the two divisions of the military navy, were invested with all rights and attributions stated by the provisions of Additional Title I to the other regiment commanders, regarding councils of discipline.

Another specific characteristic is that the provisions laid down in art. 6, par. 2. of Additional Title I, which established that council of discipline judges constituted within regiments could be replaced once every six months, was not applicable to councils of discipline within hunter battalions and military navy, derogation from judicial norm being most likely imposed, by officer crews less in number than what one could usually find among these units.

Therefore, according to statistics⁴⁴ of hunter battalion crews, enacted in 1910, the 9 battalions constituted until then had together only 180 officers, compared to 4167 noncommissioned officers and army. As far as the composition of the council of discipline within hunter battalions is concerned, the captain's rank was respected, as provided in art. 2. of Additional Title I when speaking about councils of discipline constituted within regiments, as well as, in case of replacement, the length of service principle.

The differences between the completion procedure of councils of discipline within regiments, with the similar situation from light-infantry battalions were also imposed by the reduced officer crews of the latter. Therefore, when "not enough" the light-infantry battalions, had to address to the upper echelon, to the division commander respectively, which disposed the completion of the council of discipline with other officers belonging to other army corps, either from the garrison where the hunter battalion was distributed, or in the closest garrison available.

As far as the composition of the council of discipline within the Sea and Danube Divisions is concerned, the president was no longer the deputy of the commander, as in the situations encountered within regiments or light-infantry battalions, but an officer greater in rank, appointed by the respective division commander from the subordinated navy officers.

The same appointing procedure applied also to those two judges, who were selected, also according to length of service, from the captains of

the residence garrison of the division, or, in case of "not enough" from the closest garrison available.

The differences between the completion procedure of the council of discipline constituted within regiments, with the situation similar from the military navy were also imposed by the reduced officer crews of the latter, situation similarly encountered within hunter battalions. Therefore, if the councils of discipline constituted within the Sea Division and Danube Division couldn't have functioned due to lack of available officers, the military navy commander was in charge to order its completion with officers from the entire navy corps, located in the residence garrison of the concerned division or in the closest garrison available.

Eventually, art. 7 from *the Law regarding the establishment of councils of discipline within light-infantry battalions and Navy*, also established the competence of case judgment belonging to other corps, undivided, of the navy, such as the Arsenal of the fleet or the Warehouse of torpedoes and artillery, attributed to the jurisdiction of the Danube Division commander.

Amendments added by Law no. 1025 of March 3rd, 1906

The latest significant amendment, regarding our analysis criteria of the Code of military justice, respectively before Romania joined WW1, took place under Law⁴⁵ no. 1025 of March 3rd, 1906, entitled *The Law regarding the amendment of articles: 26, 70, 99, 216, 224, 237, 241 and 256 from the codex of military law, of art. 10 of additional title of the same codex, as well as the addition of art. 224 bis in that codex.*

In our opinion, significant are the amendments of articles: 26, 70, 99 and 216. Therefore, in art. 26, the first which was amended, the lawmaker had completed the composition of the council of revision, making the presence of the substitute permanent, who was the representative of the public minister, whose presence, in the old text format, was optional, being possible for him to be appointed if "service requirement" would have required, while art. 70 encountered a change of form, changing in the sentence from par. 1, the term "resbel", an archaic term for *war*, with "resboiu" a more contemporary word.

Another significant amendment could be considered the case of art. 99, through which a new



procedural act had been added, respectively the *arrest warrant*, among those already in use, and its availability had been established to a term of 30 days, calculated since the date of issue.

The arrest warrant was issued by the *rapporteur*, as representative of the Public Attorney, only when arrest was indispensable to the instruction of the cause, when it was declared by an interest of the public cause or when the committed deed could be placed in the category of crimes (offences).

The following representative amendment, of art. 216 regarding the hitting of the superior, had been generated by the modifications appeared in 1894 when, once with the addition of Additional Title II, the punishment of "public labor" as way of sanctioning crimes⁴⁶ (offences) had been abolished.

In the current case, the punishment was provided for the commitment of deed in times of peace and outside service, so simplified, unaggrieved by other circumstances.

Conclusions

The main reason why the 1873 Codex of military justice had been criticized by several authors, concerns the fact that it belongs to a foreign judicial norm, respectively, the 1857 French Code of military justice, which, according to them, had been adopted and legislated without amendments, but, most of all, without taking into account tradition, customs, cultural evolution and the state of things in Romania.

However, we mostly agree to these critics, supporting the analyzed topic, I attempted to find a couple of circumstances, precisely, a couple of counterarguments, without thinking of running out of ideas. The first is that Romanian society had encountered the adoption of modern societies' legislation of some highly-important judicial norms, and the best evidence to this end is the 1865 Civil Code, also known as Cuza's Civil Code⁴⁷, which was into force from December 1st 1865 till October 1st 2011, which had been elaborated according to the 1804 Napoleonic Civil Code.

Back then, when it was adopted, the Romanian society was being formed, when for the unification of the two principalities and implicitly, for the consolidation of the new Romanian state, legislative reforms were urgently required.

Until the 1865 Civil Code adoption, which would prove as an important instrument in the

unification of the principalities, in Wallachia the Caragea Law⁴⁸ (1818) was applicable, whereas in Moldavia, the Calimah Code⁴⁹ (1817), typical to the late feudal era, on the verge of extinction.

The same can be said for the 1865 Criminal Code⁵⁰, through which the criminal legislative unification had been done and for the elaboration of which were also necessary foreign legislative documents, such as the 1810 French Criminal Code and the 1859 Prussian Criminal Code.

Secondly, the adoption of the Codex of military justice according to the French model was logic and was compatible with Romanian military regulations, if we take into account not only the Romanian society orientation towards French culture and civilization, but also the contribution of the French military mission (1860-1869), lead by LTC Eugene Lamy sent by emperor Napoleon III to provide assistance towards the organization of the Romanian army.

Members of Mission Lamy were technical counsellors in matters of administrative organization and military instruction, had contributed to the enactment of administrative and tactical-military regulations. It had a remarkable contribution regarding the modernization of the Romanian youth army, which accelerated both the unification process of the armies of the two principalities, and the assimilation by Romanian militaries of French tactical and administrative regulations, among the most modern of that time.

Moreover, the weaponry with which the United Principalities' army had been endowed, undergoing mainly French training, this being deemed as the best army in Europe, which caused the first and the most consistent endowments to have been French.

A large amount of weapons had been imported⁵¹ from France, among which emperor Napoleon III had agreed the training in the well-known French military schools of Saint-Cyr, Metz, Saumur and Brest, of some Romanian officers specialized in engineering, cavalry and navy.

As a conclusion, in 1865 military regulations and legislation were so strongly dominated and "smeared" by the French legislative spirit, so that it had come to the imitation of even the least significant things, such as wearing a goatee, so that, if we add the uniforms, which were very similar to the French ones, someone would have believed "in full French army on the Danube banks"⁵².



Other criticism⁵³ brought to the Code of military justice aims at the procedure, implementing method, the personnel called to perform judicial acts, aspect I haven't approached here, and last but not least, the possibility of interference from military superior bodies regarding justice distribution, precisely upon the independence between military hierarchy and the judicial attributions the militaries were entitled to.

At the heart of this criticism is the fact that, since 1873, military justice was performed according to the court of jurors' model, where judges were also acting as jurors, as well as the fact that their decisions were not motivated, aspect which could have hidden the arbitrary, removing any chance of verification.

Lack of specialized personnel in judicial matters, enabled to perform military justice, may be deemed as reasonable criticism, taking into account that many judicial errors could have been committed, even undeliberate and only because the law principles were not known or misinterpreted.

We also agree to this criticism considering that, fair and square, lack of specialized study within carrier officers, who in that era were not encouraged to fulfill their instruction with civilian studies, can be taken into account as an element able to diminish the quality of the judicial act.

No later than Romania joined WW1, authorities had attempted to modernize the Codex of military justice regarding the specialization of officers who were required in councils of war, conditioning their recruitment to an academic law training, similar to that of civilian magistrates.

On the other hand, it requires mentioning that this current of using front officers in order to perform military justice, was present within all modern armies of that era; in the French army, where the code had been translated, in the Prussian army, from where the council of discipline institution within regiments had been imported, even in the British army, which was also appointing active officers⁵⁴ in courts martial organized within every regiment of His Royal Majesty.

With all these shortcomings of *The Code of Military Justice*, adopted in 1873, with the amendments and completions subsequently encountered, had led to the opinion⁵⁵ with which we also agree, that it had accomplished its repressive role of maintaining military discipline,

granting military commanders an instrument with a preponderantly administrative function, fundamentally distinguished by the judicial one.

NOTES:

1 *Monitorul Oastei* no. 13, from 12 May 1873, pp. 289-334.

2 Petrache Zidaru, *Tribunalele militare, un secol și jumătate de jurisprudență (1852-2000)*, Univers Juridic Publishing House, Bucharest, 2006, p. 34.

3 Viorel Siserman, *Justiția militară în România. Tradiție și actualitate*, Military Publishing House, Bucharest, 2004, p. 59.

4 Petrache Zidaru, *op.cit.*, p. 34.

5 In the same period of time were published *The Law regarding the organization of the armed power in Romania* (1872), which gave an additional importance to the military institution, *The Law regarding the organization of the military headquarters* (1882), *The Law regarding the duties of the General Staff* (1883), which stated the main missions of the General Staff having as a model the similar law in force since 1880 in France, the most modern of its time.

6 *Pretor, pretori, s.m.* roman magistrate with high judicial responsibilities (often he governed a roman province). From *lat. praetor, -oris*.

7 Established on art. 48 for the situation when the Army would have been outside the national territory.

8 Viorel Siserman, *op.cit.*, p. 98.

9 *Monitorul Oastei* no. 21/22, from June 1868, pp. 258-271.

10 *Law no. 1256*, from 14 May 1881, *Monitorul Oficial* no. 40/24 May 1881.

11 *Law no. 1677*, from 8 June 1882, *Monitorul Oastei* no. 19/1882, pp. 475-486; *Monitorul Oficial* no. 50/11, June 1882, pp. 1458-1461.

12 Viorel Siserman, *op.cit.*, p. 99.

13 Vintilă Dongoroz, coordonator, *Explicații teoretice ale codului penal român, partea specială*, 2nd edition, Romanian Academy, vol. IV, Bucharest, 2003, p. 681.

14 Dumitru C. Popescu, *Privire istorică asupra Justiției Militare din România*, Military Publishing House, 1977, p. 68.

15 RATIONE PERSONAE, expression used in the criminal procedural law in order to designate that competence determined by the infringer, required by law in the moment of committing the offence or when he is prosecuted.

16 Dumitru C. Popescu, *op.cit.*, p. 70.

17 *Monitorul Oficial* no. 135/17 September 1916, p. 6266.

18 *Monitorul Oficial* no. 218/6 January 1884.

19 *Monitorul Oficial* no. 57/10 March 1880.

20 *** *Istoria militară a poporului român*, Military Publishing House, Bucharest, 1988, vol. V, p. 97.

21 *** *Istoria infanteriei române*, Stientific and Pedagogical Publishing House, Bucharest, 1985, vol. II, p. 24.

22 Within the Flotilla there were 20 officers, 20 civil employees and 246 sailors, spread to different boats and services. https://www.navy.ro/despre/istoric/istoric_03.php, accessed on 26.01.2021.

23 https://www.navy.ro/despre/comandanti/comandanti_06.php, accessed on 26.01.2021.

24 Decree no. 2795/23 December 1883, *Monitorul Oficial* no. 218/6 January 1884.



- 25 The original term used to describe large-sized warships was *bastiment*. From *it. Bastimento*.
- 26 Petrache Zidaru, *op.cit.*, p. 35.
- 27 *Monitorul Oficial* no. 290/25 December 1894.
- 28 Dumitru C. Popescu, *op.cit.*, p. 72.
- 29 *Monitorul Oficial* no. 16/21 April 1913.
- 30 Nicolae Homoriceanu, *Codul Justiției Militare adnotat*, p. 170. From jurisprudence of the Court of Caasation, 2nd Section, Decizia penală no. 1475, from 25 may 1915.
- 31 Book IV, *Despre crime și delictes*, Title II, *Despre crime și delictes și pedeapsa lor*, Capitol V, *Nesupunere și dezertare*, Sections II-V from *Codicele de justiție militară*, adopted through Law no. 1256/14 May 1881, *Monitorul Oficial*, no. 40/1881, with additional modifications.
- 32 I. Popovici, *Organizarea armatei române*, Leon Friedman Printing, Roman, 1903, vol. I, p. 141.
- 33 *Ibidem*, p. 255.
- 34 *Ibidem*, p. 250.
- 35 <https://www.defence.ro/evolutie-smap>, accessed on 26.01.2021.
- 36 *Monitorul Oficial* no.12/1905 and *Monitorul Oastei*, no.11/1905, regulamentary section.
- 37 Original term is *vânători*, similar to *chasseurs-aupied* from French army.
- 38 Înalțul Ordin de Zi no. 64, from 31 August 1860.
- 39 I. Popovici, *op.cit.*, p. 175.
- 40 *** *Istoria infanteriei române*, p. 10.
- 41 *Ibidem*, p. 23.
- 42 ****Istoria poporului român*, vol. V, p. 99.
- 43 *Ibidem*, p. 100.
- 44 *Ibidem*, p. 84.
- 45 *Law no. 1025/3*, March 1906, *Monitorul Oficial*, no. 271/9 March 1906.
- 46 Nicolae Homoriceanu, *op.cit.*, p. 90.
- 47 *Codul Civil from 1864*, in force from 1st of July 1865, to 25th of July 1993, *Monitorul Oficial* no. 271 (art. 1-347); *Monitorul Oficial*, no. 7, 8, 9, 11 and 13, from 1865 (art. 348-1914).
- 48 Ioan Gheorghe Caragea, *Domn al Țării Românești, Legiuire a prea Înălțatului și prea Pravoslavnicului Domn și Oblăduitoriu a toată Ungrovlahia Io Ioan Gheorghie Caragea*, Bucharest, 1818, Bucharest Metropolitan Library, Fondul Bibliotecii Nicolae Iorga.
- 49 *** *Codul Calimah*, critical edition, The Academy of The Popular Republic of Romania Publishing House, 1958.
- 50 ****Codul penal*, 30th of October 1864, *Monitorul Oficial*, no. 240/ 30 october and was in force from 1st of May 1865, until 17th of March 1936; C. Hamangiu, *Codul general al României*, Leon Alcalay Publishing House, Bucharest, 1907. Subsequently modified in 1874, 1882, 1893, 1894 and 1895.
- 51 Victor Gabriel Osăceanu, *Români și francezi de-a lungul istoriei*, Aius Printed, 2011, Craiova, p. 118.
- 52 I. Popovici, *op.cit.*, p. 244.
- 53 Vasile D. Chiru, *Principiile, economia și inovațiile noului Cod de Justiție Militară. Note sumare*, Pandectele Militare Publishing House, 1937, p. 8.
- 54 *Manual of Military Law* (1914), H.M. Stationery Office, Imperial House, Kingsway, London, 1914, Chapter V – *Courts martial*, art. 7-11, *Composition of courts*, pp. 36-37.
- 55 Petrache Zidaru, *op.cit.*, p. 48.

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- *** *Monitorul Oastei* no. 21, from 22 June 1868.
- *** *Monitorul Oficial* no. 16, from 21 April 1913.
- *** *Monitorul Oficial* no. 40, from 24 May 1881.
- *** *Monitorul Oficial* no. 50, from 11 June 1882.
- *** *Monitorul Oficial* no. 57, from 10 March 1880.
- *** *Monitorul Oficial* no. 135, from 17 September 1916.
- *** *Monitorul Oficial* no. 218, from 6 January 1884.
- *** *Monitorul Oficial* no. 290, from 25 December 1894.
- *** *Legea no. 1025*, from 3 March 1906, *Monitorul Oficial* no. 271, from 9 March 1906.
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<https://www.navy.ro/>



OPTIMIZATION OF THE MEDICAL EQUIPMENT MAINTENANCE PROGRAMS

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In the context of the increasing costs of the medical equipment maintenance services in the recent years, as a result of the continuous development of the complexity of health technologies, the obvious shortage of specialized technical staff and the acute outsourcing of maintenance, clinical engineering structures in our hospitals are constantly looking for solutions to maximize device availability, ensure safety, performance and clinical efficiency, while reducing maintenance costs and increasing reliability. Performing maintenance operations at the intervals recommended by the manufacturers in the operating manuals or using another periodic preventive maintenance based on the experience of technicians and evidence from the service history of the equipment, as well as the selection of the most appropriate types of contracts are the main managerial challenges of optimizing the maintenance process. The integrated approach of these elements and the evaluation of clinical, technical and financial factors in the life of medical equipment are the pillars of the development of the most appropriate maintenance strategies, which tend to achieve a balance between performance, risk and cost.

Keywords: medical equipment; maintenance; clinical engineering; costs; efficiency; optimization.

Medical equipment is the most important investment in the healthcare industry that requires complex and accurate maintenance procedures to achieve the designed performance and the delivery of safe and quality medical services. Maintenance operations for the most critical equipment are more expensive every year, and the variety of technologies and regulatory constraints at European level, which limit the implementation of maintenance policy at the level of each health unit, make the action of optimizing the programmed maintenance a difficult process of analysis, evaluation and decision, to ensure the functionality of the medical device, minimize the failure rate and extend the life, in order to obtain the maximum benefit from the use of the device, as well as reduce total ownership costs.

Medical equipment life cycle management includes, in addition to the active management of the other structural stages, the dynamic control of maintenance costs, which, compared to other operational costs (that remain constant throughout the life of the device), increase exponentially in the second half the life of the equipment, due to the advanced wear of the components and the increase of the prices practiced by the service operators,

taking into account an average lifespan of 10 years and an annual cost for a complete maintenance contract of 8-10% of the purchase value¹. In order to optimize the value of the life cycle, the managers of the sanitary units must prioritize the equipment for the preventive maintenance, to find the balance between the maintenance executed with own forces or outsourced (through direct commitments with the equipment manufacturers or third party service operators, authorized and recommended by the manufacturer) and establish the most effective contract models. In this sense, in order to make the most of the costs allocated to this key theme in medical equipment life cycle management, maintenance, clinical engineering structures of hospitals in developed countries have implemented computerized equipment maintenance management systems, in order to support the decision-making process and distribution of the type of contract.

The added value is brought to the medical organization when, in implementing a maintenance strategy, clinical engineering structures develop evaluation schemes based on factors that take into account the maintenance needs of medical equipment, patient and user safety, but also criticality and importance functions of the analyzed equipment in relation to the mission and objectives of the medical organization, and define individualized support programs for each type of medical equipment, including operations planning, human, financial and material

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resources management, continuous monitoring of implementation and improvement of the system as a whole.

Maintenance actions pluri-valence

In addition to the acceptance tests performed at the reception of the equipment, before their commissioning, the term "maintenance framework" includes the maintenance operations of medical equipment divided into two broad categories², each covering other follow-up actions as part of the annual maintenance support programs:

- Inspection and preventive maintenance (IPM) – includes actions scheduled to be performed at a predetermined time, in order to reduce premature wear of parts or subassemblies and the failure rate of equipment, detection of possible hidden defects, and insurance of the device functionality; these operations have the role of extending the useful life of the equipment and include actions of calibration, cleaning, lubrication, replacement of consumables and spare parts with fixed life, etc.

- Corrective Maintenance (CM) – includes unscheduled actions to repair or restore technical and clinical performance, safety and integrity of defective medical equipment, and re-commissioning operations.

Within the IPM, performance and safety inspections are separately regulated activities, which include actions to test the technical parameters set by the manufacturer by specifying the equipment and service manual and actions to verify the electrical and mechanical safety of the device, measuring ionizing radiation, or of gas leaks, by comparison with certain national or international standards. These inspections are not intended to increase the life expectancy of the equipment, but only to assess its current condition.

Predictive maintenance, part of the IPM, includes technical analysis and forecasting actions in order to determine the rate of wear or failure of consumables or spare parts currently used in maintenance and to determine the frequency of maintenance operations, so that used components are replaced before failure and medical equipment would operate continuously.

IPM can be executed according to two globally recognized models³, thus: Time-based maintenance (TBM) – equipment is maintained regularly, with regular budget allocations, easy to estimate and plan

and condition-based maintenance (CBM) – requires equipment condition assessments, statistical prediction tools and a high degree of expertise of the technical structure, in order to balance the annual budget, depending on the reliability of the equipment and the estimated remaining life.

The complexity of the functions of the maintenance programs also includes tasks of quality control, selection of the type of service contract and monitoring of their development, training and education of clinical and technical staff, as well as guidelines and substantiated directions for developing replacement plans with new equipment.

In order to effectively manage the costs necessary for the maintenance of medical equipment, any health unit, hospital or treatment or diagnostic center must develop and implement maintenance programs, whose complexity is strictly dependent on the mission of the organization, the type of equipment, financial resources and human resources available, the space and technical installations of the facility.

Preparation of maintenance programs

In order to obtain cost-effective maintenance programs, clinical engineering structures must allocate and direct financial resources in a balanced way and adapt the maintenance model (technical operations to be performed and their periodicity) with the criticality of equipment, hospital objectives and benefits obtained, following the risk / cost / benefit analysis of some critical factors, according to Figure 1.

Tasks and type of maintenance are grouped into 5 levels⁴, starting from level 1 which is performed exclusively with its own staff for simple maintenance actions (replacement of filters and batteries, cleaning pipes, mechanisms lubrication, etc.) and up to level 5, executed entirely outsourced with manufacturers of medical equipment for complex actions requiring installations, special equipment and software for high-tech medical equipment. It should be noted that due to the lack of special tools and devices, as well as specialized human resource, hospitals in Romania have contracted most maintenance services in recent years, even for the simplest preventive operations, which is a huge financial effort on the budgets of organizations.

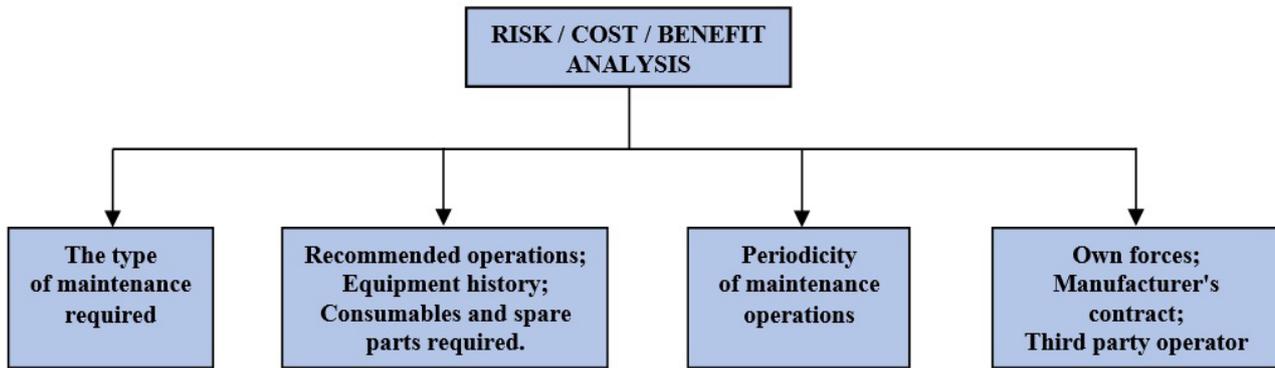


Figure 1 Elements of risk / cost / benefit analysis
(The author's conception)

The service options that can be considered in the risk / cost / benefit analysis are⁵: use of own human and material resources; acquisition of lifecycle maintenance with the delivery of equipment or negotiation of annual / multi-annual maintenance contracts (innovative approach that can bring substantial savings to the budget) with the manufacturer – OEM (Original Equipment Manufacturer) contract; the annual maintenance commitment concluded with third party operators (common service agents), other than its manufacturers or authorized representatives. For the last two options, health units must consider equipment response times, the possibility of making other spare equipment available during maintenance, the availability of repair procedures and the quality or origin of spare parts used, attributes that may affect equipment performance (in particular the case of third-party operators).

At the same time, for equipment prioritized to outsourced service, contracts must provide requirements on the availability and traceability of replaced components in maintenance, notification of parts and response times, responsibilities for patient data management confidentiality), requirements for keeping records of maintenance and consumables used, training of staff and written instructions of the manufacturer, as well as ways to dispose of waste resulting from the repair process.

The most common types of legal outsourced maintenance commitments concluded between hospitals in the Ministry of National Defence's own network and service operators are:

- Type 1 contract – only the labor of maintenance actions, without materials included in the price, unlimited number of interventions and diagnoses

(usually, it is negotiated to perform at least one annual technical review in the offered price);

- Type 2 contract – labor and covered parts, except the subassemblies considered by the service operator as special components;

- Type 3 contract – full coverage of maintenance interventions and parts and accessories necessary to maintain the reliability of the equipment – contract indicated for the maintenance support of complex technologies, such as digital radiography installations, computed tomography, magnetic resonance systems and laboratory.

In practice in recent years, hospitals prefer a fourth type of contract (3+), by transferring all risks to the operator and introducing a minimum guaranteed availability clause (uptime), usually set at 95% of the duration of a calendar year or the contractual period.

Clinical engineering structures must compare, according to Table no. 1, the advantages and disadvantages, on the one hand, of the internalization or outsourcing of maintenance services, and, on the other hand, of entrusting the contract to the manufacturer or another third party operator.

Analysis of resources required for maintenance

For each maintenance option considered, multidisciplinary analysis teams or clinical engineering structures must design the resources useful for the adopted maintenance program, using as tools the service history of each equipment, the experience and skills of the technical staff, the requirements of specialists and the forecast the time of failure of the medical equipment.

Table no. 1

ANALYSIS OF THE INTERNALIZATION / OUTSOURCING OF MAINTENANCE SERVICES⁶

Type of services	Advantages	Disadvantages
Internal	Quick response to interventions; Flexibility in scheduling preventive maintenance operations, reducing downtime; Management and coordination of contracts with producers or third parties.	High specialization costs; Lack of support devices and testing software; Reluctance to poor training from manufacturers; Low spare parts storage possibilities for the whole range of equipment.
External	Equipment availability clauses; Setting intervention times; Replacement of defective equipment during periods of unavailability; Easy to plan costs (type 3 contract).	Sending the equipment for repair; Difficulty in obtaining commitments with full coverage for critical equipment; High maintenance costs.
OEM	Compliance with repair standards; Inclusion of original software changes and updates; Easy access to original components and spare parts; Possibility of remote monitoring and diagnostics (internet); Extended warranty on operation performed; Provided training and technical assistance.	Response time, most of the time, quite long; Requires annual negotiation and updating; Difficult coordination for a wide range of equipment; Very high costs.
Third party operator	Lower costs than the manufacturer; Specialist in the facility for short-term fault intervention;	Reduced equipment coverage area; Reduced staff training opportunities; Lack of technical information from the manufacturer; Generic spare parts.
In all cases, the monitoring, audit and management of contracts is the obligation of own clinical engineering structures in the organizational chart of the health unit, in order to control the costs allocated to maintenance.		

The requested budgetary resources include the costs prior to the maintenance program (investment in workspace, tools, control devices and testers, personal training) and the ongoing costs for running the program (utility costs, checking and calibration of special devices and installations, staff salaries, training continuous maintenance of technicians or, in the case of outsourcing, the settlement of service contracts, spare parts and consumables required for maintenance).

The physical resources dedicated to maintenance must include, in addition to the service facility/technical workshop, both the equipment and applications necessary for technology testing, calibration and diagnosis, as well as operation and service manuals and procedures / work protocols required for maintenance and repair and the maintenance guides developed by the manufacturer, documents difficult to obtain by the medical units, if they were not requested as part of the delivery contract at the time of initial purchase.

After determining the need for physical and human resources, based on the fleet of equipment included in the program, the type of maintenance chosen and the number of IPM actions, financiers can determine the initial/permanent costs, by calculating the estimated the workload and the hourly rate practiced at national level. The costs of outsourced contracts, with the exception of type 3, where an average annual cost of 10% of the purchase value of the equipment is planned, are difficult to assess in the first years of operation of the technology, but can be optimized based on the history of maintenance and experience of its own maintenance structure in the coming years.

In clinical engineering practice, a maintenance program selected for a particular medical device is generally considered to be financially efficient if the ratio between the total annual cost of maintenance and the purchase value of the equipment is less than 0.10⁷, objective that can be reached only with the consistent support of its own technical department.



Prioritize equipment and set time intervals for inspection and preventive maintenance

In the context in which the costs necessary for the maintenance of medical equipment during the useful life are often higher than the purchase price and the annual budget allocated to the maintenance of medical equipment represents about 1% of the total budget of a hospital⁸, clinical engineering departments are looking for solutions to optimize maintenance programs, due to budgetary constraints, by developing priority models for preventive maintenance and setting new time intervals, ensuring that they are safe to operate, accurate, efficient and reliable, even if for each piece of equipment the manufacturer provides in the service manual the periodicity of the IPM actions.

It must be kept in mind that performing IPM activities at short intervals, in order to guarantee the continuous functionality of the equipment, without incidents or technical failures, is a waste of resources and time and even the induction of failures caused by the aggressive disassembly of component subassemblies for maintenance.

In this sense, the paradigm shift occurred slowly and gradually, starting with routine maintenance interventions and fall repairs in the years 1940-1950 (no planned maintenance), passing through the TBM of the 1980s, then applying CBM and Reliability-based maintenance (RBM) in the 2000's and nowadays reaching Risk-based maintenance (RBM).

RBM, considered globally an empirical approach, prioritizes maintenance equipment based on monitoring its condition, assessing the causes of technical failure and examining needs, as a maintenance concept for low-duration medical devices. CBM, based on the operational monitoring of the equipment with the help of dedicated sensors, forecasts the availability of the equipment and increases their productivity and safety.

If in Canada, due to the difficulty of identifying and prioritizing risks, IPM programs are carried out in most hospitals according to the recommendations of manufacturers, in the United States of America (USA), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has allowed health units to develop individual maintenance programs since 2004 through the balanced use of resources, depending on the priority of each organization, for safety and reliability reasons⁹.

Thus, clinical engineering structures can prioritize medical equipment to preventive maintenance by analyzing factors in a process of analytical ranking, taking into account multiple criteria, such as: type of maintenance (usually factor assessed by the 5 levels of complexity), the nature of the equipment (classification includes 4 main groups – therapeutic, diagnostic, analytical and auxiliary purpose), physical risk (the most important criterion in assessing the criticality of medical equipment), the role of medical equipment in the basic mission of the medical organization (its importance), the age of the medical device, the level of technical criticality (usually the periodicity of the IPM actions recommended by the manufacturer, the conditions of use and the registered CM actions are evaluated).

According to *the Fennigkoh and Smith model*¹⁰, the evaluation of the criticality of the medical equipment in order to introduce in the preventive maintenance program represents a list of analysis of some factors and parameters that define the risk probability of an equipment, based on the criticality score, which can be obtained by summing each of the elements presented below, on a grid set at the level of each element evaluated, as follows:

- critical function of the equipment within the hospital (score from 1 to 10) – maximum score can be given to life support and intensive care equipment and minimum score to analytical (laboratory analyzers) and auxiliary (patient-related devices);
- physical risk associated with equipment failure (score from 1 to 5) – maximum score is given to equipment that, by failure, can lead to patient death and minimum score, those that can cause only slight damage to the integrity of medical equipment or those for which no risks have been identified;
- maintenance requirements (score from 1 to 5) – maximum score is given to equipment that requires calibration and replacement of components at a certain time interval and minimum score, to devices that require only visual inspection.

Medical equipment that obtains a prioritization score higher than 12 points will be included in the IPM program.

Subsequently, the periodicity of IPM actions can be established after evaluating the data from the medical equipment history, assigning a new

score to each equipment (according to Table no. 2) and achieving the sum between the prioritization score and the failure factor, as follows: only medical devices with a lower score of 15 points will be checked annually, while the others will be planned for maintenance at least every six months.

Table no. 2
SCORING THE FAILURE FACTOR¹¹

Number of equipment failures	Failure factor
One or more at 6 months	+2
One in over 6 months	+1
One in over 9 months	0
One in over 18 months	-1
One in over 30 months	-2

Another method of prioritizing equipment for introduction into the preventive maintenance program, promoted in the 2000s by *Wang and Levenson¹²*, defines the criticality of the mission and gives each medical equipment a critical score, assessing the following factors: the importance of the medical device in the hospital (analyzes how crucial equipment is in ensuring the continuity of health care services and depends on the availability of other spare medical devices), maintenance needs (analyzes their complexity and the availability of the three types of resources – *labor, cost and tools¹³*), the degree of use (as a percentage of the total autonomy time) and the physical risk of technology failure (analyzes the safety of patients and medical staff in case of failure, prediction of failure, frequency of technical failures and downtime, data extracted from appliance service history), according to the formula below:

$$\text{Score EMR} = [(\text{Mission critical} + 2 * \text{Maintenance requirements}) * \text{Utilization rate}] + 2 * \text{Physical risk}$$

Subsequently, starting from a model based on minimizing risk and improving profitability, presented in 2004, *Khalaf A.B¹⁴*, has developed a new type of hierarchy by further measuring the probability of availability of medical equipment depending on their age and the degree of ensuring preventive maintenance, by using data collected through management programs.

Moreover, in order to reduce the costs allocated to maintenance, the idea of performing preventive maintenance actions at intervals shorter than the mean time between failures (MTBF), calculated according to the formula, was promoted¹⁵:

$$\text{Interval SPI} = 2 * (1 - \text{uptime}) * \text{MTBF},$$

where *SPI* represents the planned maintenance, and *uptime* represents the time of availability of the medical equipment, calculated as a percentage of the total operational time.

Thus, implementing the ways of streamlining the studied maintenance and the field evidence based on data from the service history of the equipment, from the good ranking practices implemented at the level of the institution where I work, I can present the example of extending the IPM range in the last 4 years for a 9-year-old automatic steam sterilizer, used, on average 6 hours a day, from 1 year, according to the manufacturer's recommendations, to 18 months. The cost of a preventive maintenance operation, performed in closed regime (phenomenon of captivity in the service network or only service provider at national level), includes the standard equipment overhaul kit (water filtration and softening elements, solenoid valves, resin filter, gaskets) and was at the time of January 2021 of 3,000 euros (planned intervention, without service contract), representing 8% of the value of the initial acquisition.

Internalization versus outsourcing of maintenance services

After establishing the degree of prioritization and maintenance interval, the health units must make the decision to internalize/outsourcing maintenance services on levels, based on the analysis of additional criteria related to the availability and potential of human and material resources and the evaluation of annual maintenance costs. In this sense, multidisciplinary decision support groups can assess the following factors: the competencies of their own maintenance structure (according to the 5 levels of maintenance – level 1 is mandatory with internal specialists), the average time required for each level of the maintenance strategy), the need for specialists to perform technical operations, the cost of maintenance time (internal versus external), the cost of labor (the product between the volume



of work, the cost of working hours and the number of specialists).

system is a closed one, it is recommended to choose a type 3+ contract, with full coverage on all levels

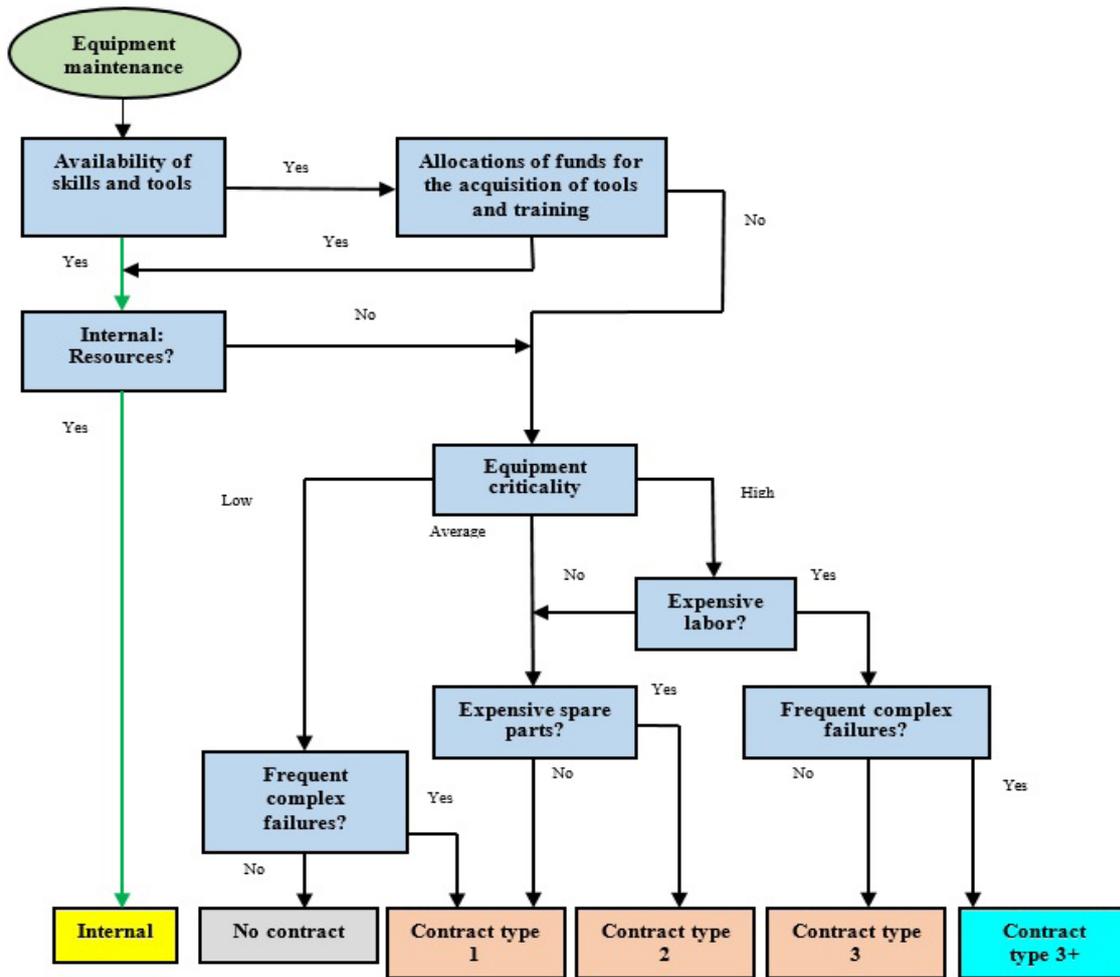


Figure 2 The decisional matrix of internalization / outsourcing of maintenance¹⁶ (The author's conception)

In the case of outsourcing services, the medical organization must make the decision to select the type of contract, analyzing elements such as cost-effectiveness of packages offered by economic operators, labor costs, spare parts costs and frequency of CM interventions in the equipment service history, according to Figure 2.

The types of contract are thus specific to each medical equipment and appropriate to each level of maintenance, depending on the degree of risk considered, the flexibility of service operators' packages, the number of IPM and CM interventions, the workforce and the parts required.

In this regard, we can say that, when budgetary resources allow it, for complex health technologies, such as magnetic resonance equipment or anesthesia machines, where the cost of technical diagnostics and spare parts is very high and the maintenance

and clauses imposed by minimum availability and maximum intervention time (usually 24 hours), while for equipment such as electrocardiographs or defibrillators, outsourcing can only be considered justified in the case of interventions of minimum level 3, by mandatory inclusion in the contract of IPM actions (at least annually) and spare parts.

Conclusions

The maintenance of medical equipment becomes more expensive every year, and to optimize maintenance programs and reduce total cost of ownership, clinical engineering structures of hospitals are constantly looking for solutions to extend the time of operation of equipment, in terms of safety and technical performance requested and through the efficient use of available resources.

In this regard, health facilities need to implement evidence-based maintenance strategies, through the development of prioritization procedures aimed at a balanced assessment of relevant factors in the life of medical equipment, through an integrated approach to the elements of reliability-based maintenance, maintenance-based on conditions and risk-based maintenance. This transparent ranking process analyzes elements of equipment availability forecast, their service history, maintenance intervals recommended by manufacturers, in light of regulations, consequences of failure and existing alternatives, costs and benefits of possible options and aims to obtain the most efficient maintenance regime in terms of the risks associated with equipment failure and the costs required for proactive maintenance, based on the interpretation of detailed and structured results.

The maintenance policy of the medical organization must establish the medical equipment included in the maintenance program and the periodicity of inspection and preventive maintenance operations, based on the critical scores obtained by each device, how to provide maintenance support and the type of contract selected, according to the complexity of medical technology, the level of maintenance appropriate to the category of equipment, the flexibility of service packages offered by operators and the availability of human and material resources.

The most effective tool for planning and recording the maintenance actions that hospitals should implement in order to organize the maintenance program and permanent cost control is the software system for medical equipment management during the life cycle. It allows real-time monitoring of the effectiveness of maintenance programs and supports the decision-making process of selecting the maintenance strategy through the data collected about each medical equipment in the organization chart of the health unit.

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RESISTANCE MOVEMENT – RELEVANCE FOR HOMELAND DEFENCE

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There is a direct connection between societal resilience and resistance movements, as a higher level of resilience ensures preconditions for an efficient resistance movement when territorial sovereignty or independence is threatened or temporarily lost. This paper highlights the necessity to approach the resistance concept in both Romanian armed forces and civil society, and the required preconditions for a successful resistance movement in case of occupation. The purpose of this paper is to debate the opportunity of planning and preparing during peacetime for a valid resistance in a total defense scenario.

Keywords: resistance movement; resilience; national sovereignty.

The aggressive external diplomacy conducted recently by several regional actors in the Black Sea region, as shown by the Russian Federation in Georgia and Ukraine, determines permanent risks and threats evaluation regarding national security level of Romania. It requires, at the same time, adjusting the proper measures and actions of the state power instruments in order to eliminate, diminish or counteract their concrete effects on national defence capability. Moreover, as a member of the main alliances at international and regional level, NATO and, respectively, the EU, determines the need to properly identify those conditions to be met in order to ensure our country's status as a factor of regional stability at the eastern border of these alliances.

Efficient engagement of military capabilities for consolidating national security requires, besides implementing conventional measures, properly countering those methods and techniques specific to unconventional or hybrid warfare, while, at the same time, diminishing the advantages, in quantity and quality, a conventional aggressor force could have. One important aspect regarding national defence capacity is the level of resilience that institutions, the economy and society will have reached when facing an armed aggression.

Romanian National Defence Law no. 45, from July 1st 1994, article no. 4, states that "In the event of aggression against the territorial integrity, existence and unity of the Romanian state and

people, the extent of which exceeds the combat capacity of the armed forces, organized on the principle of defensive sufficiency, the response will be comprised of appropriate forms engaging all human and material resources necessary to repel it"¹. Can we speak today about a whole people's war in Romania? How can our nation employ the entire existing human and material resources in order to effectively repel a major aggressive operation? Are the methods, techniques or instruments we currently plan to employ for national defence sufficient? What resources will we actually have when we are confronted with major impediments like eliminating mandatory military service for country citizens or heavy migration of workforce within the EU? These problems are more pronounced when we consider Romanian Law no. 446 from November 30th 2006 regarding the preparation of the population for defence, article no. 3 that states: "When mobilization and war state is declared or when siege is instituted, performing military service as conscript is mandatory for men aged 20 through 35 years old that meet the required criteria for military service"².

According to the same National Defence Law no. 45/1994, at article no. 33, the Ministry of Defence is compelled to organize proper training and preparations for armed forces and civilians alike in order to ensure optimal national mobilization efforts. The Defence Staff is the structure responsible for reaching the necessary readiness level of population, economy and homeland for supporting the national defence effort, through various trainings and exercises regarding general mobilization of resources.

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When considering diversity and interdependence of current confrontational domains and the various methods and techniques specific to unconventional or hybrid warfare, we can certainly say that the general population of the state has, one way or another, a significant role in discouraging or repelling a possible aggression towards homeland sovereignty or independence.

Resilience versus resistance

Resilience and resistance are two different mechanisms of the same system by which it can cope with perturbing actions. Resistance is the mechanism which the system employs to mobilize the necessary resources and act accordingly to mitigate immediate negative effects of perturbing element's actions for the purpose of reinstating the normal functioning state. In a strongly affected environment, the resilience of the system emerges with the purpose of durable adaptation of the system to the new normal conditions.

The level of resilience achieved by a society contributes to deterrence efforts and actively supports a comprehensive national defence by providing the condition for a planned and organized resistance movement likely needed to reinstate territorial sovereignty or independence. Resilience is a fundamental element in planning, generating and organizing an efficient resistance movement.

Civil society resilience is determined by:

- the will of the population to maintain the society they have built until the moment of aggression;
- the will and ability of the population to withstand negative influence and pressure from both external and internal sources;
- the will and capacity of the population to overcome the negative effects of pressure or toxic influence and to recover.

Resistance comes as a normal response of a society when its sovereignty or independence is threatened. A valid total war scenario of the state implies a proper planning and preparation long before crisis or war emerges. For this reason, responsible institutions must focus during peacetime on building a durable resilience of society that ultimately create the conditions for resistance against occupation. Resistance is a synergic effort of every element of society that seeks to reinstate the normal function of the state

that existed before the aggression. It includes a wide range of activities and actions, both armed and unarmed, violent and nonviolent, within the boundaries of a legal government, even if exiled or shadow, that seek to regain independence and homeland sovereignty previously lost through aggression. Resistance movement consists of an organized effort by a part of nation's civilian population in an attempt to challenge the enforced authority of an aggressor. Its goals include creating a state of incertitude, instability and general public disorder or disobedience in the occupied territory.

Planning, organizing and conducting a homeland resistance movement ultimately contributes to the national defence effort alongside regular armed forces that concentrate on executing conventional actions and consider asymmetric and unconventional as well. When talking about unconventional warfare we include those operations and actions conducted through guerrilla forces in order to facilitate the resistance movement to overthrow or coerce the aggressor authority in occupied territory.

An efficient resistance movement relies on a mature resilience capability of society. Proper preparations for crisis situations or war include consolidation of people national identity in order to strengthen their capacity and will to resist any aggressor. Governmental institutions are responsible for informational and psychological measures regarding the country's civil population awareness of potential external or domestic threats. So, the importance of resilience building and resistance planning during peacetime become absolutely obvious. If resilience is considered and taken care of at several institutional levels, when it comes to resistance it appears that it is not considered plausible. We can acknowledge that credible resistance planning in conjunction with specific informational and psychological operations can contribute to national security by convincing a potential aggressor that occupation in itself will come at a very high price and will be undermined in every way possible until national sovereignty and independence are regained.

Resistance oriented approaches

Planning and preparing for deterrence, mitigation or countering potential threats by resistance means must be conducted in a



comprehensive manner since peacetime. A strong national identity is consolidated through proper measures like education promoting historical, patriotic and cultural values, and different actions taken to promote national unity such as sport leagues and civic activities. The main idea behind this is to emphasize the importance of homeland sovereignty over the political factor. People disliking the government in charge at any given time will be reluctant to support or act as part of a resistance movement when needed. The psychological state of mind of a country's citizens must be molded accordingly before any aggressive effects are visible. Building propaganda immunity starts at young ages and continues in every stage of the educational process for every citizen. This will set the basic psychological readiness when the aggression and hostilities commence. An efficient resistance movement needs a consistent and constant popular support in order to actively contribute to regaining sovereignty over lost territories or national independence.

Unlike regular armed forces, special operation forces have specific tasks that belong to unconventional warfare like supporting resistance movements in adversary occupied or controlled terrain. Recent unconventional, asymmetric and hybrid warfare methods and techniques, used in confrontations determine thoughtful consideration when planning and preparing to counter possible aggressive actions. One such consideration is capitalization of possible resistance movement efforts in repelling an aggression and regaining previously lost territory's sovereignty or independence. Peacetime planning and preparation for defensive measures in case of aggression, conventional or unconventional, must include possible resistance movement effects to determine high costs in resources for any aggressor or occupying regime. Proper preparation of population, terrain and critical infrastructure for a possible invasion can also be used in informational operations to deter a possible aggression altogether.

A resistance organization has four main elements: underground, auxiliary, guerrillas and the public component.

The underground refers to organized cells that operate in urbanized locations under occupier forces control. The underground entities conduct both military and political actions through

intelligence networks, media networks - including radio, television, social media and internet, with the purpose of promoting their just cause to locals and international community. The underground cells also manage materials that can be used by fighters in various sabotage acts against occupier's forces.

The auxiliary includes a part of the local population that actually supports the underground cells or the guerrilla forces. Their implication is clandestine as they have an overt role in the community. The main functions of the auxiliary are providing intelligence, logistic support, a consistent labor force and security or early warning for the other elements of the resistance.

Guerrilla forces are the military element of a resistance. They consist of irregular soldiers that originate from regular army units or from trained civilians. Guerrillas conduct unconventional warfare actions through sabotages, ambushes or harassing occupier's forces in order to disrupt their ongoing operations, affect morale and produce material losses. The size of the guerrilla force is in direct relation with the size of the population supporting it. Guerrilla warfare, as an integral part of insurgent tactics, is, in general, based on small cells that use specific actions like combat, gathering information, detailed planning, manoeuvre tactics, surprise, infiltration and undermining enemy morale³. Guerrilla forces have a military type structure with a conventional command chain. They operate under the control of a legitimate government even if it is a shadow government or it is exiled from the occupied territory.

The public component refers to an accepted political expression regarding the resistance movement in the occupied territory. This component can exist as a political party or other overt entities if accepted or tolerated by the occupier. The public component can directly negotiate with the newly installed power's institutions and promote the resistance cause.

Throughout history we can find numerous examples of resistance type efforts that managed to actively support the conventional component to regain previously lost sovereignty or independence like the Soviet society's effort to repel Axis forces from the Motherland in World War II or the Vietnamese fighting French and later American invasion. There are plenty of sources that detail each resistance element's role and contribution



in supporting the resistance movement. Lessons learned in the past by struggling nations, including Romania, are still valid and should be capitalized and implemented in our current national defence strategy by revising army doctrine, field manuals and standing regulations to properly approach the specifics of unconventional, asymmetric and hybrid warfare.

In order to stimulate and facilitate civil society implication in national defence effort and in sustaining possible resistance movements on our national territory, proper training and preparation of both military and civil citizens are needed in order to conduct or counter conventional and unconventional actions. This is achieved during peacetime through sustained efforts in every domain that contributes to and promotes preconditions for an efficient resistance movement when needed.

Some European states have implemented recently several measures that intend to properly inform and prepare regular armed forces and the general population alike in case of aggression towards territorial sovereignty and national independence. One of the most notable is communication and distribution of essential information regarding existent risks and threats, while countering at the same time adversary propaganda and misinformation actions. Governmental institutions support and count on specific resistance actions at every level of society by creating the lawful environment in which these actions can be taken. The most interesting means of communication to nation's citizens came in the form of written materials, manuals and pamphlets that approach and elaborate on actual civil actions to be taken during occupation or invasion by an aggressor.

In Lithuania a manual called "Prepare to Survive Emergencies and War: A Cheerful Take on Serious Recommendations"²⁴ contains survival techniques that civilians can employ in case of an invasion. It also emphasizes civil contribution to resistance against an aggressor in order to prevent easy deployment of a military invasion. The manual reiterates citizen's right and duty to defend the homeland and acknowledges the role of every citizen in a country's warning system.

In Sweden a pamphlet called "If Crisis or War Comes"²⁵ presents – using images – to the general population the ways to prepare in case of aggression

and how to contribute to the country's Total Defence plan. This pamphlet also details specific civil protective measures that should be taken in case of aggression or attack like finding shelters from bombing, securing surviving essentials and understanding warning signs and signals.

One other example comes from the Latvian Armed Forces that include in their training and doctrine specific tasks and missions that are in direct relation with resistance movements that could emerge in crisis or war situations. These tasks and missions are not intended just for special operation forces like we have, but for every possible actor that must be properly aware of unconventional warfare methods. Furthermore, in accordance with the Latvian National Security Law from January 13th 2020, the Armed Forces must lead a resistance movement where the entire nation is involved in the fight against an aggressor.

These examples show several methods of proper planning and preparation for future confrontational scenarios that should be taken into consideration when ensuring homeland security, sovereignty and independence of the country. They come from implementing lessons learned from previous conflicts or national struggles for independence and ultimately contribute to deterrence and countering efforts regarding possible aggressions.

Conclusions

As the modern confrontational environment focuses more and more on human mind and the general perception of the public we foresee the importance of proper preparation for both armed forces and civil society in order to withstand possible negative influences an aggressor could exert on them. Building and consolidating a durable resilience of society and a strong national identity for Romanian citizens goes beyond the sole purpose of supporting a possible resistance movement in case of aggression, as it can significantly influence the development of any local and regional crisis situation or confrontational scenario.

Romanian National laws, field manuals and specific regulations have little to no content regarding military and civilian actions for supporting a resistance movement in an occupied territory. Modern conflict methods and instruments, including the unconventional spectrum specific to resistance movements, must be known and



accessed not only by special operation forces but by all armed forces, and furthermore, by civilians and all entities involved in a possible national defence effort. Resistance movements and its component elements can be equally supported by special operation forces, stay behind regular troops and plain civilians with or without military training, as resistance is conducted in both violent and nonviolent manner and it also has an important passive component.

At present, Romanian laws address national mobilization efforts of population, economy and homeland in a possible national defence effort against aggression. Mobilization efforts basically have the objective to support national armed forces operations but, in order to adopt a Total Defence plan like other European countries, efforts must be made to create proper conditions (legal, economic, psychological mindset, etc.) so as to include all available resources in a possible homeland defence scenario, also including the form of a resistance movement.

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APPROACHES IN SUPPORT OF HUMAN SECURITY

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In an increasingly interconnected and interdependent world, intercultural approaches contribute to ensuring and maintaining human security. In various forms of materialization, they promote open, tolerant, accepting and understanding attitudes, as well as the recognition and respect for cultural differences among people. Intercultural education, appreciated as a new level of education necessary for the realities of today's world and a means of resolving intercultural conflicts, corresponds to the third pillar of education inscribed in the UNESCO Report on 21st Century Education – the habit of living together with the others. For human security, intercultural education has an essential role, contributing to reducing various and multiple challenges by promoting values and attitudes, such as: respect for dignity and human rights, tolerance, understanding, openness to cultural differences, civic spirit. The objective of this scientific approach is to highlight the fact that intercultural education involves an approach with an important contribution in support of human security; in order to achieve this objective, we will bring theoretical clarifications and we will highlight intercultural educational approaches at international and national level and within the European Union.

Keywords: intercultural awareness; multiculturalism; intercultural dialogue; intercultural education; human security; approaches.

"What we need to do is find a way to celebrate our diversity and debate our differences without breaking our communities"¹

Hillary Clinton

Brief theoretical clarifications

Theoretical conceptual clarifications are necessary at the beginning of any scientific approach, especially since there are important differences between intercultural awareness and multiculturalism. It should be noted that both perspectives recognize cultural diversity, which is "a defining characteristic of humanity; a common heritage of humanity; it creates a diverse world that increases the number of options and enriches human capabilities and values; it is indispensable for peace and security at the local, national and international levels"².

The term *multicultural* describes the diverse cultural nature of human society, with reference to elements of ethnic or national culture, as well as linguistic, religious and socio-economic diversity. The term *intercultural* is a dynamic one and refers to the evolution of relations between cultural

groups, specifically to the existence and equitable interaction of different cultures and the possibility to generate common cultural expressions through dialogue and mutual respect³.

Intercultural awareness presupposes multiculturalism, but it goes beyond it, being a vision that responds to the multiple challenges of the international context, which implies openness, tolerance, understanding and mutual respect.

Addressing the aspects of intercultural awareness, Antonio Sandu mentions that intercultural awareness means "different", more precisely "an explanation of the coexistence in the given social framework of several "worlds with diverse cultural experiences"⁴. The term *intercultural* is used, especially, when we talk about education, and *multicultural*, when it comes to a culturally diversified society.

A differentiation between intercultural awareness and multiculturalism is shown in Table no. 1)⁵:

Intercultural dialogue strengthens respect for cultural diversity in the context of an increasingly complex and changing reality and a world in which different cultural identities and beliefs coexist.

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Table no. 1

INTERCULTURAL – MULTICULTURAL DIFFERENCES

Intercultural awareness	Multicultural awareness
It refers to the reciprocity and interdependence between different groups; communication is a tool that facilitates dialogue, exchange, mutual understanding between individuals or groups with different backgrounds and affiliations.	It refers to the culturally diverse composition of human society and expresses the diversity of ethnic, national, linguistic, religious and socio-economic culture of social systems whose cohesion is based on respect for certain norms and values
It is more interactive than multiculturalism, facilitates cultural exchange, allows for change and transformation; it promotes community cohesion through interaction, dialogue and participation in the common life of society based on what unites them and less on cultural differences.	It preserves the cultural heritage over time; it emphasizes differences and diversity.
It is a perspective encouraged and promoted in the European context.	It is specific to the Anglo-Saxon world, socio-cultural and ethnic mosaic societies (USA, Canada, Australia).

Every year, on 21 May, *World Day for Cultural Diversity, Dialogue and Development* celebrates the richness of the world's cultures and emphasizes the essential role of intercultural dialogue in achieving peace and sustainable development.

Intercultural education is an answer to the problems of the contemporary world, which corresponds to the third pillar of education – *the habit of living with others*⁶; it is an approach to the teaching-learning process based on democratic values and beliefs that promotes cultural diversity in the context of diverse societies and an interdependent world. The founder of intercultural communication, Edward T. Hall, called its teaching *intercultural education*⁷. Intercultural education is "an umbrella term that includes a number of interdependent concepts encountered in the literature, such as: multicultural education, cross-cultural education, anti-racist education and the inclusion of diversity"⁸.

The concept of *human security*, originally defined in the Human Development Report prepared in 1994 by the United Nations Development Program, is an integrative concept whose essence is human development and the protection of human rights. By addressing human security issues, the scope of security analysis and security policy analysis extends from state security to human security. According to some authors⁹, human

security, together with other concepts, such as global civil society, human development and human rights, appears as a response to new challenges within states or to regional and international confrontations.

From theory to practice, approaches in support of human security

At international, regional and national level, the various approaches have a pronounced educational character and support the idea that intercultural education is based on a vision of a world in which human rights and human development are respected and where democratic participation and the rule of law are guaranteed to all. Dignity, tolerance, respect, friendship, understanding, respect for human rights and fundamental freedoms, etc. are some of the key words of the materialized approaches but also of the human security.

The United Nations, since its inception, has encouraged its recognition and acceptance of diversity and global cultural dialogue on common goals and values in support of human security; in this sense, the Charter of the United Nations (1945) and the Universal Declaration of Human Rights (1948) are suggestive.

Various efforts to support human security have been carried out internationally by the United Nations Educational, Scientific and Cultural Organization;



we can mention: "Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms" (1974); "Declaration on Race and Racial Prejudice" (1978); "UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expression" (2005); various publications, such as "Education and Cultural Diversity" (2002), "UNESCO Guidelines on Intercultural Education" (2006), "Learning to live together: an intercultural and interfaith program for ethics education; UNESCO – sponsored programs and publications" (2008), "Education for intercultural understanding" (2010) or "Culture in crisis: policy guide for a resilient creative sector" (2020)¹⁰.

The Council of Europe promotes human rights and upholds freedom of expression, as well as equality and the protection of minorities. Among the efforts to promote human rights and contribute to human development are: "Declaration regarding intolerance – a threat to democracy" (1981), "Recommendation R (85) 7 on Teaching and Learning about Human Rights in Schools" (1985), "White Paper on Intercultural Dialogue, *Living Together Equally in Dignity*" (2008); "Convention on Preventing and Combating Violence against Women and Domestic Violence" (2011); the course organized between October 29 and November 25, 2019¹¹.

The European Union, a multicultural space, supports national identities by circulating cultural and spiritual values and norms in this space. Intercultural educational efforts to support human security are based on respecting the identity of the host country, exchanging knowledge and deepening mutual understanding of each other's culture, respecting and combating prejudice¹². We mention: the Treaty on the Functioning of the European Union (Articles 6 and 167) defining the role of the Union in supporting (including financial support), complementing and coordinating Member States' efforts to preserve and respect the cultural diversity of EU, expressed by the slogan "United in diversity"; Recommendation of the European Parliament and of the Council of the European Union on key competences for lifelong learning (2006); Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and

the Committee of the Regions, *Communication on a European Agenda for Culture in a Globalizing World* (2007); Council Recommendation on the promotion of common values, of inclusive education and the European dimension of teaching (2018), "Creative Europe Program", 2014-2020; ERASMUS program for students. The opening of the European Union for intercultural dialogue and its contribution to the achievement of a number of EU strategic priorities culminates with the declaration of 2008 as the *European Year of Intercultural Dialogue*, by Decision no. 1983/2006/ of the European Parliament and of the Council.

Due to its geographical positioning, Romania makes the connection between the western and the eastern civilization. In the Romanian space, loaded with history and legend, multiculturalism and intercultural awareness were and remained a reality in many fields (cultural, religious, social, economic), enriching and giving uniqueness to the national specificity.

Referring to the respect of the particularities of the ethnic groups on a national level, Simion Mehedinți mentioned: "Let each one live with his language, with his law, with his art and with all of his, if he is satisfied with what he has. We, as the natives of this earth, are obliged to share with anyone like you, from our culture, just as we share daily from the culture of other older or newer peoples"¹³.

National intercultural approaches in any form intended to maintain open relations and individual and group security have always manifested themselves in this Romanian space. In this regard, an important step is the signing of the "Framework Convention for the Protection of National Minorities", on February 1, 1995, Romania being the first state to ratify this document, on April 29, 1995, depositing the instrument of ratification in less than three months after its adoption on 11 May 1995¹⁴.

At the national level, along with legislative approaches, intercultural education promotes an education for all, majority and minority, peacefully.

In July 2007, for the first time in the Romanian education, the issue of cultural diversity was introduced "in order to train students for a society characterized by cultural diversity"¹⁵ Subsequently, the optional subject *Intercultural Education* was

introduced in the gymnasium and high school curriculum. The essence of intercultural learning consists in the formation and development of attitudes and behaviors aimed at the ethical component of students' personality and their manifestation in interpersonal relationships.

Aspects of intercultural awareness are also addressed in university programs. Many universities, for example: Faculty of Communication and Public Relations within the National School of Political and Administrative Studies, "Alexandru Ioan Cuza" University, "Dunărea de Jos" University, Faculty of Security and Defence within "Carol I" National Defence University, Western University in Timișoara, Babeș-Bolyai University in Cluj), introduced in the curricula disciplines such as: Intercultural communication, Intercultural education, Management of cultural diversity. At the same time, specializations have emerged and developed within the university study programs, such as: the undergraduate program "Public and intercultural communication in the field of security and defence" of the Department of Strategic, Public and Intercultural Communication / Faculty of Security and Defence / "Carol I" National Defence University; the master's degree program "Intercultural communication and professional translation" within the "Hyperion" University; master's program "Public Relations and Intercultural Development" at "Ovidius" University; the master's program "Intercultural Management" within the Faculty of Philosophy – University of Bucharest.

Other approaches are books, articles, studies or projects on intercultural issues. To exemplify we mention a few: the study published in November 2010, "Intercultural education: from theory to practice – implementation of intercultural education in multiethnic schools in Romania"¹⁶; the project "Romanian Culture and European Cultural Models, Research, Synchronization, Sustainability" co-financed by the European Social Fund through the Sectoral Operational Program for Human Resources Development 2007-2013, which includes the research with the title "Development of the Intercultural Curriculum in Romania"¹⁷; the national project "My Multicultural Journey"; the round table "Regional Intercultural Landmarks" in February 2017; the project "Combating Intolerance Through Intercultural Education in Schools" in September 2019; projects carried out by the Center

for Intercultural Research and Communication¹⁸; quantitative research conducted in order to analyze students' perceptions of cultural and intercultural aspects and the need to develop intercultural skills¹⁹.

To the above examples some others are added: the NGO *Intercultura Romania*²⁰, whose purpose is to offer young people international experiences and intercultural education programs and the program "Human Security"²¹, designed to promote national and European public policies designed to contribute to increasing well-being individual, personal security and respect for human dignity; The Intercultural Institute of Timișoara²², an autonomous, non-profit non-governmental organization with cultural, civic and scientific activity, without political purposes, which accepts and promotes the values and principles of the Council of Europe in the field of intercultural awareness.

Conclusions

Culture and creativity are important drivers of personal development, social cohesion and economic growth. In this sense, the various approaches related to intercultural awareness come in support of human security.

Among them, intercultural education, through anti-racial, anti-xenophobic, anti-discriminatory and relativizing activities of existing cultures, is a factor of democratic stability and conflict reduction, promoting values and attitudes specific to human security (for example: positive appreciation of cultural differences, respect towards one's own cultural identity and towards the cultural identity of others, tolerance and understanding, respect for human dignity and rights, peaceful resolution of conflicts).

Shaped by the history and traditions specific to states, as well as by existing national socio-political and educational systems, intercultural education has an essential contribution to respect for human rights and human development.

Barriers to communication can be removed through intercultural dialogue in support of human security and regional cooperation to stabilize relations between the states of some regions (such as the Black Sea Region or the Middle East).

Our final conclusion is that, regardless of the way of materialization, human security efforts recognize human rights as fundamental to human



development, address culture as a necessity for achieving sustainable development goals and support intercultural exchange to promote social and economic development for the benefit of all.

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THE MULTIDOMAIN APPROACH WITHIN LAND FORCES' OPERATIONS

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The frequency of operational changes, which are often unpredictable, and the difficulty of addressing the challenges posed by them represent sufficient motivational factors to trigger the Land Forces' adaptation to the requirements of the operational environments. For these reasons, the article aims to highlight the foundation of a new operational approach able to ensure for Land Forces' military structures the augmentation of their combat power and also the possibility to transcend the traditional approach of the military operation to a multidomain one, much more suitable to the context of contemporary and future operational environments. Also, highlighting the attributes necessary for commanders, staff and subordinate structures, as well as analyzing the operational implications for Land Forces' military structures are the primary objectives which are circumscribed to the purpose of this research.

Keywords: multidomain approach; JIIM; MDO; combat power; combat functions.

As introductory aspects, highlighting the context of the need to transcend the operational approach based on using the combat functions, it can be stated that there were many situations in which the Land Forces, in general, and their organic structures, in particular, did not have an adequate operational response or, in other words, their operational response did not generate the intended effects. There are many examples of this, but perhaps the most appropriate are Operation Inherent Resolve (OIR), which is still ongoing, or the COVID-19 pandemic situation, perceived by all entities involved in its management as well as by the affected parties, as being extremely volatile, uncertain, complex and ambiguous (VUCA). What is certain is that, regardless of the operational context of different military forces, they have to use permanent adjustments, due to the fact that in approaching any operational environment there will be accentuated discrepancies between the planning activity and the execution one. Moreover, approaching the operational environments by the Land Forces using the combat power's elements such as leadership, information and dedicated combat functions, is somewhat insufficient, having an apparently isolated character, reflecting negatively on its direction. On the other hand, the management of COVID-19 pandemic, which many

structures from Land Forces take part in, provides the necessary context for rethinking the operational modalities with obvious effects on combat power and operations process.

Therefore, based on the lessons learned from the highlighted examples, and not only, the modeling of the combat power generated by Land Forces' military structures should be performed in order to amplify nonlethal actions through integration of all target domains, especially non-military ones, which, until recently, have not been part of the military operational strategies.

Operational approach using combat functions versus multidomain approach

At present, most of the Land Forces from modern armies perform military operations by generating and directing combat power throughout the area of responsibility (AOR), area of operations (AO), which, as we know, can be individual, joint (Joint Operational Area – JOA) or multinational (Combined Joint Operational Area – CJOA) in nature. This traditional approach of military operations is based on the principle that "commanders apply combat power through warfighting functions using leadership and information"¹.

Starting from this principle, a first step in adapting the traditional approach of military operations, no matter the level of the employing structure, has already been initiated and consists in integrating them into the unified action, respecting the model promoted by the Army of United States

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of America (USA) or within the comprehensive approach, according to the doctrinal principle of the North Atlantic Treaty Organization (NATO). Basically, named differently, their meaning is similar, being summarized as:

objectives"⁴. Analyzing the previous definition, we find the insertion of key notions such as those highlighted in Table no. 1.

Along with these concepts associated with multidomain approach, another term is that of

Table no. 1

TERMS USED TO UNDERSTAND MDO

Terms	Significance
<i>calibrated force posture</i>	„the combination of capacity, capability, position, and the ability to maneuver across strategic distances” ⁵
<i>multidomain formations</i>	„possess the combination of capacity, capability, and endurance which generates the resilience necessary to operate across multiple domains ... can conduct independent maneuver, employ cross-domain fires, and maximize human potential” ⁶
<i>convergence of multidomain capabilities</i>	„rapid and continuous integration of capabilities in all domains, the EMS, and the information environment that optimizes effects to overmatch the enemy through cross-domain synergy and multiple forms of attack ...” ⁷ ; EMS stands for electromagnetic spectrum

- unified action – represents ”the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort”²;

- comprehensive approach – performed through the ”effective coordination and cooperation among national governmental departments and agencies, non-governmental organizations (NGO), intergovernmental organizations (IGOs), local authorities and the private sector”³.

This first step, consisting in the integration of land operations into the unified action or comprehensive approach is the bridge between the traditional engagement of operations and the one of multidomain. Therefore, an essential element in solving this puzzle of the multidomain approach is the one of multidomain operations (MDO), defined in the military literature as ”operations conducted across multiple domains and contested spaces to overcome an adversary’s (or enemy’s) strengths by presenting them with several operational and/or tactical dilemmas through the combined application of calibrated force posture; employment of multidomain formations; and convergence of capabilities across domains, environments, and functions in time and spaces to achieve operational and tactical

multidomain battle (MDB), formalized by the USA Army as a solution to obtain operational advantages in conducting Land Forces’ operations. Consisting in ”convergence of capabilities to create windows of advantage (often temporary) across multiple domains and contested areas throughout the depth of the battlespace to seize, retain, and exploit the initiative; defeat enemies; and achieve military objectives”⁸, this term is introduced to resurrect the ability of Land Forces’ structures to maneuver and generate interconnected multidirectional effects in order to create and exploit operational opportunities both at strategic level, and especially for operational and tactical ones.

Therefore, correlating all these concepts and transposing them on the current strategy for approaching the military operations (performing combat functions), it can be concluded that the multidomain approach of Land Forces’ operations assumes the augmentation the combat power of organic structure by integrating the capabilities from various domains such as joint, interagency, intergovernmental, and multinational (JIIM). Graphically, the multidomain approach within Land Forces is highlighted in Figure 1.

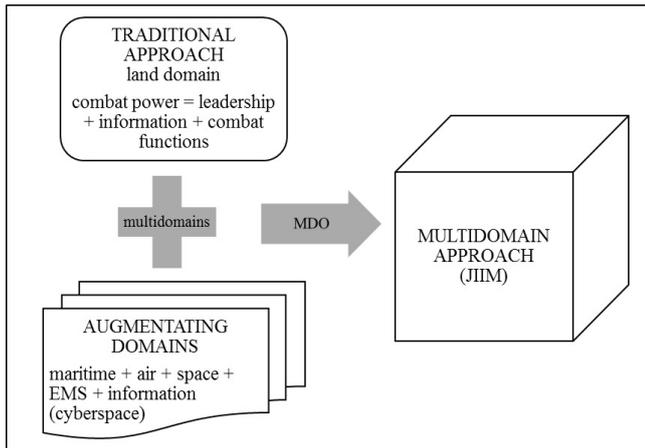


Figure 1 Multidomain approach within Land Forces (The author's conception)

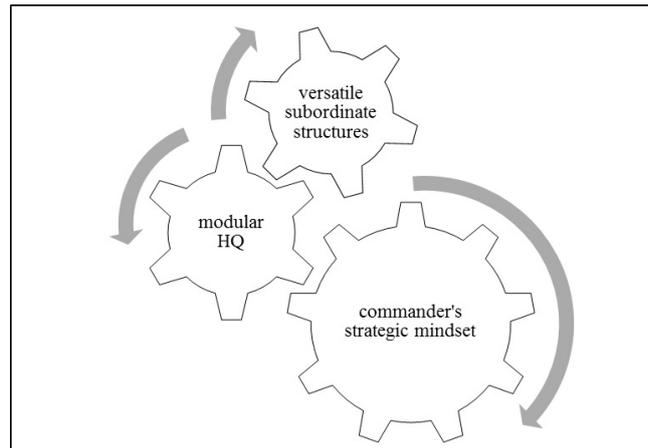


Figure 2 Minimal attributes for Land Forces' multidomain approach (The author's conception)

Consequently, the problem that arises can be reduced to optimizing the traditional approach of military operation and not giving up its use, as the multidomain approach of Land Forces should be understood as an optimized version of the previous one by integrating the capabilities from multiple domains in order to maximize the effects.

Attributes for commanders, staff and subordinate structures

Certainly, the use of the multidomain approach by the Land Forces determines a series of implications at the level of dedicated military structures. In this sense, in Figure 2 there are pictured some critical attributes of the multidomain approach, imprinting the commander, headquarter (HQ) and subordinate structures.

Related to the strategy of developing Land Forces' multidomain approach, this involves building all minimum critical attributes, the absence of one from these affecting in a negative fashion its application or, in a much more unfortunate situation, making impossible its engagement in specific military operations.

The first attribute, strategic mindset, once developed, will provide that "ability to successfully deal with change and ambiguity through creating common purpose, buy-in and alignment with workgroups supported by sound strategy formulation and implementation"⁹. In the context of military operations, the strategic mindset does not target strategic commanders, as this requirement is already their attribute, but rather those who operate within the operational and tactical structures. Exemplifying for the tactical level, strategic

thinking offers a brigade commander, even a battalion commander, the ability to easily decipher the operational contexts specific to the operational and strategic levels based on understanding the common operational picture (COP). In this way, the tactical commander will have the ability to make sound decisions whose application will generate second or even third order effects.

The next attribute, the modular HQ, implies its augmentation with structures and personnel from different fields (braches/specializations, services, agencies, civil organizations, and so forth) related to mission's analysis, so that the HQ might become much more robust, able to correlate and perform multidomain activities and tasks. The HQ's augmentation in the sense of developing its modularity can be achieved either in the form of integrating in its organic the target structures and personnel, or through close interdepartmental or interinstitutional cooperation, if the first form is not at hand.

The last attribute highlighted in the figure above, the versatile subordinate units, is a primary effect of modularity and refers to "the physical and structural ability to perform many functions"¹⁰. Therefore, in the multidomain approach, the versatile subordinate forces will be able to carry out simultaneously and/or successively multiple activities in diversified environments to achieve the desired tasks and effects. A solution for developing the forces' versatility is to organize them in the form of battle groups (BG) in relation to the mission's requirements and the nature of CJOA/JOA/AO.

Consequently, the development of these attributes is an essential step for the multidomain

approach, depending on the development of other additional capabilities. For these reasons and also having the necessary framework formalized, it can be appreciated that the more developed the minimum attributes, the higher the probability of using multidomain approach in the Land Forces' operations.

Operational implications for the Land Forces

At the level of the USA Army, transposing the MDO into reality reflects on the amplified possibilities of maneuvering and operational support (OS) in the three plans of military operations: strategic, operational, and tactical (Table no. 2).

first of all, the adjustment of the values from the table above in relation to the perspectives of developing the Land Forces and Romanian Army capabilities. Moreover, adjustments are needed in the doctrine and operational strategies that will imprint the techniques, tactics, procedures (TTPs) used by different military structures from Land Forces' configuration.

Most likely, in order to attain the desired end state (DES), the operational principle of multidomain approach within national Land Forces is the one pictured in Figure 3.

It can be noticed that the final actionable agents will be represented by the modular tactical

Table no. 2

MANEUVERING/OS POSSIBILITIES USING MDO – USA ARMY¹¹

Levels of military operations	Maneuver	OS	MDO capabilities
strategic	-	> 5.000 km	land, air, maritime, spatial, EMS, information (cyber)
operational	-	> 1.500 km	
tactical	> 200 km	> 500 km	

As it can be seen, the data presented spin around the tactical level of USA Army's operations. Therefore, using MDO capabilities, tactical military structures can perform the maneuver over a much longer distance (200 km), being under the coverage

military structures (MTMS). Regarding the force's modularity, it is essential for MDO engagement, as it firstly allows modeling the force related to the operational requirements and mission analysis, and secondly ensures the ability of organic elements to

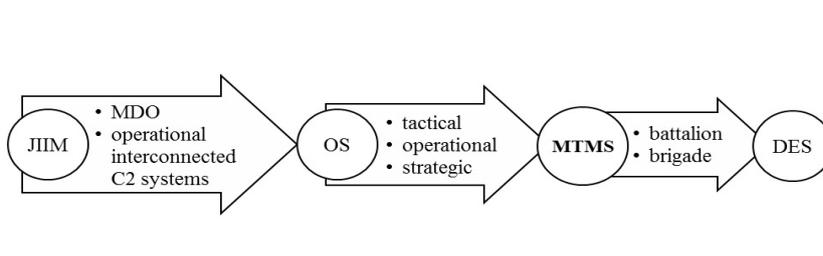


Figure 3 The operational principle of multidomain approach within Land Forces (The author's conception)

of tactical, operational and strategic OS according to the values from Table no. 2. On the other hand, the above information is applicable to the USA Army, but due to the fact that USA is a member of NATO it should be considered from the perspective of common military action, assuming the prior coagulation of multinational military structures in an allied context.

Regarding the perspective of MDO implementation at national level, this determines,

be "interchangeable, expandable and tailorable ..."¹². In the operational context, all these effects of modularity are generated by changes in the operations process, fueling the engaging structures and elements with increased capacities for action, reaction and counteraction to counter threats or take advantage of opportunities arisen in the dynamics of military operation.

Generally speaking, the interconnectivity and synergy of JIIM domains, covering the whole



spectrum of the operations, will generate the strategic, operational and tactical OS, able to ensure sufficient supplementation of the MTMS combat power. During military operations, the MTMS can benefit from the effects of the JIIM relationship, either indirectly through higher echelons, or directly, in culminating decision-making situations, when timely provision of critical OS can make the difference.

Conclusions

The aspects highlighted in this article have substantiated the awareness and understanding of some possibilities for adapting the Land Forces to the requirements of operational contexts. Regarding the proposed solution, the one of multidomain approach, it brings as a novelty the resizing of the MTMS combat power by catalyzing specific elements, using the capabilities of all spectra of the operational environment, which once correlated, will rise to MDO or MDB. Thus, in an operational context, benefiting from multilevel and multispectral OS, the MTMS will use significantly increased key functions, both in terms of discovering, fixing and striking the enemy, and, especially, in exploiting success.

Also, solving the problem exposed, through its absolute novelty and extremely complex character, transcends the ways of linear thinking, requiring theoretical-praxiological approaches in nonlinear reference horizons, as the physiognomy of the operational environment is estimated. Thus, in the sense of the multidomain approach, as we have seen, this principle has a much stronger impact on military operations' agents and, in particular, on commanders, the most requested being the tactical ones, because the application of strategic thinking is much more difficult for military structures located at the primary level of the operations, such as the tactical. With integrated visualization of the operation (strategic, operational, tactical), based on understanding the multilevel COP, the MTMS commanders will be able to provide timely decisions to ensure the necessary conditions for subordinate forces to achieve the actionable performance.

On the other hand, building and developing the multidomain approach within Land Forces, cannot be solved only by formalizing the principles and TTPs inside specific doctrines and operational strategies, although this should be the initial phase

of the overall process. Once the initial phase has been completed, the effort will focus on coagulating the MDO knowledge, skills and abilities at the level of MTMS personnel, a considerable contribution belonging to the planning and development of JIIM exercises whose scenarios will have to ensure sufficient actionable contexts for the simulated force within all spheres of the operational environment. For this desideratum to become a reality, organizational reconfigurations of land military structures are required, in terms of the staff and subordinate forces' organization.

Moreover, although the subject of this research has focused only on the Land Forces, in the sense of formalizing and developing coherently the multidomain approach, similar efforts should be made by other military services, agencies or other entities involved. Only in this way, will the collective effort of the structures involved guarantee the setting of a joint, interdepartmental, intergovernmental and/or multinational mentality that will ensure the integration into the operation of the highlighted principles. In other words, a unified conception of multidomain approach should be defined, accepted by all the parties involved. In this respect, it is necessary to develop working groups to include the participation of specialists from all the mentioned fields.

Finally, it can be concluded that approaching the operation by employing multidomain capabilities is not only an imperative for the operational adaptation of the Land Forces to NATO requirements, but can also be a national strategy whose applicability on medium and long term will ensure lethal/nonlethal effects in the most marked operational contexts by VUCA characteristics, as that of COVID-19 pandemic is considered.

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CURRENT BENCHMARKS ON THE NATIONAL RECOVERY AND RESILIENCE PLAN, AN INSTRUMENT THAT PROMOTES FINANCING FOR RESULTS – DIRECT FINANCIAL SUPPORT FOR THE MINISTRY OF NATIONAL DEFENCE

Carmen-Gabriela NIȚU (CHITAFES), PhD Candidate*

This article will discuss in detail the role of the National Recovery and Resilience Plan (NPRR), a topic that deserves attention, because it is a budget support for reform, a new mechanism that has been thought on a totally different logic, correlated with the approach used for the management of cohesion funds and will also highlight the fact that the Ministry of National Defence was introduced among the institutions involved in updating this plan. At the level of the Romanian state, "the Ministry of European Investments and Projects was mandated to coordinate and be responsible for the process of elaboration and negotiation of NPRR with the European Commission". The Ministry of National Defence has the quality of institution involved in the following fields of intervention: Transport, Health, Education, Research, innovation, digitalization as well as Resilience in crisis situations. Through the Recovery and Resilience Mechanism (RRF), the European Union (EU) provides funded Member States for the implementation of systemic and structural reforms and investigations, harmonized with EU priorities and policies.

Keywords: National Recovery and Resilience Plan (PNRR); Recovery and Resilience Mechanism (MRR); investments; phasing.

This article aims at outlining the role and importance of the National Recovery and Resilience Plan (NPRR), this new tool that the European Commission provides to the Member States, a document being created and implemented based on a completely different logic than the structural and investments European funds. Through the Recovery and Resilience Facility (RRF), the European Union (EU) the member states are given budgetary support to implement systemic and structural reforms and investments, harmonized with the EU priorities and policies, in the context of the COVID-19 pandemic outbreak, for the correction of the economic perspectives in the EU in the coming years.

The volatile and unpredictable results, on a long and medium terms, will be reflected in all the economic sectors. No economy can develop, transform, modernize without financial support. The *investments* are a true benchmark of contemporary economic development.

This is why, in order to define the reforms, so essential for our country, the Ministry of Investments and European Projects (MIEP) closely cooperates with the specialized ministries and central public authorities, named in the Memorandum: "Mechanism for the elaboration of the Romanian Government position as concerns the NPRR" approved during the Government meeting on January 20, 2021.

In this context, MIEP started all the formalities for the elaboration of the NPRR in October-November 2020, when a first version of the document was issued, according to the initial form of the Regulation Proposal no. 480/2020. This was released on November 26, 2020 and published for consultation, thus the first technical discussions with the European Commission were held in November-December 2020. The initial version of the NPRR was structured based on three investment pillars, which included the relevant reforms and, at present, with the update of the NPRR, the aim is to comply with the new provisions of the Regulation of the European Parliament and of the Council for the establishment of the RRF, i.e. matching the intervention areas in the NPRR with the six pillars defined in the RRF Regulation, which are: Pillar 1

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"Transition to a green economy"; Pillar 2 "Digital transformation"; Pillar 3 "Intelligent, sustainable and inclusive economic growth"; Pillar 4 "Social and territorial cohesion"; Pillar 5 "Institutional health and resilience"; Pillar 6 "Children, youth, education and competence".

It is worth knowing that MIEP, as coordinator and responsible for the elaboration and negotiation of the NPRR with the European Commission, has started to update NPRR, a Technical Commission being established for this purpose, as to contribute to the NPRR. Its members are representatives of the specialized ministries competent for the target sectors. Moreover, in order to negotiate with the European Commission, MIEP suggested representatives of the *Presidential Administration, of the coordinating deputy prime-minister, of the General Secretariat of the Government, of the Ministry of Finance, of the Department for Sustainable Development of the Government*¹ should be involved and attend the meetings, together with representatives of the specialized ministries, covering activities and projects under the NPRR, in order to ensure efficient implementation.

The period for the completion of the implementation of all the set objectives cannot exceed August 31, 2026; there is no possibility for phasing and no projects started before February 1, 2020 can be financed, but the expenses incurred after February 1, 2020 can be settled.

Attempting to understand the term phasing, we can say that it consists of the manner to organize the financing of a project during two programming periods, for the purpose of limiting risk of uncompleted projects (which would thus become non-eligible) and to increase absorption in the first phase². In other words, according to Article 40 letter (d) in the Regulation (EC) no. 1083/2006, "the member state or the managing authority shall provide the Commission with the following information on major projects: a timetable for implementing the project and, where the implementation period for the operation concerned is expected to be longer than the programming period, the phases for which Community co-financing is requested during the 2007 to 2013 programming period"³, the phasing of projects reduces the risk of de-commitment if the projects are not completed until the end of the period.

As there is no possibility of *phasing*, the projects must be mature and feasible and have a

significant impact on the economic development of Romania.

The implementation of the measures established by MIEP, i.e. the elaboration of a working plan and of a timetable of consultations both with the specialized ministries and with the representatives of the private sector, of the civil society, with the unions and with the other dialogue partners, has led to the fast mobilization of all the entities involved in the update of the NPRR.

An important aspect which should not be neglected is that, until January 20, 2021, the technical and coordinating teams in charge with the elaboration of the components at the level of each specialized ministry were appointed.

In this respect, between 01-05.02.2021 there were public consultations with the stakeholders in each area, as follows:

- 01.02.2021 *Transport and Environment, climate change, energy, energy efficiency and green transition;*
- 02.02.2021 *Urban development, cultural heritage and improvement of buildings;*
- 03.02.2021 *Health and Education;*
- 04.02.2021 *Business environment, entrepreneurial ecosystems and Research, innovation, digitalization;*
- 05.02.2021 *Agriculture and rural development and Crisis resilience.*

The second round of public consultations with the above-mentioned institutions is scheduled for the week 15-19.02.2021. During this round of consultations, MIEP, together with the specialized ministries, will:

- establish methods and means to implement the reform and identify the investments in connection with the objectives of each component;
- establish the interim objectives, financial targets, as well as the costs related to the reforms and investments.

At the same time, in February, the technical teams per areas of interventions will convene to correctly define the reforms in the sense of the RRM.

As far as public consultations are concerned, including those with the social and economic partners, we can mention that between 08-12.02.2021 there were daily public debates with the partners in the business environment, NGOs and all the stakeholders for the update of the National Recovery and Resilience Plan, i.e.:



- 08.02.2021 – Youth and Rural Development and FNGAL (National Federation of Local Action Groups);

- 09.02.2021 – Association of Municipalities, Business Community and Declic;

- 10.02.2021 – Association of County Councils and Civil Society Development;

- 11.02.2021 – NGOs poverty and Association of Communes;

- 12.02.2021 – NGOs environment and Unions and Employers⁴.

At the same time, the deadline for the update of the NPRR, as a final version, is end of February 2021. This leads us to the idea that the correlation of the NPRR projects with the specific targets in the country recommendations has to be taken into consideration⁵. The reforms and investments undertaken through the NPRR are based on analyses, studies, strategies of the institutions involved in this approach. The underlying documents are the Country Reports of the European Commission for the years 2019-2020.

After the completion of the steps presented above there will be informal discussions with the staff of the European Commission (SG RECOVER) between 08-31.03.2021, in order to negotiate the updated version of the NPRR.

Promoting the importance of the involvement of Ministry of National Defence is updating the NPRR

I have always wondered, as an internal public auditor/counsellor at the Ministry of Investments and European Projects, as well as a Ph.D. student in military sciences, how we can improve the national military capabilities and how we can succeed in identifying practical solutions to access and use European funds at the level of the Ministry of National Defence, as an extra-budgetary resource in modernizing the Romanian army.

This stage of our scientific research has led to reaching one of the essential objectives, i.e. to identify and provide elements useful to the Romanian society, by the Ministry of National Defence accessing European funds, in order to reach the strategic security objectives and to achieve national defence success.

Thus, the contribution of the Ministry of National Defence to the update of the NPRR is, in our opinion, an important step, through the active

and responsible involvement and participation of the appointed technical teams, in order to present the working modalities and to complete the elaboration process. The representatives of the Ministry of National Defence have attended the meetings of the sectors: Transport, Health, Education, Research, Innovation, Digitalization, as well as Crisis Resilience.

The common mission, together with the Ministry of National Defence, is the identification of those projects and investments, new or in progress (since February 2020), in connection with the objectives of each component and with the related reforms.

At the same time, the Ministry of National Defence has to elaborate a list of investments (projects) deemed eligible, adequate, relevant, feasible and mature from the point of view of the RRM regulation. In order to support the specialized ministries, including the Ministry of National Defence, as well as the institutions, organizations and individuals interested in the update of the NPRR, MIEP also proposes a Reforms and Investments Sheet, which a tool helping formulate and submit proposals for the update of the NPRR in a "standardized and simplified form"⁶.

Besides that, in order to timely complete the list of investments and reforms for each sector, the Ministry of National Defence had to appoint a coordinator at political level, as well as a representative at technical level, in charge with maintaining a permanent dialogue with MIEP⁷.

The Ministry of National Defence, as an institution involved in elaborating and updating the NPRR, supports the specialized ministries, appointed as institutions responsible for certain intervention areas, in order to submit an adequate in-depth reforms program in certain areas essential for the EU member states, aiming at approaching the structural deficiencies of the economies and at ensuring the strengthening of their resilience to future challenges. The proposals submitted, which are to be included in the NPRR, shall address reforms in the relevant sector. These reforms are to be followed-up through "milestones", which incorporate "targets" and interim objectives or landmarks, as these are defined in the regulation.

Another conditionality to be taken into consideration refers to the maturity of the projects proposed for funding under the plan by the

Areas of intervention and institutions responsible

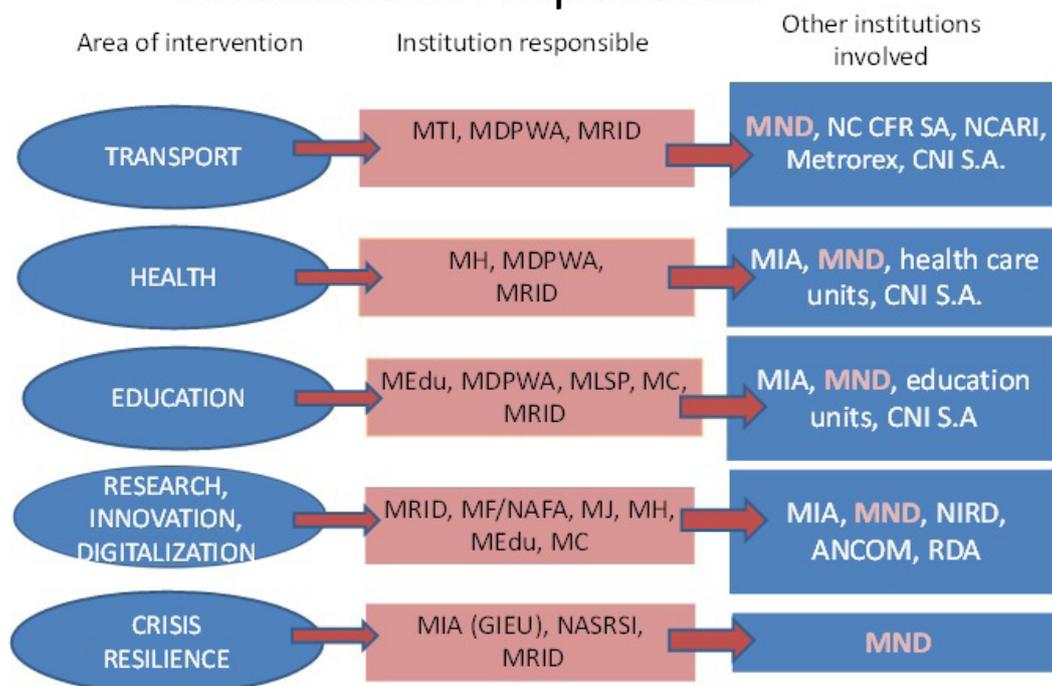


Figure 1 Main area of intervention and responsible entities

Source: Adaptation of the Memorandum: *Mechanisms for the elaboration of the Romanian Government position as concerns the NPRR*, 2021, pp. 3-4.

Ministry of National Defence, a very important element in this respect being that the projects must be completed by August 31, 2026.

As concerns the complementarity and orientation of the NPRR, the suggestion of the European Commission to the Romanian authorities has been to search other funding sources as well, NPRR being practically an alternative for the reforms that cannot be funded from other sources, such as structural funds, programmes managed directly by the European Commission.

Then, the interim objectives, the financial targets, as well as the costs of the reforms and investments are to be set. The interim objectives and the targets must refer to a timeline between 2021 and 2026, as there will be two payment application each year, for which progress must be reported in connection with the interim objectives and with the targets. If the interim objectives and the targets are not met, the costs of the investment are to be paid from the state budget.

NPRR must present a set of in-depth reforms of certain intervention areas essential for the EU

member states, aiming at addressing the structural deficiencies of the economies and to ensure the strengthening of their resilience to future challenges.

For a unitary approach, the sectoral negotiations will be coordinated by MIEP, and the Ministry of Finance and the Ministry of External Affairs will facilitate the organization of informal discussion with the staff of the European Commission.

This is why at present Romania is in a position favourable to strengthening the national defence capabilities and we are, at the same time, witnesses to the configuration of partnerships between the Ministry of National Defence and the following specialized ministries in charge, through a common effort, based on the Memorandum "Mechanisms for the elaboration of the Romanian Government position as concerns the NPRR": Ministry of Transport and Infrastructure, area of intervention Transport; Ministry of Health, area of intervention Health; Ministry of Education, area of intervention Education; Ministry of Research, Innovation and Digitalization, area of intervention Research,



Innovation, Digitalization; Ministry of Internal Affairs, area of intervention Crisis Resilience.

The deadline set for Romania to officially submit the NPRR to the European Commission is April 30, 2021. According to the latest information from the European Commission, the regulation is estimated to be approved in February 2021, and the deadline for the submission of the plan can be deferred. Under NPRR, the investments and reforms must be presented as a coherent package, starting from the Specific Country Recommendations (SCT) 2019-2020. At the same time, it has to be taken into consideration that the investments and reforms covered by the plan must contribute as high as 37% to the climate change objective and as high as 20% to the digitalization objective. Through the GEO no. 155/2020 concerning certain measures for the elaboration of the NPRR required for Romania to access reimbursable and non-reimbursable funds under the RRM, MIEP was appointed coordinator and responsible for the process of elaborating and negotiating the NPRR with the European Commission⁸.

We fully agree that, in order to use the RRM financing instrument, each member state of the EU has to elaborate its own NPRR to decide the investments priority areas. This is where our country is at this moment. Given the very short period of time Romania has, we must focus and pay utmost attention to this priority dossier, proving commitment and determination in updating the NPRR, as well as cooperation, transparency and quick solutions.

In this context, the Ministry of National Defence, as part of the public administration, through its specialized structures and all the component entities, must be permanently prepared to face the current and future transformations and challenges. At the end, the Ministry of National Defence will insert the foreseen reforms and investments agenda in the NPRR, in line with the EU policy objectives, taking into consideration the green and digital transitions. In order to preserve the health and well-being of citizens in Europe and throughout the world, fast and sustained actions are required from all actors across the society. At the same time, we can notice that NPRR contains measures aiming at addressing the deficiencies of the economies in the member states and the stimulation of the growth potential of the economy

in the member state concerned, facilitating the creation of jobs and mitigating the negative effects of the crisis, promoting at the same time gender equality and green transition⁹.

The complex character of the Recovery and Resilience Mechanism

The European Union has decided to establish a temporary financial instrument – #NextGenerationEU, amounting to 750 billion euro, separated from the long-term budget of the EU, the Multiannual Financial Framework (MFF), for the period 2021 -2027. Its main purpose is to provide support to the member states to face the challenges of the COVID-19 crisis and its economic consequences. RRF is the main pillar of #NextGenerationEU, with an allocated total budget of 672.5 billion euro¹⁰.

The estimated budget allocated to Romania amounts to about 30.5 billion Euro under this RRF financing instrument, of which 13.8 billion Euro are structured as grants and 16.7 billion Euro as loans. The rule set under the Regulation Proposal (still being negotiated at European level) is for 70% of the grants to be committed until the end of 2022, the deadline for accessing the remaining 30% of the grants being December 31, 2023. Besides, the payments for the projects to be included in the national recovery and resilience plans must be made before December 2026¹¹.

Therefore, RRF is a mechanism proposed by the European Commission on May 28, 2020, in order to support public investments and reforms in the member states through grants and loans, helping them overcome the economic and social impact of the COVID-19 pandemic, as well as the difficulties of the flagship and digital transition, by the Regulation Proposal of the European Parliament and of the Council to establish the RRF no. 408/2020¹². The proposed recovery and resilience facility (the "facility") will provide financial support on a large scale for the public investments and reforms strengthening the resilience of the member states economies and better preparing them for the future. The facility will help the member states address the economic and social challenges they are facing even more acutely given the crisis in various sectors, such as social issues, employment, competences, education, research and innovation, health issues, as well as aspects

related to the business environment, including the public administration and the financial sector¹³.

RRF is also an instrument promoting funding against results, i.e. direct financial support to achieve the results proposed and to implement the reforms and public investments among the Member States, in response to the challenges identified in the European Semester¹⁴.

Therefore, MIEP representatives are responsible for the analysis and harmonization of the proposals submitted by the specialized ministries, based on the recommendations made by the dialogue partners. The mission and common effort of MIEP and of the specialized ministries involved in the process is to identify the challenges mentioned in the CSR, representing both structural problems and acute issues. Then, the reforms are defined. The reforms included in the NPRR has to provide for a balanced coverage of the 6 pillars agreed at European level: green transition; digital transformation; economy and competitiveness; social cohesion; health and institutional resilience; new generation (youth and children). NPRR refers to a coherent package of public investments and reforms proposed based on the Country Specific Recommendations 2019-2020. In the spirit of the RRF, the reforms and investments have to support each other. These reforms and public investment projects have to be implemented.

Under the RRF, *investment* is understood as any expenditure of an activity, project or another action in the scope of the Regulation. Investments have to lead to the achievement of the objectives of the Plan. Under NPRR, a vast range of means can be used to implement the reforms. For example: designing new or updated policies; regulations (law, regulatory acts, procedures) elaborated and implemented; construction and upgrade of infrastructure based on the principle "do no significant harm" (i.e. not to support or carry out activities bringing significant harm to an environment objective, as mentioned, as the case may be, in the Regulation (EU) 2020/852 of the European Parliament and of the Council [15] – EU Regulation on taxonomy. The Commission elaborates technical guidelines for orientation as concerns the practical implementation of the principle "do no significant harm", considering the said regulation¹⁵), procurement of equipment; subsidies; vouchers; grants or grant schemes or securities for loans; actions aiming at strengthening

the administrative capacities and to make the central and local authorities more efficient.

RRF financially supports the investments and reforms with a real and sustainable impact on the economy and society. The measures proposed meet the challenges identified in the context of the European Semester, supporting the green transition and the digital transformation, social and economic resilience and creation of jobs. NPRR has to intervene with reforms and investments in the following sectors: Transport; Environment, climate change, energy, energy efficiency and green transition; Urban development, cultural and natural heritage and tourism; Agriculture and rural development; Health; Education; Business environment; Research, innovation, digitalization; Improvement of buildings; Crisis resilience¹⁶.

Conclusions

Given the very short period of time to submit the NPRR to the European Commission, i.e. end of April 2021, a conjugated effort is required from all specialized ministries covering activities and projects under NPRR, with the involvement of the Presidential Administration, of the Government, of the coordinating deputy prime-minister, of the General Secretariat of the Government and of the Department for Sustainable Development of the Government¹⁷ including the Ministry of National Defence.

At international level, changes occur fast and the process of modernization, development and transformation of the Ministry of National Defence in terms of defence and security of Romania, this requires a set of projects closely correlated with the investments.

Modernization is a permanent process, requiring cooperation among all sectors, i.e. Transport, Health, Education, Research, Innovation, Digitalization, as well as Crisis Resilience, as well as a multidimensional process, influenced both by the internal factors of Romania, such as the national economy, the political decisions, as well as the external factors, such as the international political and military changes.

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COVID-19 – POTENTIAL IMPACT ON THE NAVAL POWER PROJECTION

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The naval power projection has the role of protecting the maritime interests of a country, of transmitting strong messages to both allies and enemies, of shaping the security environment so as to avoid the escalation of conflicts in a particular maritime space. In this article, we have analyzed how the projection of the elements of naval power, especially warships, is affected within the established missions and international commitments assumed because of the current background of the COVID-19 pandemic. We have established as a research hypothesis that the naval forces remain the main tool to ensure the continuity of the projection of naval power in different maritime areas against the background of the spread of the COVID-19 epidemic. To validate the research hypothesis, we have established two research directions that focus on analyzing the importance of applying the concept of naval power projection and how the COVID-19 pandemic influences the actions of the naval forces. The lessons learned from the challenges faced by the naval forces during this pandemic will in the future have a major impact on the organization, training, allocation of forces and development capabilities so that personnel exposure is kept to a minimum.

Keywords: naval power projection; naval presence; pandemic; regional stability; security operations.

The naval forces, in general, face multiple challenges, starting from the specific actions executed in the context of the security environment in a certain maritime space, continuing with the technological challenges, endowment, staffing, and improvement of training by participating in national or international exercises. Sometimes a threat to the health or even life of the military suddenly appears over all existing challenges. The spread of a virus to which the human body has no immunity can produce devastating effects, being known in this sense the disappearance of ancient civilizations on the American continent following the interaction with European sailors. The first information about how an epidemic affected the conduct of a war dates back to the Peloponnesian War in 430 BC, when the plague epidemic in Athens caused Sparta to postpone the military invasion of Athens, although Sparta was superior from the military point of view. The plague killed about 300,000 people, including the Athenian head of state, Pericles¹.

It is known that during the wars, due to inadequate application of personal and collective hygiene rules and specific conditions on the battlefield, there were outbreaks of dysentery, typhoid fever, typhus or influenza which caused

very high losses among combatants. An example of this is the campaign of Emperor Napoleon Bonaparte to Russia. In the march for the conquest of Russia, the emperor's army marched through Germany and Poland. Communities in rural areas lived in unsanitary conditions, drinking water became a major problem, which led to an outbreak of dysentery. The problems worsened when they arrived in Lithuania. Due to the lack of water for washing bodies, lice and dirty and sweaty equipment, the typhus epidemic broke out, killing 80,000 soldiers in a month and a half².

The well-known Spanish flu pandemic of 1918-19 killed more people than World War I. As a result of this pandemic, a mortality of between 20 and 40 million people is estimated.

In general, researchers in the health system have been able to discover, for most infectious diseases that have plagued entire armies, remedies and prophylaxis measures. When a new virus appears for which no treatment methods are known and which multiplies different strains, the situation becomes critical, especially where there are small spaces and numerous staff performing activities together.

To begin with, I set out in this approach to globally analyze the potential impact of the spread of this virus on the naval power projection, against the background of the COVID-19 pandemic (short for coronavirus disease 2019).

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The rapid spread of COVID-19 has led countries around the world to focus on solving domestic health problems and to be less focused on maintaining international solidarity. Thus, many states have closed borders for a while, tightened control measures on entry into those countries and limited international military cooperation.

In developing this article, we started from the assumption that in the event of a pandemic, the naval forces must change their strategy of projecting the elements of naval power without significantly affecting the fulfillment of national missions and international commitments.

Therefore, I will use as a research hypothesis that the naval forces remain the main tool to ensure the continuity of the projection of naval power in different maritime areas against the background of the spread of the COVID-19 epidemic. For this we have established two research directions. The first direction analyzes the importance of projecting the elements of naval power in order to model the security environment in a certain region. The second direction of research examines how the actions of naval forces are influenced by the occurrence of the COVID-19 pandemic.

Starting from the definition of naval power as "the ability of a state to manifest its interests at sea, through diplomatic or military interventions in time of peace, crisis or war, to achieve strategic objectives"³, I consider naval forces as the main element of naval power and I will analyze how the projection of naval power is influenced by the COVID-19 pandemic.

Thus, specifically for the Romanian Naval Forces, we have identified from the Doctrine of the Romanian Naval Forces a wide range of missions in which elements of naval power participate in defending allies and partners within NATO and the EU, as well as promoting regional and global stability⁴.

Against the background of this pandemic, being in the first year of the fight against the virus, no measures have yet been taken at European level to resize defence budgets, but it is very possible that many states will review their security policies and grant greater attention to measures to prevent the spread of the virus.

Since the beginning of 2020, most naval forces have resized training activities at sea and in many cases withdrew ships from international exercises.

Withdrawal of ships (the main elements of the projection of naval power) from international exercises or from areas where the security situation is severely deteriorated may have undesirable effects and a rapid escalation of regional conflicts.

The importance of the naval power projection in the context of maintaining a climate of regional security

The projection of naval power, in many cases only by their naval presence, in an area where regional stability is affected, has led to the improvement of existing tensions in the region and ensuring the freedom of navigation on the communication lines. In this subchapter, by analyzing the examples presented, I will demonstrate that the naval presence is not just an action made for creating a desired image, it achieves a multitude of military and diplomatic purposes.

From ancient times the Athenian historian Thucydides stated that ships proved to be uniquely useful as tools for conducting foreign policy, through their actions expressing very clearly the objectives of foreign policy⁵.

Most naval theorists have highlighted the role of naval power as a direct involvement in naval warfare. The American theorist Alfred Thayer Mahan argued the importance and value of projecting the elements of naval power (showing the flag) in different regions of the globe for the sake of regional stability and national interest⁶. Thus, after the Second World War, the USA maintained a significant number of ships in various maritime spaces considered strategic. These ships participate in planned exercises within NATO or independently perform naval presence actions depending on the geopolitical situation of the respective region. In support of the previous statement, US Admiral Stansfield Turner encouraged the presence of US naval forces where the appearance of ships prevents a problem from becoming a crisis. Russian Admiral Gorshov also put this concept of naval power projection into practice in the late 1960s, when Soviet fleets made their presence felt on the world's oceans, reminding everyone that the Soviet Union had become a global player to be reckoned with.

Demonstrations by the naval forces have, in many cases, made it possible to achieve political goals by exerting pressure and threatening to launch naval operations. Thus, it was possible to model the



operational environment without resorting to naval confrontation.

The role of the projection of the elements of naval power in certain maritime spaces increased especially during the Cold War, a period in which the United States and the Soviet Union aimed to exert influence in a certain region. The great advantage of military ships is given by the maritime legislation that allows navigation in the high seas and even the execution of limited maritime operations outside the territorial waters of hostile countries. The sea is a neutral environment and the presence of ships in international waters is less challenging for the population than the presence of tank divisions or aircraft squadrons.

The naval presence in a certain maritime space as an expression of the projection of naval power is found in different forms. First of all, there is the aspect of time, so the naval presence can be temporary, routine or continuous. It can also be regular with a regular pace or as many times as possible, thus the naval presence ensuring the achievement of a major objective in the region. Such routine temporary naval appearances are carried out in the Black Sea by ships belonging to NATO member states, amid tensions between the Russian Federation and Ukraine.

Battleships are divided into several categories depending on the main missions they perform (some of them being multifunctional), which is why a ship can be used to send completely different messages to enemies or friends. A ship belonging to a state within an alliance or coalition, deployed in a certain maritime space may perform specific exercises in common with ships belonging to friendly countries, on combat environments where common capabilities are found, quay training activities, personnel exchanges. Such activities strengthen mutual trust and promote the image of the alliance / coalition or state to which the ship belongs. Instead, the message for countries that threaten regional stability is one of determination and involvement in the event of a deteriorating security situation in the region. These messages are transmitted as a result of actions performed at sea: firing with weapons on board, participation in joint exercises, participation in demonstration exercises, etc.

Cooperation between naval forces aims to increase interoperability and experience in leading

naval operations. Crisis response operations, stability, law enforcement, humanitarian assistance, maritime interdiction are planned, organized and led by the central structures of an alliance or coalition, with each Member State taking on tasks depending on the political decision of that state.

The presence of military ships as elements of the projection of naval power, with the role of supporting allied nations and discouraging the naval enemy in times of peace, crisis or war, is an aspect of diplomacy and increases the complexity of the role of naval power.

In the current security complex where there are multiple threats at sea (regional instability, piracy, resource exploitation, migration, arms trafficking and banned substances), military ships are constantly involved in specific actions and activities, many of them with diplomatic role.

Determining the amount of forces intended for naval presence in a given maritime space generally starts from identifying national or coalition / alliance interests in that maritime space and assessing the likelihood that those interests will be jeopardized⁷. In support of this statement there is a good example of the US sending a naval group, including the Enterprise aircraft carrier, in December 1971 to the Bay of Bengal during the Indian-Pakistani war to protect US interests in the region.

The projection of a group of naval forces also has the role of discouraging an enemy, usually inferior, to use the battleships provided for various actions, showing that, most likely, the costs could outweigh the benefits of hope. In general, naval deterrence through the projection of elements of naval power is done in two forms: passive and active.

Passive deterrence occurs when a group of naval forces is in an area of interest and in terms of its capabilities determines the potential enemy not to develop combat or other actions that contravene international law. Passive deterrence was most common during the Cold War when the United States and the Soviet Union deployed groups of ships and submarines to areas of interest.

The active form of deterrence occurs when the enemy is identified and when he acts on the basis of a course of action to be deterred.

This claim is supported by what happened to the Georgian naval forces during the Russian-Georgian war of 2008, when a group of five fast



Georgian patrol ships tried to attack the group of Russian Federation ships sailing off the coast of Georgia. Following the attack of the Georgian ships, the response of the Russian group was extremely harsh, which resulted in the sinking of two Georgian ships and the withdrawal of the others in the port where they were sunk by Russian Special Forces.

For naval powers that do not have enough forces to form and deploy naval groups, participation with ships in NATO or EU commitments is a contribution to promoting maritime security. The Romanian Naval Forces also fall into this category, which shows a pro-active attitude in expanding the area of competences, according to the assumed commitments. Participation with forces and means in the operation to combat piracy (Operation Atalanta), in humanitarian aid operations and the evacuation of Romanian and foreign citizens from Libya, in operations to prevent and combat terrorism (Operation Active Endeavor), maritime security operation (Operation Sea Guardian) demonstrates the ability of the Romanian Naval Forces to design elements of naval power for the purpose of regional security and stability.

Given the issues addressed in the first direction of research, I believe that we have shown that the projection of naval power in a maritime space by the amount of forces, deployment time and effect generated, can shape the security environment and influence a situation so that the goal of prevention a conflict to be successfully realized.

At this time, I consider that the research hypothesis is partially validated, given that the most visible instrument of the state for the projection of maritime power, through the component of naval power, is the naval force and its ability to project power and force.

Cooperation, interoperability and naval presence are elements that naval forces capitalize on to confirm the active contribution of the state to maintaining its regional security.

The influence of the COVID-19 pandemic on the actions of the naval forces

The outbreak of the COVID-19 pandemic took the whole world by surprise, and the naval forces were no exception. The rapid spread of this virus has seriously tested the resilience of the military medical system, especially in the first part of 2020,

mainly due to the lack of a standard treatment that works effectively against this virus and the complications that can occur from contracting the virus.

By attacking the respiratory system in the first place, oxygen no longer reaches sufficient quantities in the circulatory system, and the internal organs no longer function in optimal parameters. The US Centers for Disease Control and Prevention estimates that 35% of infected military personnel are asymptomatic. The study conducted for the US Navy shows that 80% of the number of those infected, for the age group 18-49 years, generally have mild forms to flu-like environments with the development of symptoms of loss of taste and smell, difficulty breathing, cough, fever, muscle aches, chills, sore throat, runny nose, headache, dizziness and sickness⁸.

Following the studies performed, the most effective measures to prevent COVID-19 infection are: physical distance, frequent washing of hands, wearing individual protective masks, permanent disinfection of surfaces, especially in common areas. Advanced studies are currently being conducted to establish treatment regimens as well as to produce a vaccine to stop the spread of this virus.

Specific to a battleship is the high density of soldiers in a small space, the use of many common areas (dining rooms, barracks, cabins, battle stations) which leads to the impossibility of maintaining a sufficiently large physical distance.

In support of the above statement, I will briefly present what it meant to infect several crew members on the American aircraft carrier USS Theodore Roosevelt. The American aircraft carrier USS Theodore Roosevelt is a Nimitz-class aircraft carrier with a crew of approximately 4800 sailors who work for a long time on board using many common areas. The crew was tested following the first symptoms specific to COVID-19 infection, after a visit to Vietnam, and after testing 1271 crew members (27% of the crew) were found to be infected with COVID-19⁹.

As a result, 736 sailors with severe respiratory symptoms were placed in specially designated areas at the US military base in Guam. Out of a total of 4800 sailors, 4085 disembarked (approximately 85%), several hundred sailors remained on board to maintain essential services. All other disembarked sailors were quarantined for 14 days, one in the



room and under constant surveillance. Following the infection with COVID-19 on the medical side, there were 6 hospitalizations and one death of a sailor. The effect on the military was to cancel the planned missions. This incident highlights the vulnerabilities faced by even the most modern ships.

In case of war when the national territory has to be defended, it is justified to take risks in terms of an outbreak, but in peacetime it is necessary to take all measures to eliminate possible risks of disease that may lead to the impossibility of using ships for a period of time.

The impact of COVID-19 on ship operations was also highlighted by the departure of a NATO exercise by the French aircraft carrier Charles de Gaulle following the infection of more than half of the crew. The ship left NATO exercise 10 days earlier than planned and returned to the port of Toulon to disembark sick crew members and sanitize. The Indian Navy canceled the largest planned naval exercise in 2020, similarly Australia canceled its largest naval exercise in the Pacific Ocean aimed at strengthening mutual trust and cooperation in core naval activities.

The Romanian Naval Forces were not spared from the challenges either, the infection with COVID-19 among the crew of the Frigate Regina Maria determined the return of the frigate faster than planned from the maritime security operation "Operation Sea Guardian" in the Mediterranean. Upon returning to the country, the 110 sailors diagnosed with COVID-19 were transported in series to the Modular Military Hospital for Intervention and Treatment (SMMIT) for investigation and treatment¹⁰.

The other crew members went into institutionalized quarantine for 14 days following the COVID-19 infection surveillance methodology. A good aspect is that no crew member has died and those infected have been medically recovered and can carry out specific activities safely. While the crew was in quarantine, the ship underwent an extensive disinfection process, making it possible to operate the entire equipment on board without any risk of infection.

The rapid spread of this virus has led to the application of strict sets of rules for carrying out activities on board ships. Daily medical screening at the beginning and end of the program, permanent

wearing of an individual protective mask, repeated disinfection of hands, maintaining a physical distance of at least 1.5 meters between people, performing specific activities with small groups of soldiers, disinfection of common areas after each activity, minimizing contact with off-board personnel, they are all carried out with the utmost care on board ships.

If a ship carries out a visit to restore the combat capability of the ship's crew, it shall in principle not be allowed to leave the ship if the epidemiological situation in that city is not certain.

The crew's awareness of the importance of preventive measures to be taken is crucial in the fight against the virus. Disinfection of the premises, washing hands, wearing an individual protective mask, physical distance and reporting of any symptoms protect the ship, the mates and the mission of the ship.

Given the issues addressed in this direction of research, I believe that we have highlighted the effects of such a threat, generated by the COVID-19 pandemic, on the actions of naval forces and what solutions may be adopted to reduce these effects.

At this time, I believe that the research hypothesis is validated, given the fact that the projection of naval power is achieved by the most visible instrument of the state, the naval force, which is able to fulfill its specific missions under any threats, even from unconventional spectrum.

Conclusions

The rapid spread of COVID-19 virus has generated a chain reaction of negative economic and military effects, the impact on the projection of naval power being quite strong in generating forces for the execution of naval exercises and maritime security operations.

The cancellation of naval exercises due to COVID-19 greatly reduces the naval presence in certain maritime areas where the security environment is unstable. Prohibited activities such as: illegal transport of goods, weapons or prohibited substances can take place in these maritime spaces and historical conflicts can be activated, which contributes to the deterioration of the security environment.

The construction and modernization of military ships in shipyards is much slowed down or delayed

in terms of respecting the physical distance, reducing the number of people they come in contact with or stopping activities if cases of COVID-19 infection are detected.

The downturn in the economy leads to a possible reduction in funding for the endowment, modernization or construction of military ships.

The acquisition of equipment and apparatus specific to the fight against COVID-19 requires a significant allocation of funds not previously scheduled.

The process of selecting military personnel is difficult, as most schools operate online, the promotion of military careers in the virtual environment may not have the same impact as the promotion of military careers face to face.

The allocation and endowment of the spaces destined for the treatment and quarantine of the infected military personnel as well as the care for the personnel in quarantine at home represents a challenge in the conditions of diminishing the human resource on the background of the contamination with COVID-19 virus.

The training programs are resized; specific training activities are performed on modules with low staff so as to comply with the rules of physical distance.

Preparing to participate in training exercises at sea, international exercises, and naval operations requires a much longer time due to the entry of the crew in quarantine a certain number of days before leaving for the mission.

Operational constraints increase as the mission approaches. Prevention and isolation measures are effective only if they are carried out correctly at both individual and unit level.

Failure to observe protective measures prior to participating in a naval exercise or operation may result in infection of crew members and withdrawal of the ship from the naval operation or operation.

The situation of diseases on board ships has led to the establishment of strict protocols on board, based on lessons learned, to limit the spread of the virus if an infected sailor has been detected.

The Romanian Naval Forces managed to overcome the moment of the withdrawal of the Frigate Queen Maria from the "Operation Sea Guardian", they learned the lessons derived from this experience, and through the measures taken they managed to complete all the given missions and commitments.

As a final conclusion, the impact of the COVID-19 pandemic will determine a new vision on the elements of naval power projection through the development of unmanned autonomous vehicles, the construction of small and unmanned ships, the development of surveillance and monitoring systems, the development of smart weapons, torpedoes, marine mines) commanded and directed from the shore, so that personnel exposure is minimal both in the face of the enemy and in the event of a new pandemic.

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THE EMPLOYMENT OF AIRMOBILE FORCES IN MOUNTAIN OPERATIONS

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Special capabilities as airmobile, air assault and airborne forces could make the difference on today's complex battlefield. Their ability to swiftly deploy and strike enemy vulnerabilities transforms them in a versatile weapon. Mountain operations request special attention, both in planning and execution phases in order to prevail. By integrating airmobile capabilities to mountain unites, a strong opportunity to seize initiative is gained.

Keywords: mountain operations; airmobile capabilities; mountainous environment.

The requirements of today's battlefield are a real challenge for states' security, due to a fast-paced and ever-changing international security environment. The security environment's dimensions and the inherent implications derived from them have always generated a huge pressure on the modern armies' leaders. Military operations in sensitive areas such as the streets of Baghdad, mountains of south-eastern Afghanistan, desert areas of Syria, or South America's jungles, have emphasized complex problems related with the command and control and also the execution of multinationals joint operations. Moreover, cultural challenges and/or the asymmetrical actions of an enemy that has increasingly found the source of its power in unconventional and hybrid methods were revealed.

Regarding Romania's classic threats to national security, such as international terrorism, the proliferation of weapons of mass destruction or organized crime, they are completed by new ones such as cyber threats, but also the lack of access to basic education and the medical system, hunger and poverty, migration phenomenon, etc. In addition, the Russian Federation's hostile actions and attitude, in the immediate vicinity of our country, generate possible sources of conflict and regional instability, as well as the perpetuation of already existing differences in the region¹.

Thus, the necessity to build and project new military capabilities including shaping allied forces structures may be more pressing than ever

before. These forces should be equipped with high-performance and interoperable military systems and weapons. Mobility and flexibility, adequate response capacity and, last but not least, sustainability and resilience should be also mandatory requirements². Even if the risk of a major conflict, no matter if it is conventional or hybrid remains low, we cannot completely exclude it.

Taking in consideration the proposed subject for our analysis, I think it should be necessary first to highlight the main objectives and research directions, but also the methods used in order to obtain relevant results. The analysis' results conclusions and recommendations will be stressed in the end.

The study starts and is based on the following hypothesis: "successful military operations in national mountainous environment, depend and are influenced by the building and employment of airmobile forces in support of mountain brigades". By using deductive reasoning, I have tried in the next lines, to argue the relevance of building airmobile forces in direct support of mountain brigades. The emphasis is placed on their essential role in seizing success and initiative in military operations. By studying national and NATO documents related with the mountain operations' planning and execution, as well as performing an analysis of the airmobile forces' characteristics led to conclusions that validate the initial hypothesis.

With the purpose to direct the efforts and to pursue the objectives in an efficient way, the following questions may be useful. Also, I wish to emphasize the fact that those questions practically establish the research directions of the present approach:

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- What are the current security environment's requirements and references that determine the development of Romanian mountain forces?

- What are the mountain operations' particularities?

- What are the considerations that require the building and development of airmobile capabilities in support of mountain brigades?

- What are the mandatory actions and measures to be taken for an initial integration of the airmobile forces with the supported mountain unit?

In this context, and also related with the topic under scrutiny, it seems natural to consider the necessity of maintaining and developing specialized forces for mountain operations. Considering the geographical configuration of Romania, corroborated with a short analysis of the main sources of risk to the country's security and also taking into account the lessons learned from national military confrontations, we can consider Carpathian mountain range a strategic line of defence. In other words, by reconsidering the possibility to conduct military *large-scale combat operations*³, on the national territory, Romania's mountainous area will offer a strong defence line to stop a potential enemy offensive. Subsequently, the necessary conditions to conduct a counteroffensive in order to liberate the occupied territory are established. The control of the Romania's mountain area gives the opportunity to deny the enemy's access in the mountain passes, that are the only land penetration routes to the center of the country. Therefore, we should stress again the necessity of continuous development of national mountain forces. I strongly believe it is a priority, given the current security paradigm that influences the policies of states in the region.

The development and adaptation of these special capabilities' with respect to the new requirements generated by the modern conflicts' physiognomy is an inherent feature to the modernization process of the Romanian Army's land forces. This fact implies and requires both solving weapon systems and military equipment issues and adapting combat tactics and procedures, including their forms of maneuver. The Force's mobility and its ability to project surgical effects, in order to gain an advantage against the enemy are the real challenges when we are speaking about building the necessary capabilities to conduct mountain

operations. Following this idea, the objective of this analysis is to highlight the purpose and reasoning to build airmobile forces in support of mountains troops and consequently, to emphasize their role in shaping operations which allow seizing and maintaining the initiative on the battlefield.

Airmobile operations' description refers to those actions that project a force package by air, including necessary weapons and equipment to engage enemy in land environment⁴. These actions are usually conducted for a limited period of time, having a precise objective. An airmobile operation is practically a vertical maneuver, it involves the integrated use of helicopters and ground forces trained to conduct those type of actions.

Airmobile forces are those forces with the capability to execute the operations described above. They usually belong to light forces and exploit the helicopters' firepower and mobility, by conducting aerial maneuvers to engage and destroy enemy forces or to secure and maintain key terrain. Usually, the platforms for air transportation are integrated into the supported unit's organic (the US military are using the term of "army aviation" for helicopter units subordinated to ground forces). If this is not possible, aviation units are received temporary in support in order to give the opportunity to build an airmobile force. This kind of force is designated to execute shaping operations, but with a major impact to the enemy's cohesion and coherence of its actions. If well conducted, airmobile forces have the chance to affect enemy's morale and willingness to fight. Airmobile forces, using surprise are penetrating deep into enemy territory, usually striking its reserves, command points, or occupying key terrain and controlling them until the junction with the main forces is set up. The main features of these forces become their advantages in combat operations. Thus it could be helpful to mention them: flexibility and surprise, operational mobility, speed, shock inducing and the use over long distances, ability to open theatres of operations, independence, economy of forces, *esprit de corp*⁵.

The airmobile forces' efficiency in operations for solving specific crises, establishing a bridgehead, opening a new theater of operations or creating the conditions to develop future actions, leads me to the idea that the full integration of aviation units and mountain units is worth to be considered, in order to



build a robust and flexible force. Thus, I will try in the following lines to argue this idea. Also I would try to highlight the specificity of military mountain operations, which in my opinion, recommends the foundation of the airmobile capability in support of mountains brigades.

The rugged and compartmentalized nature of the mountainous terrain turns these particular areas into real obstacles for mechanized forces. Their movement is limited to the use of a poor communications network, which is usually found along valleys, passes and mountain passes. The operations' success, whether offensive or defensive actions are taken, depends on seizing and maintaining the initiative. Mobility is a huge issue generated by the specificity of the mountainous environment, and it is not the only one. Communications and signals are severely restricted, this fact having negative consequences for the command and control process. Shifting fire support from one direction to another is difficult due to the terrain fragmentation. In this idea, mutual support is hampered too. The forces engaged in operations in this type of terrain become vulnerable in choke points and along the narrow lines of communications. Moreover, they are highly exposed to inherent risks generated by environmental and meteorological conditions. Achieving efficient logistical support is a real challenge for mountain brigades, especially when part of the forces acts on an independent direction.

Taking into account mountainous terrain particularities generated by this environment, we emphasize that the offensive is not recommended in the mountains and its success depends essentially on the way in which forms of maneuver are conducted. The most appropriate form of maneuver for offensive actions in mountainous areas is the turning movement. In this respect, mountain brigades are projecting company level detachments in order to execute this kind of maneuver and to obtain the desired effect. At the same time, mountain battalions could create their own turning movement force which is usually based on a mountain platoon structure reinforced with mortars, antitank means, etc. However, the detachments' organization largely depends on the type of mission received and the existing situation. Large tactical units such as division or army corps, in combat large-scale operations, could build a turning movement detachment using a mountain battalion from a

mountain brigade of the second echelon. The unit will temporarily become subordinate to the higher echelon, until the mission is accomplished. The mission of these detachments is to strike the enemy's second echelon and reserves, consequently forcing it to direct forces from the main effort direction in order to counter the threat. This "reversed front" put the enemy in the impossibility to counterattack in order to close the gaps created in the defence disposal. Detachments may also be tasked with temporarily occupying key terrain and maintaining them in order to facilitate the offensive of the main forces.

The infiltration's chances for these detachments are substantially increased by air transportation and this way the risk to be discovered before engaging is reduced. The successful execution of the offensive operation depends to a large extent on the success of the detachments' action. Their efficiency generates the premises for destroying the cohesion of the enemy's defence, and forces him to withdraw. Consequently, a pursuit can be mounting up against the enemy's forces where airmobile force could play a decisive role by intercepting its lines of communication and hamper its freedom of movement.

The need for using airmobile force into battle also is necessary during the defence operation in the mountainous environment, with the purpose to timely counteract to the offensive actions of the attacker. Thus, the airmobile forces in support of mountain brigade's operation will allow striking the infiltrated enemy's detachments as much as the rapid intervention in independent directions, or in support of the encircled forces. The accurate and timely use of the reserves can be facilitated through air transportation, from one direction to another. Rapid intervention, to neutralize the enemy airborne forces, requires the use of forces that have the necessary mobility and speed. This entity can be materialized by the airmobile force build in support of the mountain troops, as said before.

No matter what the tactical activity is, the challenge remains, as I said before, the manner in which special detachments are brought to bear and introduce in combat. I emphasize, once again, that the success of the conducted operations depends decisively on their infiltration. Given the increasing development of ISR capabilities and taking into account the opportunity to conduct land maneuvers,



it could be concluded that ground infiltration, mounted or on foot, is difficult to achieve even for small units as companies or battalions. Moreover, the mountainous environment, through the terrain special configuration is favoring the infiltration by air, with the use of helicopters. The mountains provide visual and sound masking, allowing the airmobile force to get both a greater tactical surprise and protection against early combat engagement. The airmobile operations give the brigade's staff the opportunity to quickly reposition its forces and strength in decisive points in order to obtain a position of advantage against the enemy. By doing so, the chances to strike enemy's vulnerabilities and subsequently exploit new opportunities are enhanced. Another advantage obtained by conducting airmobile operations in support of the mountain operations is to ensure the possibility of forces' concentration in rough terrain which is usually inaccessible with the conventional technologies and means. By a swift key terrain control, or by realizing surprise by performing actions in unlikely directions, those shaping operations are set up in order to support the brigade's decisive operation.

Last but not least, it should be emphasized that airmobile operation's specificity ingrains the subsequent actions with special features such as independence, high degree of risk, while determination, courage and military professionalism become real imperatives. Therefore, we can say that airmobile forces and mountain troops are connected through the same "esprit de corps" that empower them to operate in hostile environment, usually with small combat units.

Starting from these premises, we need to reiterate once again the reason to build airmobile forces in support of mountain brigades in order to enhance their abilities to conduct military operations. Moreover, I have tried to identify those mandatory directions regarding the achievement of the capability described. Therefore, to build and integrate airmobile forces, several aspects must be taken into account:

- the type of mission that the airmobile force can carry out in support of the mountain brigade's operations;
- adapting the doctrinal stipulations and regulations, regarding the military operations in the mountainous environment, as well as the

elaboration of the norms and instructions necessary for the accomplishment of the training process;

- the airmobile force's size projection, composition and organization according with the missions received;
- the airmobile force integration's proceedings with respect to the mountain brigade's structure and organization or its higher echelon;
- the mandatory measures to train and prepare air units with the necessary capability to conduct air infiltrations in order to insert a designated ground force in combat; this activity should be performed, respecting the requirements of the "early insertion" concept, as well as the extraction of force, if the situation requires it;
- special attention to the acquisition and endowment regarding necessary weapons and combat equipment, as well as special equipment, in order to enhance the force's ability to survive; in this regard, we should emphasize the need for reliable and compact small arms fire, man-pad mortars and antitank systems, but also global positioning systems – GPS, tactical drones, night vision equipment, securitized communications including satellite systems, thermal and infrared camouflage equipment, etc.;
- maximizing the possibilities of providing fire support, both during the infiltration and the execution phase;
- ensuring appropriate logistical support and providing the necessary facilities for the integration of aviation units;
- an adequate personnel selection process;
- the establishment of special training programs in order to provide an appropriate training for selected personnel; designated training facilities and bases are required.

These are just a few aspects that I believe should be taken in consideration in order to create airmobile forces in support of mountain operations. Definitely, the list is far from being complete. Future acquisition programs hopefully will allow building organic aviation unit for land forces, and also will open a certain way to use this type of force. Consequently, this fact will generate the need to rethink the new combat requirements. In this context, the mountain troops will have the opportunity to obtain the appropriate aviation resource in order to set up an airmobile force when it is necessary. By realizing this important



capability, a decisive instrument for conducting military operations could be achieved.

NOTES:

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2 *** *Carta Albă a Apărării*, Bucharest, 2020, p. 31.

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THE MILITARY ENGINEER STRUCTURES IN COUNTERACTING HYBRID THREATS

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The military engineer structures, both in NATO and in the Romanian Army, have played a historical and critical role in shaping the operational environment. Changes in the international security environment also have consequences for engineering structures. The military engineers will face an increasingly complex operational environment, in which hybrid threats are increasingly present. Counteracting them and solving the serious problems faced by the societies impacted by politico-military conflicts require narrowing the gap or even erasing the border between military and civilian actors. Military engineer structures will be essential in shaping the hybrid operational environment and in developing the civilian-military relationship.

Keywords: operational environment; hybrid threats; military engineer structures.

Hybrid threats – a main feature of the contemporary operating environment

The events of 1989, which culminated with the fall of the Berlin Wall and the dissolution of the Soviet Union, brought with them a paradigm shift in conventional warfare, which was considered more or less irrelevant by most military analysts. A simple analysis of the conflicts of the last decade, such as those of the wars in Iraq and Afghanistan, reveals their tendency of manifestation towards unconventional and counterinsurgency warfare (COIN).

Based on this experience of recent conflict, some of which are ongoing, it can be said that the hybrid threat is a combination of regular and irregular forces, including criminal elements. These forces use conventional warfare capabilities to win symmetrical battles at decisive points and dissolve into the population where they continue to use asymmetric tactics. Moreover, the involvement of actors in criminal activities is another major threat.

The North Atlantic Treaty Organization (NATO) defines hybrid threats as those threats "represented by any current or potential adversary, including state, non-state and terrorists, with the ability, either demonstrated or probable, to use both conventional and unconventional means adaptively to achieve its objectives"¹.

The rapid growth of new communication technologies, globalization and the expansion of global transport networks have minimized the significance of geographical and political boundaries. Because of these considerations, the NATO Strategic Command rated hybrid threats as one of the most challenging issues of the post-Cold War era "the contemporary operational environment is radically changing as a result of globalization, easier access to international resources and modern means of communication and as a result of regional instability which makes the hybrid threat a great challenge"².

It is worth mentioning that hybrid warfare is not a new type of warfare, as we have seen elements of hybrid warfare in the way the Irish Republican Army, Hezbollah, Al Qaeda and the Islamic State have conducted their operations. The use of military, quasi-military and non-military means to achieve the ultimate goal gives the Western world an overview of a possible future threat scenario.

The annexation of Crimea by the Russian Federation provides the international community with a template for tomorrow's war. Russia is using the development of local infrastructure on the peninsula as a tool to remove attention from the fact that it has invaded another country. The effect has so far proved very beneficial for Russia³. One year after the annexation of Crimea, the majority of the local population in Crimea seems to support Russia. NATO and the rest of the world have forgotten that Putin invaded another country, the size of Maryland, with a population of 2.4 million, and claimed to be Russian territory.⁴

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Moreover, today Russia combines a humanitarian aid operation with intelligence / disinformation operations and the covert deployment of its special forces in Ukraine. According to the Russian state media, controlled by the Kremlin, the seven-point ceasefire plan provides, among other things, for the creation of "humanitarian corridors". Unfortunately, the "Russian aid" and "reconstruction teams" reach and serve the separatists.

These few examples describe the complex and challenging environment in which Romanian and NATO the military engineer structures must operate. Access to technology and rapid changes in the battlefield will cause major operational changes that can translate into "hybrid warfare tends to erase the boundaries between peace and war and between combat and non-combat"⁵.

The multitude of actors involved, as well as the complexity of the current operational environment, reveals that hybrid warfare cannot take the shape of an exclusively military campaign, requiring the involvement of all available power tools (diplomatic, informational, economic, military). In this regard, after more than a decade of COIN operations in Afghanistan, there is growing recognition that there is no exclusively military solution to challenges, just as there is no autonomous civilian solution. Consequently, it is recognized that close civil-military cooperation is needed, in which security as well as societal challenges must be considered as a whole and which require coordinated civil-military measures.

In conclusion, it can be said that hybrid threats are nothing new, only that opponents have adapted their ways of waging war to Western means and technology. *When opponents have access to Western technology, it will return and be used as a weapon*⁶.

The contribution of military engineer structures to counteracting hybrid threats

The contemporary operational environment involves the manifestation of a multitude of ethnic, religious, ideological factors, which involves the adoption of sustainable solutions that lead to the reduction of violence, the restoration of public services and intervention to solve humanitarian disasters or catastrophes. It is clear that military means alone will not be enough to solve all these challenges. Civil-military cooperation allows the

armed forces to achieve their ultimate goal by coordinating, synchronizing and deconflicting activities with civilian contributors, thus linking military operations to political objectives. For such a relationship to be productive, it must be based on trust, respect, patience and tact, as well as a determination to work with all actors, military and civilian.

In search of successful strategies, R. Scott Moore of the Washington Center for Complex Operations conducted a comparative analysis of over 100 irregular operations, conducted from 1916 to the present. His findings reveal that strategies that aimed only at a military victory over the enemy failed or led to oppression and occupation. On the other hand, strategies involving integrated political, social, economic and security measures pursued simultaneously have usually reached long-term stability⁷.

The experience gained from the development and outcome of recent military conflicts, in which counterinsurgency operations have predominated, indicates that the integration of civilian and military instruments is the main strategy for reducing violence and ensuring security and stability.

The lessons learned from the last decade of the war in Afghanistan, but especially those resulting from the action of the Provincial Reconstruction Teams (PRTs), are relevant in planning how to counter hybrid threats. One of them tells us that the operational environment in which counterinsurgency operations (COIN) take place generates additional tasks for military engineer structures. In this manner, economic development and infrastructure creation are often presented as the main non-lethal lines of effort in COIN operations⁸. Otherwise, military engineers have the competence and ability to contribute to winning the hearts and minds of the host nation's population.

The military engineer structures, a component of any joint military force, are indispensable both in major operations/campaigns and in crisis response and contingency operations. They have capabilities that can be integrated with fire support and the maneuvering of combat forces in order to ensure the mobility of their own forces, achieve the countermobility of opponents, as well as to increase the protection of their own forces. There are also military/non-military activities that require military engineer skills, as an inherent part of a



mission, to provide specialized support outside the joint force. In this regard, the assistance of the military engineers is fundamental to fulfilling the tasks of stability operations aimed at restoring or providing essential services (such as water supply, electricity and transport, as well as repairing critical infrastructure)⁹.

Depending on the type of operation, its phases, but also the characteristics of the operational environment, the most likely use of the military engineer structures, at the tactical level, for all components will be support for achieving mobility, in a balance with tasks to maintain capacity operational and infrastructure development. A very important aspect, not to be neglected, concerns the adaptation of the military engineer capabilities to the specifics of the mission, and ideally, they should be mobile, flexible and modular¹⁰.

Beyond all this, the following question arises: *What is the contribution of the military engineer structures to countering the threats specific to hybrid warfare?* The answer to this question is very simple, as they have always done, through operations aimed at building / developing infrastructure, support for maintaining the operational capacity of combat forces, as well as support for other organizations participating in the military campaign. However, all these activities must be carried out in a much more complex operational environment, where hybrid threats are fully manifested.

In the execution of counterinsurgency operations, the fight for human support has been and remains particularly important. For insurgents to be effective, they depend on the support and sponsorship of the population. The armed forces depend on the same support to end the insurgency and to develop a safe and sustainable environment. As the military engineer structures have the capacity to contribute to the development of infrastructure that will benefit civil society, military engineers have played a central role in winning the hearts and minds of the local people. PRTs across Afghanistan have contributed to the reconstruction and development of local infrastructure. However, how they have contributed and their effectiveness is difficult to assess. National differences between troop-contributing countries have influenced the way PRTs solved their mission, but especially in terms of the role of the military engineer structures. Also, the challenge posed by civil-military

cooperation was solved differently, depending on the national and cultural specifics, both by the military and by civilian organizations.

According to col. Garland H. Williams, a successful criterion for the reconstruction operation and the creation of a lasting peace is that the reconstruction begins immediately after the cessation of hostilities. At that time, military engineer structures were the only credible and available capabilities in the theater. If the reconstruction phase is delayed, it will be more difficult to get support from the population¹¹.

According to recent experience, there are rarely enough military engineer structures available, and this deficit can be partially overcome by using civilian contractors. To cover this shortfall, as stated in AJP 3-12, military engineers will support and coordinate the execution of all infrastructure projects in accordance with the infrastructure development plan and may also be required to contribute to the training of multinational units, staff NGOs and IBs, as well as the local population. Military engineers can also provide assistance with appropriate physical protection measures, including obstacles, observation points, detection / warning systems, masking and mitigation of the effects of weapons on structures.

The effort of the international community to stabilize and rebuild the emerging states from a politico-military conflict has enjoyed the active support of Romania through its military engineer structures and more. Thus, the 96th Engineer Battalion participated in the IFOR mission in Bosnia and Herzegovina, whose missions consisted in ensuring freedom of movement for multinational troops and civilians, providing general support to multinational commands and contingents, and carrying out work in support of local communities in the Federation Croatian-Muslim and Republika Srpska¹². Starting with the year 2000, the 96th Engineer Battalion was reorganized and established the National Detachment "Bosnia" with a force of 68 soldiers, stationed in Butmir and the National Detachment "Netherlands", which acted within the Dutch contingent with a force of 38 of the military.

The adoption by the Romanian Parliament of Decision no. 2 of 12.02.2003, enshrined Romania's participation in the Multinational Stability Coalition in Iraq. Within the forces participating in the "Iraqi

Freedom" mission, a military engineer structure as a Detachment type was also found.

Between August 15, 2003 - August 23, 2006, Romanian military engineers performed specific missions in support of Coalition forces in the Iraqi theater of operations, from the military bases of Al Hillah, Ad Diwaniyah and Al Kut, missions that materialized in the arrangement, maintenance and preservation of the viability of road communication routes, engineering arrangement of military bases, work for personnel protection, arrangement of helicopter platforms, arrangement of CORIMEC platforms for accommodation of troops, as well as research of watercourses and level 1 inspections at road communications bridges in the area of action of the South Central Multinational Division¹³.

With the launching, in 2002, of the concept of "Provincial Reconstruction Teams" in Afghanistan, a new challenge appeared for Romania. Thus, our country participated, between 2003 and 2006, with a military police officer and a reconnaissance squad within PRT Helmand (led by Great Britain), as well as with a medical team composed of three people within PRT Kunduz (led by Germany).

Romania maintains its military effort to support the processes of return to normalcy in Afghanistan, by participating now, but also in the coming years, in the NATO mission "Resolute Support". The main mission of the military of the Multinational Coalition is to train, advise and assist the Afghan security and defence structures, ANDSF (Afghan National Defence and Security Forces). Within the Romanian military advisory teams there are officers and non-commissioned officers from the military engineer corps who offer advice in the fields as: counter-IED (counteracting improvised explosive devices), infrastructure, genetic support.

Conclusions

Therefore, military engineer structures play and will continue to play a crucial role in mitigating and counteracting hybrid threats. The timely execution, by the military engineer structures, of all specific and deduced tasks, will ensure both the necessary support to the force gathered during the military campaign, but especially will contribute to the success of the post-conflict reconstruction operation, which will ultimately win hearts and people's minds and return to normalcy.

To be able to perform their tasks, military engineers must be prepared to face future opponents,

who are adaptive and who use a wide range of abilities, which allow them to successfully fight with a superior force from a technological point of view.

All these reasons must lead military specialists to act in the direction of adapting of the military engineer capabilities, so that they provide support and assistance both in the conventional combat space, but especially to support the armed forces in a COIN environment, by:

- creation and provision of mobile, modular, flexible and adaptable military engineer structures to the situation, mission, changes in threat level and available resources;
- integration / cooperation of military engineer structures with other non-military entities;
- solving the major challenges related to interoperability, caused by differences in language, culture and endowment with equipment;
- C2 (command and control) harmonization, as to allow mission command.

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MILITARY ENGINEERING STRUCTURES' TRANSFORMATIONS IN THE CONTEXT OF CONSTANTLY CHANGING ENVIRONMENT OF ACTION

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The need to adapt national security and defence policies to the current characteristics of the security environment is subjecting the military institution to an extensive process of transformation. From this perspective, the nature of the conflicts that characterize the XXI century requires a new approach and the development of those types of structures that can be quickly adapted to new challenges in the security environment. The main objective of the military transformation process is to create capabilities to provide state policy makers with alternatives to action in accordance with new types of risks and threats to national and / or international security. At the same time, the military transformation aims to create / gain a significant competitive advantage over potential adversaries by transforming the role of defence within national security, transforming both the defence management and the armed forces.

Keywords: battlefield; transformation; modernization; optimization; military actions; engineering support.

In the current and future environment people are faced with the challenge of addressing risks, dangers, threats and vulnerabilities, as an essential requirement on how to concentrate efficiently and optimally coordinate the efforts to effectively manage global and regional realities, in which the fluidization of state interests favorable to community interests is of paramount importance.

The diversity and complexity of the armed conflicts in recent decades in which doctrines, technologies, strategic concepts, armies with different degrees of endowment have been confronted, accompanied by a special informational and logistical support, have highlighted new situations and conditions for training and conducting military actions.

The advanced technologies that have emerged, especially in the last two decades, have radically changed the means and modalities of military actions, consequently modifying the character of the war in the future. Also, a special role in changing the character of the war has the fact that it is possible that the purposes for which the armed confrontations are triggered have been framed both in the official spectrum and in a hidden area, subtly

masked, to convince the public of the need for the military solution as the last and decisive way to impose a state of normality.

General considerations regarding the modern battlefield

The characteristics of the modern battlefield have been and are constantly studied by specialists to ensure a realistic image for politico-military decision makers, but those considered to be decisive now and more importantly in the future, are "lethality, permanent environmental changes and high dynamics of fight as well as the extent of military actions"¹.

Given the rapid pace at which weapon systems and ammunition are currently evolving in order to optimize the effect on the opponent and thus increase their lethality, we can deduce that engineer protection is becoming increasingly important in today's confrontation environment.

Starting from this reality, we can highlight the decisive role that the tasks of military engineering acquire outside the contact with the enemy, especially those that contribute to the hiding of their own forces and those executed for misleading the opponent.

Permanent environmental changes and the high dynamics of combat actions permanently influence the mobility and counter-mobility of the

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maneuvering forces. This fact generates additional needs for specialized engineering forces capable of anticipating possible changes and allocating sufficient resources to solve specific tasks that allow own troops to perform the maneuver in good conditions and at the same time, not allow the opponent to use the ground to their advantage.

The amplitude of military actions has an influence on the engineering support as a whole because, as we know, the military engineering capabilities are limited. In very few known situations can it be said that there are sufficient engineering forces and resources to support military actions in optimal conditions. Most of the time, the scale of military actions generates engineering support needs that cannot be fully and timely covered by the existing engineering forces and technical means. In the situation when for the development of military actions capabilities are necessary that can be covered only partially by military engineering, two ways of action can be approached to support military actions.

The first way involves identifying and using human, technical and material resources from outside the defence system that can fill the range or action volume of military capabilities to fully compensate for the existing deficit. The second way of action is restrictive and allows the use of engineering capabilities only after a thorough prioritization has been made in order to solve specific tasks in the most important moments of the battle. Of course, the combined use of the two variants ensures a high success rate as it generates usage optimization of all available resources at the most important moments of the supported actions.

The current complexity of the confrontation environment forces the participants to manage the space by dividing it into zones. These areas can be categorized according to different principles and here I would like to mention:

- areas that are defined by the value / level of the combat structures – the tactical, operative or strategic levels;
- areas that are defined according to the type of action / operation and/or the chosen form of combat – the defence strip, the staging area, the base of operation;
- areas that are defined by the task / effect assumed by the combatant in the defined confrontation space – areas of responsibility, areas of interest, areas of influence.

Without claiming that this brief exposition covered the entire organization of the modern confrontational space, we could see that its dynamics, complexity and constant evolution determine the need to constantly evaluate the components of the support forces and especially the military engineering support, with a special emphasis on detachments that ensure the water bridging, ensure movement and mobility, detachments that execute mobile countermobility systems and last but not least demolitions. I consider that this ongoing evaluation is the foundation on which a coherent and efficient management of military engineering resources can be approached in support of modern military actions / operations.

Brief analysis of the courses of action that are foreseen for the realization of modern military engineer structures capable of successfully performing specific missions in the current and future confrontation environment

One of the specialists in the field of Romanian military engineering support stated in 2007 that "the realization of modern, compatible and interoperable force structures requires the fulfillment of clear and fundamental requirements and, in our opinion, these are: elaboration of a legislative framework compatible with the military system; elaboration of conceptual and doctrinal documents of the organization, endowment, preparation and use of peace forces for national security, national and collective defence, promotion of stability, as well as for the support of local authorities in situations of civil emergencies; compensation for the gradual reduction of the staff with the degree of professionalization of the military structures; increased capabilities for crisis management; simplification of command and control procedures; supporting and framing the modernization programs in the allocated resources"².

Based on the above, we can say that since then and until today the Romanian Army has made a remarkable effort to create a legislative framework that allows the transformation and modernization of military engineering structures at a level that ensures the successful approach of its tasks, both national defence and collective defence (NATO) and at the same time launched endowment programs on priorities in accordance with current and future

requirements predicted by specialists in the field of military engineering support.

The basic objective of the modernization process is to adjust the structure of the Romanian Armed Forces to the present and future security environment, in order to meet national commitments to the Alliance, in accordance with the processes and phenomena in NATO's transformation plan. The goal is to make the Romanian Armed Forces able to participate in the full spectrum of missions carried out by NATO and the EU.

In these circumstances, given the existence of a multinational force, it is very important that the engineering structures are able to provide adequate engineering support. The engineering structures of the Romanian Army have important tasks in these conditions. We must not forget that they were among the first structures in the Romanian Army involved in the conflicts of the last two and a half decades in theatre of operations in the Balkans, Iraq, Afghanistan or in the crises in Africa, gaining important experience.

The objective of this process for the Romanian engineering structures cannot be other than the objective established by the Alliance in this field, namely to provide engineering support to NATO forces in the whole range of missions, current and future, to give the NATO commander the greatest freedom of action at the best value for nations.

There are four medium-term directions for action to achieve this goal, as set out at Alliance level:

- increasing awareness and the capacity of engineering forces available for NATO missions;
- improving the interoperability of NATO's engineering forces;
- optimization of the command and control process in the field of military engineering;
- sustainable support for NATO forces³.

This approach is a conceptually important change in the specific military engineering transformation. For each of these directions of action, a series of objectives have been established at the level of the Alliance, and Romania has the responsibility to establish its own objectives, in accordance with the objectives of the Alliance.

Given the continuing evolution of the engineering capabilities required to support NATO operations, starting with the *White Paper on Defence* to the *G.-1 Doctrine of Engineering Support in*

Joint Operations, the structures and capabilities needed to achieve the required level of support for the anticipated missions and to support the Strategic Concept of the Alliance, we can highlight some distinct objectives for the period 2016-2025 in the development of the military engineering:

- optimizing the capability, capacity and availability of national engineering structures for NATO missions;
- throughout the Alliance, the level of understanding of the capability, capacity and availability of engineering structures available for NATO operations, must increase;
- raising the level of interoperability of NATO engineering forces;
- optimizing of the Command and Control process of engineering structures;
- contributing to the support of NATO forces.

The process of modernizing the engineering forces channels the effort of transformations towards a new modern conception of combat support through the component of *engineering support for combat*.

This process is based on *G.-1 Doctrine of engineer support in joint operations* and the *Transformation, development and endowment of the Romanian Army program until 2026 and in perspective*, documents that fully ensure the legislative framework necessary to obtain those modern engineer capabilities that they can ensure the successful fulfillment of the missions incumbent on the military engineering structures to ensure support at the highest level both in national and multinational framework together with the alliance partners.

Despite the fact that high-precision hitting systems, cyber-attacks and social media are gaining more and more weight in today's scales of confrontation, the importance of engineer protection of forces can never be ignored. Regardless of whether we are talking about preparing the national territory for defence or the missions and tasks of military engineering structures during and after conflicts and in the post-conflict period we will see that they always provide key elements that contribute substantially to the success of their own actions/operations and/or allies.

To exemplify this statement, I will refer to the opinion of one of the engineer specialists who stated the following: "Conducting misleading operations



can be influenced by technological developments, especially the development of robotics and speech processing and synthesis technologies. For example, a fleet of robotic elements will be able to simulate the maneuvering of forces or control points in parallel with deceptive actions in the electromagnetic environment (by imitating the electromagnetic signature of the PC / own units) especially in the urban environment. Advanced voice processing and synthesis technologies can effectively contribute to simulating the voice of own or enemy personnel in communications networks or radio stations⁷⁴.

This example shows us how the efficiency of the military engineering works specific to misleading is increased, namely the typical works of the command points or those typical of the disposition of the military structures in a district, executed in volume of 1/3 of the necessary, completed with the above-mentioned measures. They cause the high-precision systems used by the opponent to lose their efficiency considerably and, implicitly, they will no longer obtain the expected effect on the targeted targets.

For modern engineering troops today, there is a tendency to develop organizational structures with a high self-protection capacity, possessing mobile command points equipped with all necessary facilities, multifunctional and modular armored equipment capable of performing maneuver in land, naval and all of which are already partly found in some of the structures in the composition of the forces that are made available to NATO.

The process of modernizing the genius forces highlights the current standards and materializes the existing orientations and perspective trends in the field within the modern armies. This permanent evolution is meant to give the forces of genius an appropriate level of performance and the possibility to operate without limitations with similar military structures of the alliance in joint actions/operations.

In order to achieve engineering structures compatible and interoperable with those of the allies, we must pay attention to the following features:

- timely adjustment of the concept of development of military engineering in permanent correlation with the evolution of the concept of land forces reform;

- maintaining a constructive attitude, open to the new and innovative ideas that can provide timely solutions with reasonable resources;

- permanent adaptation of the doctrinal framework to the needs of the troops in accordance with the general framework of the force category;

- the permanent increase of the weight of the qualitative performance factors in the quantification of the developed capacities;

- fulfilling the provisions of the reference documents in the field;

- highlighting the experience gained by implementing / generalizing efficient solutions to solve identified problems;

- maintaining the continuity and stability of the transformation processes in conditions of real certainty;

- the permanent improvement of the self-assessment capacity, as well as the control capacity of the risk factors and uncertainty;

- firmly fulfilling the requirements assumed at the politico-military level for a quick and full integration in the Euro-Atlantic standards.

In order to optimize the process of modernization of engineering structures, it is necessary to assume the following requirements:

- permanent adjustment of the structures in accordance with the mission entrusted to them and the factors that influence the confrontation environment;

- the continuous increase of the professionalization degree of the positions;

- regular evaluation of the level of professional training of the staff and taking the necessary measures to comply with the imposed standards.

According to those stated by specialists in the field, these objectives can be categorized as follows:

- "general – defining the role of a certain military engineering structure for a long period of time;

- derivatives – staggered so that their prior realization gradually leads to the achievement of general objectives;

- specific – fixed to an activity, compartment, set of compartments meant to contribute to the realization of the derivatives"⁵.

We could add to this brief analysis of how issues related to the process of transforming military engineering structures are managed also a brief

reference to the importance of how engineering support missions should be grouped. It is obvious that in order to make this grouping, relevant criteria are needed and in this category the following are mentioned by the specialists in the field: the identity criterion, the convergence criterion, the rationality criterion. Each of these criteria contributes to the optimization of the actions carried out by the engineering structures and to their organization and operation in conditions of maximum efficiency.

Conclusion

All the above converge to the idea that the gradual implementation, staging and setting of objectives by areas are very important steps that must be taken responsibly in order to substantiate the new engineering structures within the budgeted financial resources.

In the same respect, in order for the transformation of engineering structures not to be made superficial, a sufficiently long period of adjustment and refinement of conceptual adaptability is required simultaneously with the technical and administrative operationalization of the structures in the new context.

It can be seen that the real development of the engineering structures can be achieved by equipping them with modern technical systems, equipment and materials that can generate a wide range of capabilities and simultaneously execute large volumes of work. The new equipment that will become part of the endowment of the engineering structures is required to be compatible and interoperable with that of the allied partners, at the same time to offer possibilities of high-level protection, and last but not least to be multifunctional.

Another basic element that must be mentioned here, that leads to the optimization of the transformation, is the gradual realization of the process of professionalization of the engineering troops.

In conclusion, we can say that NATO reference documents have been implemented in the national defence doctrine, at this time Romania being involved in a comprehensive program of endowment / modernization with NATO compatible equipment, and with the completion of this process the Romanian Army will reach full technical integration with NATO and the EU.

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THE MANAGEMENT OF THE OPERATIONAL PROGRAMMES – POSSIBLE CONNECTIONS AND BENEFITS, FORMULATED BY REFERENCE TO THE COMPLEMENTARY FINANCING NEEDS OF ROMANIA'S NATIONAL DEFENCE

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Nowadays, more than ever, as a result of the transformations undergone on an international level, the dynamics of new challenges sustain the reconfiguration of the priorities of the internal and external agenda of the states through adding new risk, threat and vulnerability factors, which are not included in armed defence, modifying at the same time the relationship between different security aspects. In this context, national defence must – through an anticipative, preventive and participative approach and, moreover, through utilisation of various resources, by contacting the integrated management of the defence resources – to identify and sustain those response ways which are adequate to contemporary challenges. This hypothesis represents the starting point of this research, through which we have decided to identify and formulate possible connections and possible benefits that can be obtained not only as response means of the national defence against new challenges, but also as its complementary resources. Thus, looking from this point of view, we will demonstrate how should be the management of the operational programme dedicated to the human resources development in Romania.

Keywords: management; operational programme; human resources; complementary resources; national defence; integrated management of the defence resources.

Given, on the one hand, the economic developments of recent years and, on the other hand, the financial difficulties at European level, rethinking the equation and how to plan, allocate and use resources towards their optimal management and multinational financing of capabilities, in terms of efficiency, and the need to materialize a prioritization of investments and, implicitly, its extrapolation from the military dimension of national defence in all areas and aspects of socio-economic reality was only a matter of time.

Moreover, *the multidimensional, modern and multidirectional approach*, offered, at national level, for the first time by the *National Defence Strategy 2010-2015*¹ to the concept of *Romania's defence*, according to which, equally, the success of defence – obtaining security – can be ensured by combining means with political, economic, social, encouraging initiative and participation in the management of national security and civil society – press, specialized NGOs, citizens – based on partnerships,

including those with private organisations, for an effective and efficient correlation of resources with the objectives of security, is another variable derived from the integrated management of defence resources, which we present, in this way, with the main purpose of arguing the need and importance given to the existence and implementation, and in our country, of such of management.

This modern and multidimensional direction was continued and developed by the *National Defence Strategy 2015 - 2019*² and is supported, substantiated and promoted in the current national defence strategy, *National Defence Strategy 2020 - 2024*³, the fundamental programmatic document through which defence planning is thought about at national level, which has been designed and adapted to new facts (*new challenges*) and development needs of the country and was also designed to update Romania's responses to the main problems and issues specific to the increasingly dynamic security environment, new risks, threats and vulnerabilities to it.

Integrated and multi-annual defence planning, achieved by grouping in a unitary system short, medium and long-term objectives, policies and

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human, material and financial resources for defence, which allowed the identification of constraints, limitations and restrictions of any kind for taking, in due time, measures to reduce their negative effects, took into account, according to NDS 2010-2015, achieving all the capabilities in the field for fulfilling the responsibilities assumed within NATO, EU and international coalitions.

Moreover, the current strategy, *NDS 2020-2024*, outlines the main courses of action and ways to ensure security through seven dimensions: *the diplomatic dimension; defence size; the dimension of public order; the size of information, counter-intelligence and security; the economic and energy dimension; the dimension of crisis management and civil protection; the environmental security dimension, with direct effects in terms of quality of life assurance; the educational, health, social and demographic dimension (societal dimension)*⁴.

Consequently, another essential variable of integrated management to defence resources, the achievement of an optimal allocation of limited resources, choosing from a multitude of possible alternatives, over an average (long) period of time and under conditions of uncertainty, in order to maximise national security, is presented, to be implemented, in the document that substantiates Romania's defence planning, at national level, *NDS 2020-2024*, emphasizing in this form, once again, the need for the existence of *integrated management of defence resources*, as well as the participation/involvement of all institutional actors, both public and private, in order to achieve security, in the sense of *an integrated relationship and collaboration*⁵.

In this framework, we consider another variable derived from *integrated defence resources management* to be of a real and meaningful use, namely the existence of variants, options and solutions meant to support the decision-making process, in case of additional requests or budgetary constraints, which we will present and exemplify below.

Thematic concepts

Overview

Although on the same level, *the scientific one*, and categorised by the same fundamental field, *project management*, both thematic concepts,

namely *management* and *operational programme (OP)*, requires our attention as well. Specifically, while, at first glance, the scientific term of *management* does not raise big questions and can be easily defined or conceptualized by the general public, it doesn't work like that with the thematic notion *operational programme*, more and more often confused, in specialised practice, with another term of this register, the term of *project*.

Thus, taking into account the introductory considerations, as well as the need to operationally define the concepts specific to our subject, to which is added the fact that a substantial part of my professional activity, which I still carry out as executive director of the Intermediate Regional Body for Sectorial Operational Programme of Human Resources Development Bucharest-Ilfov, focuses on achieving a high degree of absorption of the European Social Fund, by ensuring the efficient management of the projects under management, both those financed by SOPHRD 2007-2013, as well as those financially supported by Human Capital Operational Programme 2014-2020, we consider it appropriate and necessary to use our own experience in order to clarify programmatic notions, weakly defined in the literature, with which Romania, as a member state and, implicitly, beneficiaries and project applicants, including defence institutions operate in this specific field.

For this, a first direction of research, proposed and assumed to be explored and presented in this article, is the operational definition of the following specific concepts: *management and operational programme*.

Also, having as a starting point this conceptual framework presented, we will continue our approach in the practical/applied direction, namely that of exemplifying these notions, by using *the management function of an operational programme*.

Therefore, the first concept on which we focused the scientific study was the concept of *management*, a concept that generated, moreover, the first challenge, resulting from the multitude of theories and approaches, found in the literature, developed around it, challenge, which we managed by appealing to the method of selecting the information applicable to our topic, in order to a fair and necessary delimitation and definition.

Consequently, for these reasons, we offer the definition of *the management concept of an*

operational programme, an approach that allowed us to extract and formulate a complementary conclusion: the concept evolves and acquires new and new valences, depending by the realities and socio-economic needs, offering, in equal measure, the possibility to apply, naturally, even instinctively by the leaders the functions or principles described by the theories developed around it.

For the first concept, management, from the literature, we choose and present a suggestive definition: "the job which consists in leading, in a given context, a group of people, with the purpose of achieving common goals in accordance with the purposes of the organisation to which it belongs"⁶.

The second concept necessary to be operationally defined for the theme of this paper is the concept of *programme (operational programme)*, an approach on which we will continue our action.

Given the fact that, very often, in practice, the notion of *programme* is confused and used with meaning equivalent to the notion of *project*, following our approach, we will direct our analysis in the direction of presenting and delimiting the concept *programme* by referring to the concept *project*, so that we can present and highlight the distinction between these notions.

Therefore, in this sense, a first distinct element that we present as an argument is the one referring to the idea of composition – *inclusion relationship – a programme (the whole) is composed of several projects (component parts)*, which are, in turn, made up of subprojects and activities so that they can be implemented more easily. Subprojects with related activities are implemented in partnership or outsourced to third parties. In other words, *projects are integral components of a programme*, through whose punctual activities, well-established objectives, specially allocated and planned resources contribute to the achievement of the indicators, objectives and results of the programme they are part of.

The growing supply of programs has inevitably led to the emergence of a new science, *programme management*, defined by the Central Agency of Informatics and Telecommunications in 1999, as coordinated type management of a project portfolio, which modifies organisations to achieve strategic benefits.

Also, the distinction between the notion of programme and that of project can be highlighted

by the space element. If the location or spatial coverage of the programme is large, national, that of the project is smaller, related to the local, regional or multiregional level. Equally, the distinction can also be highlighted by the element of the extent of the area concerned, which, in the case of the programme is of overview, and in that of the project is distinct.

Another argument that we bring to the fore is the one regarding their duration. While projects have a limited, determined, clearly defined duration (months, years), programmes usually have a rather long, vaguely defined, cyclical duration, some of which are almost impossible to limit in time due to the possibility readjustment according to the results of the evaluations to which their objectives are subject, on the one hand, and their objectives, in themselves, which are either too tender or too difficult or sometimes impossible to achieve on the other hand.

The distinction between the analyzed notions also lies in the characteristic element of the budget, which is global and adjustable within the programmes and determined, fixed, within the projects.

The argument regarding the role of the team is also eloquent – within the programmes, the team has planning, coordination, supervision, management and control tasks, and, within the projects, they have the attributions of effective, direct implementation.

A last characteristic element that we engage in the process of argumentation is the one that highlights orientation or focus of the evaluation – for a programme, the evaluation is oriented in the directions of the performance and their impact, on the other hand, for a project, it is strictly aimed only at performance.

In conclusion, the operational programme, unlike the project, never achieves all its strategic goals; in order to achieve a complex objective of a programme it is necessary to implement several projects, each producing an independent result.

At the same time, at the operational level, a funding programme can be defined as a document written by the ministry designated / responsible for its implementation, approved by the European Commission, which represents the form / way in which Romania uses European funds for its specific investment areas.



Last but not least, to define the concept of *the operational programme*, we will make use of the *Decision no. 936, of November 5, 2020, for the approval of the general framework necessary for the involvement of the Romanian authorities and institutions in the process of programming and negotiation of non-reimbursable external funds related to the 2021-2027 programming period and of the institutional framework for coordination, management and control of these funds*, according to which the concept is given the following meaning: "operational programme – detailed multi-annual plan drawn up by a Member State and adopted by the European Commission by decision setting out how non-reimbursable external funds are allocated to a given region or to one or more areas of development across the country, in line with policy objectives and investment priorities under cohesion policy and the common fisheries policy"⁷.

Taking into account all these aspects, based on the specific experience in the field, we propose the following definition of the concept of *management of operational programme*: the complex process of coordination and management, by calling for a series of specific management tools, methods and techniques, of all the resources involved (information resources, material resources, financial resources, material resources and time resources), with a very well defined purpose, precisely – the achievement of the objectives, indicators and results assumed, at OP level, as an EU Member State.

Moreover, for the operational definition of the derived thematic concept, *the management of operational programme*, we will consider, at this point in our research, a key concept, namely *the monitoring committee*.

Therefore, the Monitoring Committee is responsible for overseeing the implementation of an operational programme (OP) and ensures compliance with Community and national legislation, achievement of objectives assumed at programme level, by efficient use of allocated resources.

The Monitoring Committee has mainly the following responsibilities: it approves the selection criteria for the projects financed by the OP and revises them according to the programming needs; regularly monitors progress in achieving the specific objectives of the program, based on the

documents submitted by the Management Authority (MA) that manages the respective OP; examines the results of implementation, in particular the achievement of the indicators set for each priority axis; approves the annual and final reports on the implementation of the programme before being sent to the Commission; is informed of the annual control report and of the Commission's comments on the report.

Also, the Monitoring Committee has its own rules of organisation and functioning, as well as the way of making decisions. The Monitoring Committee is chaired by the MA, which also provides the Secretariat of the Committee.

MA transmits, annually, to the European Commission, *an annual implementation report of the OP* and submits a final report after the end of the programming period. The responsibility for preparing these reports rests with the MA together with the IBs (Rs).

Implementation reports must include the following information: the progress made in the implementation of the OP and its priorities compared to the established indicators (stage of implementation of projects; financial implementation, detailing on each priority of the expenditures made, their breakdown on national contribution and ESF contribution); the steps taken by the MA and the Monitoring Committee to ensure the quality and efficiency of the implementation, in particular, monitoring and evaluation measures, including data collection arrangements; a summary of all problems encountered in implementation and measures taken; the way of using technical assistance; the measures taken to do advertising and providing information on OP; the statement on compliance with Community rules in the implementation of the OP; the progress in financing major projects.

Project management aimed at human resources development in Romania: present and future

Human Capital Operational Programme (HCOP) 2014-2020 is the programmatic document that establishes the investment priorities, the specific objectives and the actions assumed by Romania in the field of human resources, thus continuing the investments made through the European Social Fund, in the period 2007-2013, through *Sectorial Operational Programme of*

Human Resources Development and at the same time contributing to the achievement of the general objective of the *Partnership Agreement (PA 2014-2020)* and, implicitly, of the European Structural and Investment Funds in Romania, namely, to reduce the disparities of economic and social development between Romania and the EU Member States. With integrated interventions, planned in the field of employment, social inclusion and education, HCOP functions as a means of stimulating economic growth and cohesion and also supports the achievement of the objectives set in other development challenges – competitiveness, infrastructure, administration and governance – contributing to the achievement of the objectives assumed by Romania in the context of the *Europe 2020 Strategy* for smart, sustainable and inclusive growth. In other words, for the 2014-2020 programming period, the projects destined for the development of human resources, in Romania, are financed and managed with the help of the tools and rules applicable to this operational programme.

For the next programming period, 2021-2027, the programme that will continue and finance investments in human capital in Romania is *Education and Employment Operational Programme*.

The development of *EEOP 2021-2027* was coordinated by the Ministry of European Funds, respecting and applying the partnership principle, and involved close cooperation with public authorities responsible for policy policies funded by the program, as well as with the main types of beneficiaries, representatives of civil society, academia and society – economic, involved or targeted by the actions financed through this OP⁸.

Essentially, *Education and Employment Operational Programme (EEOP)* presents an integrated vision of access to education and access to the labour market⁹. Moreover, it aims to modernise the institutions and services offered to the labour market, to promote balanced participation, according to gender, in the labour market, to ensure the balance between professional and personal life, but also to lead to a better adaptation of workers to fast changes on the labour market¹⁰.

To this end, a financial allocation of EEOP has been established of 3.8 billion euro, of which 3.2 billion euro come from the European Social Fund (ESF+) and 581 million euro from the State Budget¹¹.

At the same time, three areas of intervention are specific to this OP: youth employment (informational NEETs, youth centres / clubs / networks of youth workers, integrated packages of personalised measures tailored to the needs of young people); education (prevention of early school leaving, accessibility of education) and occupancy (access to employment for all, increasing employment among women, entrepreneurship and the social economy, anticipating skills, social dialogue / partner capacity, health and safety at work, active aging)¹².

Therefore, among the potential beneficiaries of this operational programme are: the central authorities / institutions and public services with responsibilities in the field (MLSP, NEM, NQA, NAE, NCCTD etc.); local authorities / institutions and public services with responsibilities in the field (decentralized services of MLSP, NEM, NQA, NAE, etc., UATs); public or private providers of employment services / education or training services / skills assessment and certification services / career information and counseling services; units in the national education system; higher education institutions; research institutes; youth associations; chambers of commerce; non-governmental organisations; employers, social partners, employers 'and trade unions' associations, sectoral committees and relevant actors in the economic sectors; county commissions for the authorization of training providers, regional training centres, competence assessment centres; community or youth centres.

All these actors will contribute, through the proposed and implemented projects, to the achievement of the general objective of the operational programme, that "to contribute to the creation of a more sociable Romania with equal access to sustainable, quality employment, to an education system relevant to the labour market and an incentive for lifelong learning"¹³. They will also contribute to achieving the specific objectives of each area of intervention, such as: education (Improving the accessibility, quality and affordability, cost, education and care of preschool children, including related infrastructure; preventing early school leaving by introducing a student-centered approach for children at risk, of flexible "Second chance" programmes, but also relevant counseling and career guidance services, while



improving the skills of teachers so that they can pay the necessary attention to children from vulnerable / disadvantaged groups, improving the quality of education and training, so to adapt to labour market developments, including the necessary training and the provision of specific equipment; supporting the development of innovative and effective teaching methods and techniques); occupancy (integration of young people into the labour market; ensuring access to employment for vulnerable groups, including increasing women's employment; developing an entrepreneurial culture, supporting entrepreneurship and the social economy; developing mechanisms for anticipating skills and monitoring active employment policies; developing social dialogue and involving the social partners in the implementation of employment policies, including by increasing their capacity, ensuring a safe and healthy work environment and promoting active aging, increasing participation in lifelong learning to ensure labour market transitions and employee mobility)¹⁴.

At last but not least, investment priorities, which will be funded under EEOP, are the following:

1. Unlocking the potential of young people on the labour market;
2. Preventing early school leaving and increasing access to and participation of disadvantaged groups in education and training;
3. Increasing the quality of education and training to ensure the fairness of the system and better adapt to the dynamics of the labour market and the challenges of innovation and technological progress;
4. Increasing the accessibility, attractiveness and quality of vocational and technical education;
5. Increasing access to the labour market for all;
6. Entrepreneurship and social economy;
7. Supporting labour market reforms in line with labour market dynamics;
8. Strengthen population participation in lifelong learning in order to facilitate transitions and mobility in the labour market;
9. Technical assistance to facilitate and streamline the management of the Programme¹⁵.

Connections between the needs of human resources training in the Ministry of National Defence and the opportunities offered by HCOP / EEOP

For example, below, we will appeal to elements, aspects and variables specific to the organisation of affiliation, the Ministry of European Funds, the

institution with a role, at national level, for managing European funding, which are made available to Romania in the current programming period. In other words, we recommend focusing stakeholders in the field of integrated defence management in the direction of (re)considering as variants, options and ancillary solutions of new sources of funding, European funds, additional financial sources, designed to support the economic and social dimensions of national defence, resources that, accessed, can contribute and support, along with traditional funding sources, the success of national defence and, moreover, which can be transformed into ways, optimal solutions for managing and reducing the main risks and vulnerabilities to national security of Romania and its citizens.

Moreover, within the same coordinates proposed as examples, there is also the possibility to respond to a major challenge for our country, that of conceiving the extended management of security in terms of project, to propose those activities that create value and are solutions to the main problems, especially those of an economic and social nature, budgetary constraints, as well as the main vulnerabilities of our country, the focus falling on the specific elements of the absorption of European funding.

Therefore, the first and most important level, specific to the military dimension, if we take into account the fact that it enhances and carries out the entire activity within an organisation, the human resource (military, civilians, collaborators, partners, etc.), can be supported by the results of our research. In this case, projects contracted by military educational institutions (National Defence University, Military Technical Academy, as well as other military academies, high schools and schools), in partnership with other similar educational institutions, national or community, may represent, in itself, consistent financial support and significant investment in own human resources (participation in various specialization, advanced training courses, doctoral and postdoctoral courses; organisation of study visits, internal and transnational, intrasectoral or intersectoral mobilities, national and international conferences and seminars; organising exchanges and integrated approach to good practices; providing financial support – scholarships – for students of military educational institutions, including providing

tutoring and guidance activities; diversification of forms of training, creation and development of networks, partnerships and cooperation between universities and military institutions and civilian organisations, research centres at regional, national and European level, etc.).

The second resource of the military dimension, which can be supported by the results of our research, is the material resource. To exemplify this conclusion, we will use, again, the projects that can be submitted by military educational institutions within the financing lines of the EEOP 2021-2027. As a result of contracting such projects, it will be possible to purchase a series of materials necessary to ensure the performance of activities, as well as materials associated with the operation and maintenance of equipment (are considered eligible expenses such as the purchase of furniture, equipment, office, protective equipment of human and material values, expenses made with the archiving of documents, with the payment of utilities, etc.).

The results of this research may also influence the financial resources intended for defence on both levels, budget planning and ensuring the co-financing of projects, on the one hand, and the generation of new resources for defence, on the other hand. In other words, in order to be able to generate other resources, additional resources for national defence, the submitted projects must, first of all, have the financial support of the applicant, they must ensure the part of co-financing established and assumed by signing the financing contract. Moreover, once identified, planned and budgeted, the resources necessary for the implementation of the projects, the categories of expenses such as the expenses with the salaries of the staff involved in the implementation of the projects; operating, maintenance and support costs; expenses with some purchases; research and development expenses; infrastructure spending will be able to benefit from additional sources of funding, financial support worthy of consideration.

Conclusions

This new approach, specific to the integrated management of defence resources, open, multidimensional and proactive, as well as this whole complex of actions related to both the military and non-military dimensions of national

defence, which can be carried out to ensure normal functionality and of organised human communities, successfully compete, as strategic resources, along with other dimensions and variables derived from the integrated management of defence resources, to maximise national security.

NOTES:

1 [Romanian Presidency], *National Defence Strategy – for a Romania that guarantees the security and prosperity of future generations (NDS 2010-2015)*, Bucharest, 2010

2 [Presidential Administration], *National Defence Strategy 2015-2019 – "A Strong Romania within Europe and the World"*, Bucharest, 2015.

3 [Presidential Administration], *National Defence Strategy 2020 - 2024 – "Together, for a safe and prosperous Romania in a world marked by new challenges" (NDS 2020-2024)*, Bucharest, 2020, Monitorul Oficial, Part I, no. 574, from 1 July 2020.

4 *Ibidem*, pp. 30-38.

5 *Ibidem*, pp. 38-40.

6 Călin Emilian Hînțea, Călin Ghiolțan, *Management public I*, Gewalt Publishing House, Cluj-Napoca, 2000.

7 *** *Decision no. 936, of November 5, 2020, for the approval of the general framework necessary for the involvement of the Romanian authorities and institutions in the process of programming and negotiation of non-reimbursable external funds related to the 2021-2027 programming period and of the institutional framework for coordination, management and control of these funds.*

8 *** *Education and Employment Operational Programme (EEOP)*, ver. 1, October 2020, p. 118.

9 <https://mfe.gov.ro/consultari-publice-pentru-perioada-2021-2027-programele-operationale-regionale-por-si-programului-operational-educatie-si-ocupare-poeo/>, accessed on 15.01.2021.

10 *Ibidem*.

11 *Ibidem*.

12 *Ibidem*.

13 <https://www.finantare.ro/consultare-publica-programul-operational-educatie-si-ocupare-poeo.html>, accessed on 15.01.2021.

14 *Ibidem*.

15 *** *Education and Employment Operational Programme (EEOP)*, ver. 1, October 2020.

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SAFETY AND HEALTH AT WORK IN THE ROMANIAN MILITARY

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Occupational safety and health is one of the most important areas of interest in contemporary society, a concept that has undergone an impressive evolution at national level, especially as accidents at work and occupational diseases are increasingly present in modern society, generating real human and economic problems. Creating more jobs, improving the conditions in which employees work, but, especially, maintaining their health are the main objectives of social policy today. A safe and healthy work environment is an essential element of the quality of work. In this article we aimed to highlight some common aspects of occupational safety and health and the national legal framework in the civilian and military environment, but also the specifics due to the military organization. As the level of education of the population increases, so do the requirements related to ensuring the quality of work, life, safety and health at work. In this respect, one can see the impressive progress that occupational protection has made, starting from the interest of preventing and minimizing work-related accidents and reaching the development of national strategies in the field of occupational safety and health.

Keywords: occupational safety and health; accident at work; occupational diseases; occupational hazards; authorized institutions.

In Romania, labor protection was initially regulated by the "Sanitary Law" (03.04.1885) which established a national regulation on occupational safety and health. However, the first express reference to the prevention of occupational accidents and diseases was made in the "Regulation for unhealthy industries" (24.09.1894). The regulation clearly specifies some preventive measures – "In any industrial establishment with more than 10 workers, the workshops will have a space of no more than 5 m³ of each worker, and the ceiling will have a height of at least 3 m"¹.

Towards the end of the 19th century and the beginning of the 20th century, the foundations of distinct branches were laid, such as work psychology, work sociology, ergonomics.

Occupational safety and health is a system of institutionalized rules aimed at preventing and reducing accidents, but also ensuring the best conditions in performing work tasks, to protect the life, physical and mental integrity and health of employees.

We are all already familiar with the protection rules in force in all areas, and we recall here some of the minimum requirements when it comes to occupational safety and health, such as²: emergency routes and exits must remain permanently free in order to ensure possible evacuation quickly and in the safest possible conditions in case of danger; during working hours the temperature in the rooms in which employees work must be appropriate to the human body and hazardous areas must be clearly marked.

Common elements of the military and civilian system in the field of occupational safety

There will be presented some common aspects of employee security found both in regulations governing the civilian environment and in regulations governing the military system. For example: the duties of the employer; staff skills in the field of occupational safety and health; the responsibilities of employees for carrying out occupational safety and health measures.

*Duties of the employer*³

Whether we are referring to the military system or the civilian environment in terms of the employer's responsibilities, they are the same. These are very clearly established according to the legislation in force. Of course, we mention only a

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few of them here, and we would like to start with obtaining the operating permit in the field of safety and health, prior to any activity. In addition, the employer has the obligation to develop a protection and prevention plan specific to the organization, to implement the necessary measures to ensure security, by preventing and training employees. Then, the provision with equipment and means necessary to carry out the activity in appropriate conditions must be done, thus avoiding injuries of any kind.

It is also the task of the employer to provide free food and hygiene to employees who work under special conditions, which are usually set out in the employment contract.

Staff competencies in the field of occupational safety and health⁴

Also in this case the requirements are identical, whatever the scope of activities. Of course, we refer to the minimum requirements in this area. It should be noted that the designated staff may be graduates with secondary or higher education. The graduate with a secondary education with a real or technological profile must hold a certificate of completion of the course in the field of occupational safety and health with a duration of at least 80 hours. Designated staff with higher education, graduate in engineering, agricultural and forestry sciences must have a certificate of completion of the course in the field of occupational safety and health with a duration of at least 180 hours or a master's or doctoral degree in safety and occupational health.

Employees' responsibilities for carrying out occupational safety and health measures

Undoubtedly, employees have their share of responsibility, but only after they have been properly trained. We must specify that the training of employees is performed in three stages⁵:

- on employment – it is called *general-introductory training*, the objective being to inform employees about risks and prevention measures;
- at work – it is called *on-the-job training*, the purpose is training on the activities and risks for the job;
- *regular training* – its purpose is to update knowledge and it is done at 6 months or as appropriate at 12 months.

All these trainings are recorded in the individual training sheet.

Now, of course, we can pay particular attention to some of the obligations that employees have and that are not negligible at all, such as: mastering the law, the correct use of personal protective equipment, proper use of machines, equipment or tools, and the fact that the employer is notified of the occurrence of a hazard or the communication of information requested by labor inspectors.

Elements specific to the military system in the field of occupational safety

Therefore, this time we will refer to the particularities of the military environment in terms of safety at work, more precisely to: authorities and institutions with responsibilities in the field of security; organization of prevention and protection activities.

Authorities and institutions with responsibilities in the field of security

In the civilian field, the Ministry of Labor and Social Protection is the competent authority in the field of occupational safety and health. It has as its subordinate the Labor Inspectorate, which is the competent authority for monitoring the application of legislation on safety and health at work.

The Labor Inspectorate controls the way in which the national legislation in the field of occupational safety and health is applied in all sectors, both public and private, except for those provided in art. 50 para. (1) and (2), of Law 319/2006, which the Ministry of National Defence is part of. The Labor Inspectorate is a public institution that fulfills the function of state authority, and stipulates that the State General Inspector subordinates⁶:

- *The Deputy General State Inspector* who coordinates the activity in the field of labor relations, under whose subordination the *Labor Relations Control Directorate* operates;
- *The Deputy General State Inspector* who coordinates the activity in the field of occupational safety and health, an activity that is carried out through the *Occupational Safety and Health Control Directorate*.

Compared to the civil environment, the management of activities in the field of occupational safety and health in the Ministry of National Defence is provided by the *Control and Inspection Corps*, through the Prevention and Protection Service. The control and inspection corps represents the

competent authority in the field of occupational safety and health, similar to the Labor Inspection of the Ministry of Labor and Social Protection for the respective field. *The General Directorate of Human Resources Management* represents the competent authority in the field of labor relations at the level of the Ministry of National Defence, with the exception of the General Directorate of Defence Intelligence.

The Prevention and Protection Support Office, a structure directly subordinated to the Control and Inspection Corps, ensures the organization and conduct of work in the field of occupational safety and health for central structures, with the exception of the Defence Staff, the Department of Armaments, the General Directorate of Defence Intelligence and Domains and Infrastructures Department⁷. Also, for the structures directly subordinated to the Minister of National Defence, which do not have distinct functions in the organizing states, a person is appointed to ensure the connection with the Prevention and Protection Support Office.

The authorities in the military system similar to the Territorial Labor Inspectorates are: the Prevention and Protection Support Office, the exempted central structures, the staffs of the army force categories, the arms / forces / support commands and divisions⁸.

Organizing prevention and protection activities

Clear differences can be observed between the civilian and military environment when it comes to how to organize prevention and protection processes. In this sense, we can highlight the following areas, such as:

- Prevention and protection activities in the civil environment represent the obligation of the employer and can be performed according to the needs of the organization, as follows⁹:

- "by the employer, if the field of activity involves activities without particular risks, and, if he has the necessary quality in the field of safety and health at work;

- by appointing one or more employees, as the case may be, to carry out those activities;

- by setting up one or more internal services for prevention and protection activities;

- by using accredited external services in the field of occupational safety and health".

- In the Romanian Military, the commanders of the military units have the competence to

organize the activity of safety and health at work, as follows¹⁰:

- "through internal prevention and protection services;

- the person responsible for occupational safety and health".

In the event that a battalion-level military unit, which is part of a brigade, does not have adequately trained personnel in the field of occupational safety and health, it may request specialized advice and support at the higher hierarchical level. At the same time, if there are structures without distinct functions in the field of occupational safety and health, they may use the external prevention and protection service, according to the procedures provided in a provision of the head of the Control and Inspection Corps.

Occupational health surveillance in the Romanian Military

The totality of medical services for the prevention and identification of occupational diseases, but also the maintenance of the health condition performed by the occupational medicine doctors is called *the supervision of the health condition*.

The protection of the worker against accidents at work and occupational diseases has emerged from all practices and research aimed at improving working conditions.

Within the Law 319/2006 on safety and health at work several distinct elements are defined and they can be met and identified at work. Next, reference will be made to occupational health, in particular to accidents at work and occupational diseases¹¹:

- "work accident – personal injury, as well as acute occupational intoxication, which occur during the work process and which cause temporary incapacity for work for at least 3 days. Accidents at work are classified as follows: accidents that cause temporary incapacity for work for at least 3 calendar days; accidents that cause disability; fatal accident;

- occupational disease – the condition which occurs as a result of the exercise of a trade or profession, caused by harmful physical, chemical or biological agents characteristic of the workplace, as well as by overloading various organs or systems of the body in the work process.



Accidents related to work are present in all areas and include a multitude of injuries to the body ranging from poisoning, slipping, collisions with objects, falls, burns, traffic accidents, etc. However, many of these problems can be prevented through proper management.

Common aspects regarding the supervision of occupational health in the military and civilian environment

Employers are compelled to ensure the surveillance of employees' health in all work-related contexts. The management of the military institution must implement measures to reduce the levels of illness and absenteeism, the rate of accidents or staff turnover because all these aspects are reflected in the inability to achieve the proposed objectives.

Among the common elements related to occupational health surveillance there are the following: occupational medicine service and occupational diseases¹².

Occupational medicine service

The only service that monitors the health of military or civilian employees is the occupational medicine service. The employer has a contract with the respective services so that all employees benefit from the periodic medical evaluation, or whenever it is needed, according to the legislation in force. Also, the whole occupational medicine service reports at the end of the year the conclusions of the evaluation of the employees' health condition, but also recommends the optimization of the working conditions for maintaining the health condition at the workplace.

Occupational diseases

Occupational diseases are not declared, they are medically dispensed and reported to the employer without being nominated, in order to improve working conditions and minimize occupational risks. The table with diseases related to the profession can be found in annex no. 23 of the Methodological Norm of Law 319/2006.

Peculiarities in occupational health surveillance in the Romanian Military

Among the peculiarities encountered in the military organization in the field of occupational health surveillance can be highlighted¹³:

- competent authorities;
- event research.

Competent authorities

The activity in the field of public health care, in civil life, is the responsibility of the central authority, more precisely, the Ministry of Public Health, as a specialized *body* of the central public administration. Whereas, in the military environment, the competent authority in the field of occupational medicine and personnel health supervision is held by the Medical Directorate, through the Center for Preventive Medicine of the Ministry of National Defence, which cooperates with the Control and Inspection Corps.

Event research

The event research, no matter where the event takes place, in civilian or military circles, is mandatory. This will take place immediately after the event is reported, and the result will be recorded in a report. Depending on its type, the research is done as follows:

- When the event occurs in the civilian environment¹⁴:

- by the employer – for events that have caused temporary incapacity for work;

- by the territorial labor inspectorates – for events that have caused obvious or confirmed disability, death, collective accidents, dangerous incidents, missing persons, but also in the case of events that have caused temporary incapacity for work to employees who provide natural persons to employers;

- by the Labor Inspectorate, in the event of collective accidents, caused by special events, such as damage or explosions;

- by the territorial public health authorities, respectively of the municipality of Bucharest, in case of suspicions of occupational disease and diseases related to the profession.

- When the event takes place in the military system¹⁵:

- the military unit, in the situation of events that generated temporary incapacity for work and minor accidents;

- the exempted central structures, the staffs of the military force categories, the structures exercising control over the participating personnel and the structures participating in missions and operations

outside the Romanian state, the military/forces/ support and division commands, in case of events, including those that take place during missions and operations outside the territory of the Romanian state, which have generated obvious or confirmed disability, death, collective accidents, dangerous incidents and situations with missing persons;

- The Prevention and Protection Support Office for events that led to temporary incapacity for work, minor accident, obvious or confirmed disability, death, collective accidents, dangerous incidents and situations with missing persons for the structures provided in art. 18 of the Instructions regarding the organization and development of the work safety and health activity in the Ministry of National Defence, from 27.09.2019;

- The control and inspection body, in case of collective accidents, generated by some special events, such as damages or explosions;

- The medical department, in case of reporting a case of occupational disease, through the Center for Preventive Medicine;

- economic agents from outside the Ministry of National Defence in case of events in which their employees were involved, during the development of activities based on contract, command or other legal forms concluded with military units.

These peculiarities emphasize the military specificity, but especially the concern of specialists in the field, the health of military and civilian personnel in the Romanian Military, and the desire to offer suggestions for assessing the working environment and analyzing work factors that affect the health of military and civilian personnel from the Romanian Military.

Conclusions

The objective of occupational safety and health is to remove all obstacles that arise in the work process, which may be likely to cause accidents at work or occupational diseases. The primary role of occupational safety and health is prevention. Properly taken preventive measures are simple measures, but with a colossal effect when it comes to occupational safety and health. Therefore, there are a number of rules whose observance by all employees ensures a better working environment. Creating a friendly work environment, rules for everyone to follow, as well as ensuring protective equipment ensure success in productivity, but

especially healthy employees, given that human resources are the main resource for the existence and progress of society.

The efficiency of occupational safety and health measures is determined both by the correct implementation of the theoretical and legal premises, but also by the concrete way in which these measures are observed at work.

Managing employee safety and health is one of the increasingly important issues for both employees and employers. Therefore, safety and health at work are integrated into all activities that ensure social protection in any state, as an essential component for ensuring a certain level of quality of life.

Occupational safety and health in the Romanian Military is characterized by measures and rules specific to the military environment designed so that the military's missions can be fulfilled, taking into account the collaboration agreements with the international military structures.

The specific features of the military environment are due to the fact that the activities of organization, coordination, including those of control and authorization are carried out by their own bodies with competences for the respective structures.

NOTES:

1 <https://sanatatesisecuritateinmunca.webgarden.ro/menu/s-s-m-scurt-istoric>, accessed on 10.06.2020.

2 *Hotărârea nr. 1091/2006 privind cerințele minime de securitate și sănătate pentru locul de muncă.*

3 *Legea securității și sănătății în muncă no. 319/2006.*

4 *Norma metodologică de aplicare a prevederilor Legii securității și sănătății în muncă no. 319/2006*, from 11.10.2006, art. 47-50, pp. 15-16.

5 *Ibidem*, art. 77, pp. 21-22.

6 *Annexa no. 1 to Ordinul ministrului muncii și justiției sociale no.1095/2018.*

7 *Instrucțiunile privind organizarea și desfășurarea activității de securitate și sănătate în muncă în Ministerul Apărării Naționale*, from 27.09.2019, art 15-20, p. 2.

8 *Instrucțiunile privind organizarea și desfășurarea activității de securitate și sănătate în muncă în Ministerul Apărării Naționale*, from 27.09.2019, art 15-20, p. 2.

9 *Norma metodologică de aplicare a prevederilor Legii securității și sănătății în muncă no. 319/2006* from 11.10.2006, art. 14, p. 5.

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13 *Ibidem*.

14 *Legea nr. 319/2006 a securității și sănătății în muncă*, art. 29, p. 10.

15 *Instrucțiunile privind organizarea și desfășurarea activității de securitate și sănătate în muncă în Ministerul Apărării Naționale*, from 27.09.2019, art. 81, pp 14-15.

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*** *Legea nr. 346/2002 privind asigurarea pentru accidente de muncă și boli profesionale*.

*** *Hotărârea nr. 191/2018 pentru aprobarea Strategiei naționale în domeniul securității și sănătății în muncă pentru perioada 2018-2020*.

*** *Hotărârea nr. 355/2007 privind supravegherea sănătății lucrătorilor*.

*** *Hotărârea de Guvern nr. 1425/2006 privind aprobarea Normelor Metodologice pentru aplicarea Legii nr. 319/2006*.

*** *Hotărârea nr. 1048/2006 privind cerințele minime de securitate și sănătate pentru utilizarea*

de către lucrători a echipamentelor individuale de protecție la locul de muncă.

*** *Hotărârea nr. 1091/2006 privind cerințele minime de securitate și sănătate pentru locul de muncă*.

*** *Codul muncii*, 2003.

*** *Ordinul nr. 191/2019 pentru aprobarea Instrucțiunilor privind organizarea și desfășurarea activității de securitate și sănătate în muncă în Ministerul Apărării Naționale*, Monitorul Oficial no. 900, from 07.11.2019, Part I.

*** *Ordinul ministrului apărării nr. M. 113/2008 privind supravegherea stării de sănătate a personalului din Ministerul Apărării Naționale, cu modificările ulterioare*.

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DIVERSIFICATION OF CYBER THREATS IN THE CONTEXT OF THE EVOLUTION OF THE SARS-CoV-2 PANDEMIC

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With the onset of the SARS-CoV-2 pandemic, the challenges in communications, information technology and cybersecurity have become much more numerous and complex at the same time. The continued transfer of certain daily activities in cyberspace will give rise to new major challenges, with many elements of novelty and unknown. It is difficult to predict how the virtual space will evolve in the future and how it will respond to the requirements formulated by society. State or non-state entities need to adapt quickly to the new demands of cyberspace. History has shown us that major changes will inevitably lead to other changes in which society will have to find the right solutions to ensure its continuity. The evolution of society in the SARS-CoV-2 pandemic shows us every day that the development of communications infrastructure and information technology, as well as ensuring cyber security, are essential elements without which certain sectors of activity cannot function at normal parameters.

Keywords: cyber threats; communications and information technology; cyberspace; cybersecurity; SARS-CoV-2.

For the first time, the SARS-CoV genome was identified in April 2003, following the outbreak of the epidemic of the same name in countries in the Asian region. At the time, SARS-CoV (Severe Acute Respiratory Syndrome CoronaVirus) was seen as a strain of the virus that mainly infected epithelial cells in the lungs.

Following studies conducted by specialists in the field, it was established that this strain of virus was initially developed by various animals (especially palm civets and bats), and later SARS-CoV was transferred to humans¹.

The death toll recorded in 2003 following the development of the SARS-CoV-1 pandemic (named after the outbreak of the 2020 pandemic) was about 774 people².

As for the history of SARS-CoV-2, it is very well known because it is an event that was recently launched and is still ongoing.

However, we would like to remind you that SARS-CoV-2 was first identified on 8 December 2019 in Wuhan, CHINA, and the World Health

Organization (WHO) was notified of its existence on 31 December 2019.

Although at the beginning of the SARS-CoV-2 pandemic, many states were reluctant to the effects and speed of the spread of this virus, on 11 March 2020 the World Health Organization declared SARS-CoV-2 a global pandemic.

The disastrous effects of SARS-CoV-2, as well as the rapid spread of SARS-CoV-2, have led countries around the world to urgently adopt a series of unprecedented measures, which have inevitably led to a radical change in the way of life of citizens.

The measures taken to combat the SARS-CoV-2 pandemic were gradual and eventually led to an almost total but temporary closure of activities around the world (transport, education, trade, tourism, etc.).

These restrictions imposed by government institutions have generated a number of major changes in the way of life of citizens.

One of the most effective measures imposed to avoid the spread of SARS-CoV-2 was to respect the social distance of people that led to a transfer of many activities in the virtual space.

It was not really an element of novelty because many activities were already taking place in the virtual space (e-commerce, distance

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learning through e-learning platforms, etc.), but what was surprising was the fact that the existing infrastructure was not ready to withstand such a large transfer of information. The information capacity and services required in the virtual space have reached levels that the communications infrastructure and information technology have faced with certain limitations.

Gradually, the communications infrastructure and information technology began to operate at normal parameters, not anyway, but with massive investments.

However, in order for the activities in the virtual space to take place in a normal and secure way, financial investments have been and still are needed to allow the development of communication infrastructures and information technology.

Even before the onset of the SARS-CoV-2 pandemic, the development of communications infrastructure and information technology were already priority objectives planned over a period of time, with the advent of COVID-19, deadlines had to be brought forward so that people could carry out certain activities in safe and cyber security conditions.

The anti-SARS-CoV-2 measures revealed the dependence of certain (and not a few) sectors of activity on the communication infrastructure and information technology and determined the allocation of additional funds to be able to develop and expand the virtual space in cybersecurity conditions.

The SARS-CoV-2 pandemic, through the restrictions imposed, showed that the lack of digital skills in a world where virtual space has become vital, generates a series of problems that can be hardly remedied.

This SARS-CoV-2 pandemic has generated a series of new challenges that have determined and will determine the states of the world to adopt unprecedented measures that will impose a new way of life dependent on virtual space.

Cyber Attacks In The Context Of Sars-Cov-2

The transfer of many activities from the ordinary environment to the virtual space has inevitably generated an increase in the threats, vulnerabilities and implicitly of the risks to which the people who use the virtual space are exposed.

In this regard, on 22 October 2020, the head of the Cyberint Cyber Security Department within the Romanian Intelligence Service (SRI), Mr. Anton ROG, stated that the SARS-CoV-2 pandemic created a special environment that cyber attackers took advantage of especially due to the lack of information we all face, especially in March 2020, when we publicly signaled that the number and complexity of cyber attacks has increased, the main topic used by attackers being an alleged miraculous treatment³.

Also, on the same occasion, the head of the Cyberint Cyber Security Department within the Romanian Intelligence Service specified that the main cyber attacks registered during the SARS-CoV-2 pandemic were ransomware and fraud. These two types of cyber attacks mainly targeted institutions in the health system, the banking system, the local and central government system, as well as in the education system.

In a previous statement, published on 14 August 2020, Mr. Anton ROG revealed that during the SARS-CoV-2 pandemic certain state entities (without specifying their identity) carried out cyber attacks and operations for the purpose of cyber espionage⁴. In his opinion, the cyber attackers used social engineering techniques through emails that were disseminated to certain people employed in Romanian state institutions. The content of the messages mainly referred to issues related to the SARS-CoV-2 pandemic (how to protect yourself, statistics on the number of infected, etc.).

At the same time, the official from the Romanian Intelligence Service confessed that one of the main targets of the cyber attackers was the health system through its related institutions⁵.

The *CYBERINT Special Bulletin in the context of the SARS-CoV-2 pandemic*, published by the Romanian Intelligence Service details the main types of cyber-attacks registered worldwide.

Thus, the specialists in the cyber field within the Romanian Intelligence Service appreciate that, since the beginning of the SARS-CoV-2 pandemic and until now, the following types of cyber-attacks have been registered:

- Ransomware (Covidlock, Netwalker, Maze, Nemty);
- Web defacement;
- Trojan banking (Cerberus android banker, Qbot)⁶.

Covidlock is a ransomware cyber-attack that is transmitted through the mobile application COVID-19 Tracker. This application locks the device and according to the characteristics of the types of ransomware attacks requires the payment of a sum of money in digital format to allow access to the terminal owner to their own information.

Netwalker was first identified in 2019 and was created by a cybercrime group called "Circus spider". The main features of this type of ransomware attack are the following:

- works on devices that have the Windows 10 operating system installed;
- has as a favourite target devices used for personal purposes;
- has specific capabilities that allow it to bypass antivirus systems.

Maze also belongs to the category of ransomware cyber-attacks and uses as propagation vectors phishing messages or vulnerabilities of remote communication protocols. The techniques used by cyber attackers are the classic ones, identifying weak credentials or sending documents with the .docx extension for access.

Nemty is another type of cyber attack that belongs to the ransomware family. It was identified in August 2019 by cybercriminal specialists of the American computer company McAfee. Nemty acts to block the access of the device owner to the information by encrypting it, while deleting the data and information backups.

On 20 October 2020, The European Union Agency for Cybersecurity (ENISA) published a List of top 15 threats from January 2019 to April 2020 where the main cyber threats registered in the mentioned period are presented in detail.

In this complex document, cybersecurity specialists analyzed each threat in detail, presenting in particular the vectors of spread, current and future trends of threats and vulnerabilities, as well as the main measures of prevention and cyber security.

According to the List of top 15 threats from January 2019 to April 2020, the main 15 identified cyber threats were the following: malware, web based attack, phishing, web application attack, spam, DDOS, identity theft, data break, insider threat, botnets, physical manipulation, information leakage, ransomware, cyberspionage and cryptojacking.

At a first analysis of the document, we notice that the 15 cyber threats identified in this document

are the same as those published in January 2019 in the Threat Landscape Report 2018 ENISA, with small changes in the order of ranking.

The Need To Ensure Cyber Security In The Virtual Space

The outbreak of the SARS-CoV-2 pandemic and the adoption of restrictive measures to limit its effects have inherently led to major changes in the way citizens live.

As a result of the measures adopted by the governmental institutions of the states, many activities have migrated from their usual environment to cyberspace. The need to communicate, to learn, to work, etc., expressed in a single expression "to live", is increasingly dependent on virtual space.

Massive investment in communications infrastructure technology and information technology is a necessary but not sufficient condition. In order to transfer a part of our way of life from the current environment to cyberspace, we need the certainty that it is safe, stable, accessible and efficient. Certainly there are other conditions that cyberspace must provide users in order to carry out normal virtual activities, without risks.

An article published in 2020 by Harvey Nash (a global provider of IT recruitment and outsourcing consulting services) mentions that since the beginning of the SARS-CoV-2 pandemic, the interviewed companies have spent huge sums on the development of communications infrastructure and information technology and also to ensure cyber security. However, the same article points out that these investments have not been able to stop cyber attacks. In a survey of about 4,400 information technology specialists, 4 out of 10 IT leaders said that during the pandemic there was an increase in cyber attacks. The most important cyber threats were phishing and malware⁷.

We appreciate that one of the factors that contributed to the increase of cyber threats during the SARS-CoV-2 pandemic was the fact that a large part of the active population started working from home, being much more exposed to cyber attacks precisely due to minimal measures or sometimes non-existent cyber security. Among these we would like to mention the lack of an adequate security culture, the endowment with equipment and programs that do not ensure cyber security, information from unofficial sources, etc.



In this context, we state that investments will have to target both communications infrastructure and information technology, as well as the provision of cyber security with resources.

The lack of ensuring cyber security in the virtual space can have serious consequences both on the security of state or non-state actors and on the security of citizens.

Conclusions

The SARS-CoV-2 pandemic, through the measures taken and the effects generated, revealed to the whole world a new way of life, the absolutely necessary symbiosis between man and cyberspace.

Human activities are increasingly dependent on virtual space, which makes us even more responsible for ensuring cybersecurity.

A secure virtual space automatically generates comfort for citizens who carry out various daily activities.

Asking us one question *How would we have lived in a pandemic without the existence of cyberspace?* we realize that the variables in such an equation would have been completely different.

Human progress achieved through the existence of communications infrastructure and information technology can not be denied, but must be recognized, supported, continued and used for noble purposes.

By virtue of the above, to ensure a modern communications infrastructure and information technology, with high-performance cyber security, in the context of the evolution of the SARS-CoV-2 pandemic, we propose the following:

- allocating sufficient funds for the development of communications infrastructure and information technology;
- ensuring a normal and secure virtual space by implementing efficient cyber security solutions;
- continue training and support a qualified human resource to ensure the cyber security of communications infrastructure and information technology;
- ensuring access to the Internet for all citizens, so that they can carry out their activities in cyberspace;
- ensuring the digital literacy of all citizens by organizing dedicated programs in this regard.

NOTES:

1 https://www.chinadaily.com.cn/china/2006-11/23/content_740511.htm, accessed on 29.12.2020.

2 <https://romania.europalibera.org/a/coronavirus-de-ce-%C3%AEn-epidemia-de-sars-%C3%AEn-2003-au-murit-mult-mai-pu%C8%9Bini-oameni/30545956.html>, accessed on 29.12.2020.

3 <https://economie.hotnews.ro/stiri-telecom-24369538-oficiali-din-guvern-sri-confruntam-adevarata-pandemie-spatiul-cibernetic-victime-fost-romania-semnalul-alarma-privinta-securitatii-5g.htm>, accessed on 29.12.2020.

4 *Ibidem*.

5 <https://www.digi24.ro/interviurile-digi24-ro/cine-sunt-spionii-din-telefon-si-din-calculator-interviu-cu-directorul-cyberint-anton-ro-1352811>, accessed on 30.12.2020.

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7 <https://home.kpmg/xx/en/home/media/press-releases/2020/09/covid-19-forces-one-of-the-biggest-surges-in-technology-investment-in-history-finds-worlds-largest-technology-leadership-survey.html>, accessed on 30.12.2020.

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REALITIES OF THE EUROPEAN SECURITY ENVIRONMENT AT THE BEGINNING OF THE THIRD MILLENIUM

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The changes that took place at the end of the 20th century in the international relations system led to changes at the global level, but especially at the regional level, in terms of the prospect of understanding how security was achieved. In this respect, the continued struggle of actors to reconfigure power centers, the increased development of existing threats and the emergence of new ones, have led to the reshaping of the regional and global security environment. Thus, in this article we aim to capture some of the realities that govern the European security environment at the beginning of the 21st century.

Keywords: European Union; threats; security; security environment; security actor.

The end of the 20th century and the beginning of the 21st century lead to the writing of a new chapter in the evolution of the international security environment, the fall of the main bastions of communism, the evolution towards multipolarity, the growing trend towards the expansion of globalization, as well as the emergence of new types of risks, threats and extrapolation of existing ones, requiring rethinking the approach to the security environment.

The need to maintain and even expand its sphere of influence in an environment characterised by increasing unpredictability, fluidity and complexity also compels a number of prominent actors to adapt their security policies and strategies, both regionally and globally. In this respect, the great powers of the world understand that they cannot fight alone the rapidity with which the current threats propagate, their increased capacity for adaptation and transformation, the optimal solution being the development of credible, transparent forms of cooperation in which dialogue, sharing of experience and addressing the interests of all members constitute steadfast pillars.

At the same time, at the beginning of the millennium, the achievement of security in the context of the international perceived as "the ability of States and societies to preserve the autonomy of their functional identity and integrity"¹ can no longer be understood only through the prism of the old realistic approach which is centred on the

application of military power and the superiority of the balance of forces, and need a new understanding through a combination of neorealist, neoliberal and socio-constructivist approaches with postmodernist accents in which non-military forms and instruments occupy the decisive place in resolving divergences in international relations. Moreover, through the voices of the most significant representatives of the Copenhagen School – Barry Buzan, Jaap de Wilde and Ole Waever – a new vision of the approach to security is offered, one that combines both traditionalist and idealistic principles, resulting in a multisectoral approach to security², which considers that, together with the military factor, the political, economic, societal and environmental factor must be analysed.

Also, the subject of security reference is reconsidered, the emphasis being increasingly placed on the security of the human individual, as an essential element of any form of social organization, the security of the whole community being deeply influenced by human security and the system of relations between people. However, internationally the state continues to be the main exponent of security, this state being increasingly built on the inter-market between countries, power blocs and international organisations.

Moreover, the responsibility of ensuring security attributed in the last century to the great powers is redivided at the beginning of the millennium, between them, the forms of regional cooperation and international and non-governmental organisations that tend to take an increasingly significant role in ensuring stability and prosperity at regional and even global level.

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However, a series of actions, carried out both in plain sight and by using hybrid techniques and tactics aimed at masking the perpetrator's footprints, are directed towards destabilizing the existing balance of power and creating a new one in which spheres of influence are redistributed. Thus, this continuous struggle for power creates new hotbeds of instability and premises for the substantive increase of threats, often the collateral damage being significant at the societal level.

This more complex approach to security is also reflected in the analysis of the security environment, in the opinion of the researchers the phrase "a relational concept, which implies a permanent adaptation and adjustment of a set of internal parameters (economic-social, political, military, legal, cultural and moral) to the conditions of the international environment, a process with a fluid dynamics, oriented towards the preservation of space, common ideals and values and at the same time putting these elements in a stable balance, unaffected by risk factors or threats"³.

Therefore, taking into account the above international context, through the use of quantitative analysis, the study of bibliographic resources and content analysis, the article aims to identify the main trends that are manifested in the system of international relations outlined in the European space and to draw a series of conclusions on the perspective of European security at the beginning of the third millennium.

Determinations and trends that manifest in the European space in the 21st century

The end of the Cold War led to the elimination of the international order system characterized by the control of the two superpowers, the United States of America and the Soviet Union, over the states, producing multiple effects on the system of international relations, both regionally and globally. In this respect, there is a growing trend towards reconfiguring forms of international cooperation, with major powers and a number of emerging countries trying to polarise around them as many supporters of their own values and interests as possible in an attempt to maintain/secure a dominant place in the new world hierarchy that is increasingly projected through a reorganisation of power centres.

In this context, at the level of the European

security area, the fall of the Berlin Wall in November 1989, followed a year later on 3 October by the reunification of Germany, is one of the defining stages of Post-1945 European history. Although after 30 years, according to opinion⁴ polls, about a third of Germany's population still considers reunification incomplete, this act represented a strong push for Europe towards democratisation, inoculating in the souls of Europeans hope and determination in rebuilding the old continent.

The European security environment of the post-Cold War period is also shaped by the fall of communism in Eastern Europe, causing the disintegration of the Union of Soviet Socialist Republics (Soviet Union) in December 1991 and the later split of the Socialist Federal Republic of Yugoslavia. In the space under review, this leads to the emergence of new independent states, in this way, fundamentally changing the security imperatives. Moreover, newly created states are taking important steps towards democratisation, with the full support of Western democratic countries. However, many of the countries on the path of democratisation are not legislatively and institutionally prepared, thus generating new vulnerabilities to European security. There are therefore difficulties in putting democratic principles into operation due to the resistance to change of the main institutions of the States concerned, which leads to an even greater deepening of the gaps between states.

The beginning of the 21st century presents a Europe in which the possibility of conflicts between states is relatively small, with conventional threats almost entirely diminished. Thus, there is an acceleration of the political and economic integration process at the level of the old continent, which aims to promote common interests and values, particularly favoured by the enlargement of NATO and the EU. In this respect, the EU expands its borders by welcoming the Czech Republic, Cyprus, Latvia, Lithuania, Malta, Slovakia, Slovenia and Hungary in 2004, with Romania and Bulgaria becoming members of the organisation in 2007. However, the existence in the vicinity of the European area of still conflicting areas such as those in the Middle East, the ex-Yugoslav space and the territory of the former Soviet Union is always a danger to regional security, and may lead to the emergence of new forms of conflict with various forms of manifestation and possibilities of



propagation, as well as the emergence of new risks and threats to European states. Moreover, there are still situations of instability and crisis at sub-regional level and trends of fragmentation, marginalisation or isolation of some states. Central, Eastern and South-Eastern European countries face economic, social and political difficulties associated with the transition to society based on the principles of democracy and the market economy, which can generate a number of risks to the security of states in the region⁵.

The influences of the particularly fluid strategic security environment, characterised by a high degree of unpredictability in which, together with state actors, are increasingly manifesting their interests in non-state actors, are also felt in the European area. If globally we are talking about a single superpower, the United States of America, at the regional level a number of medium powers tend to dispute their supremacy in a continuous attempt to re-divide spheres of influence. In Europe's neighbourhood, the Russian Federation seems awakened from a deep sleep and seeks to regain its influence in the old territories and become a global superpower again, while internally France and Germany are fighting for their position as a leader within the European Union, and Britain is seeking to break free from the rules imposed by the European Union and make its way to the world's high hierarchy. At the same time, China does not want to remain only a major player in international economic exchanges, but develops its military capabilities and increases its presence in UN-led security missions. Moreover, India has an important word to say in South Asia and the Indian Ocean, and Japan is building partnerships with NATO and the EU to participate in strengthening stability in Asia.

While in terms of conventional threats we can say that at European level the situation is relatively balanced, the trends are different for unconventional ones. Thus, under the umbrella of globalisation, unconventional threats such as terrorism, migration, drug trafficking, the illicit trade in strategic materials, as well as organised crime take advantage of border penetration and are proliferated not only throughout the European area, but throughout the world.

In this respect, the tragedy of 11 September 2001 finds Europe in a process of continuous change and adaptation to the complexity and dynamism of

the new security environment. Changes at NATO level also lead to changes in European area states, most of which are members of the European Union. Thus, at European level there is a broad campaign to condemn terrorism, the fight against terrorism gaining new valences. Europe is under further testing, facing an increased emergence of terrorism, with the Madrid, London and Paris attacks being the most eloquent examples. It is interesting, however, that instead of causing division and fragmentation between states, the terrorist phenomenon is leading to a coalition of European states and the development of new common strategies to combat this scourge, thus demonstrating that in borderline situations, Europeans are able to come together to combat them, with differences between states moving into a secondary plane. Moreover, the urgent need to combat terrorism made the EU develop and adopt the Counter-Terrorism Strategy in 2005. In this respect, directing its effort in four directions of effort – prevention, protection, follow-up and response⁶ – the strategy sets out the EU's determination to join the global fight against this emerging threat and aims to strengthen European security. Further updates on policies and strategies in this area, an eloquent example being the revised EU Strategy to Combat Radicalisation and Recruitment for Terrorist Purposes in 2014, as well as the fight against 119 terrorist attacks and the arrest of 1004 people who committed terrorist offences in 2019⁷ on the European continental, show that European states are ready to take a greater role in ensuring security at regional level.

Often compared to the Great Depression of 1930, the 2008 global economic crisis⁸ produced multiple effects on the international security environment by affecting the economic factor in the first phase, the consequences produced in this area triggering the chain reaction and influencing, one by one, the political, military, social and even environmental fields. At the same time, the attention paid by governments around the world to finding optimal solutions for limiting/minimizing the effects of the crisis attests that for a limited period of time, the new emerging threat distracted the world from the main threat metamorphosed at the beginning of the third millennium- terrorism. In this respect, there is an accelerated increase in the public deficit at the European level, with a significant increase in public debt until the end of



2010..Thus, at EU level the public deficit increases from 2.3 of GDP to 7.5% of GDP in 2010, while public debt increases from 61.6% in 2008 to 79.6% of GDP two years later. This was basically tantamount to the annulment of progress on fiscal consolidation since the end of the Cold War. The crisis also had significant effects in the employment sector the average EU unemployment rate rising to 11% in 2010, with some Countries in the Union at more than 20%, with the consequences reflecting on the organisation's human capital⁹.

The crisis also has significant effects in the employment sector the average EU-wide unemployment rate increasing significantly, with the consequences of turning to human capital. Furthermore, the decrease in defence budgets across all EU states leads to asymmetry in the capabilities of Member States' armies, with major implications for the interoperability and defence capacity of the old continent, as well as on the fulfilment of the obligations undertaken under partnerships and initiatives. In addition to unemployment, which leads to the deepening of the phenomenon of poverty at Union level, the crisis is causing worsening working conditions, increasingly difficult to ensure the essential services of life, a multiplication of the number of homeless people, excessive indebtedness and financial exclusion¹⁰.

Moving from economic to social, Europe is facing upward trends in the migration phenomenon. While it can be an effective approach to filling in weaknesses in the labour sector, with the migratory population generally young, active and able to work, the phenomenon is causing a number of security challenges. Thus, populations with different traditions and cultures, often opposite behaviours and ideologies are coming into contact, the challenge of the institutions of European states being to manage the situation in order to prevent the emergence of conflict situations generated on ethnic and religious grounds, and at the same time to find the most effective methods of integrating those who migrate. Other challenges relate to the adaptation of policies and strategies towards respect for human and minority rights, as well as the education and vocational training of the migratory population¹¹.

Moreover, the demographic factor and spatial distribution of the population bring challenges with an impact on the security problems of the European

space. Thus, the disproportionate evolution of the pace of population growth, the perpetuation of economic gaps between developed and developing areas, the ageing trend of the population, the vulnerability to epidemics and pandemics, labour migration and the deterioration of social conditions in crisis and conflict areas, are defining elements of the asymmetric nature of global developments. They are still added in a form of deep and widespread manifestation of the phenomenon of poverty. Thus, in the first decade around 20% of the total EU population (116.4 million people) is at risk of poverty or social exclusion, and 17% live with less than 60% of the average household income in their country, with the Europe 2020 target being to reduce the number of the continent's poor population by around 20 million¹².

The events of 2014, resulting in Russia's annexation of Crimea, were an inflection point in international relations, bringing up a topic that the entire international community thought had been consumed since the end of the Cold War, namely the use of military power and the threat of its use to annex new territories. The consequences of this are all the more significant, as the effects on international relations go beyond the operational/actional framework, extrapolating conceptually/ideologically. Practically, the entire effort made by the international community to ensure a framework conducive to human development by respecting the provisions of international law, the resolution of disputes between states mainly diplomatically, is not only called into question by Russia, but provokes a real setback in the realization of peace and stability so necessary for the development of human society. Although there were different views at the level of the major actors, instead of producing a split effect between East and West, Russia's annexation of Crimea produced a diametrically opposed effect, with a union effect, with the entire international community condemning the actions of the Russian aggressor. The extension by the EU, the UN and the US, successively from 2014 to 2021, of the period of imposition of sanctions against Russia by prohibiting all Euro-Atlantic investments in Crimea and Sevastopol, the drawing up of a blacklist that currently contains individuals and companies supporting the destabilization of Ukraine and bans in certain sectors of the economy, demonstrates the determination of the international community to

end any attempt to violation of international law not only by Russia but by any state of the world.

The European security environment has as its main vector of power the European Union; by developing its partnerships, it tends to expand its borders and assert itself not only as an economic force, but also as a political and military one, the stated aim being to become a more important factor of stability and security, not only at regional level, but also at global level. For years, the world's most important economic partner, believed that the economic interdependencies between existing states at the beginning of the millennium would ensure the preservation of the balance of power. Thus, confronted at its borders with the expansionist and revisionist tendencies of the Russian Federation, the Union understands the importance of strengthening the transatlantic partnership and the need to develop the security and defence side as quickly as possible.

In this regard, through security and defence initiatives, the promotion of the Common Security and Defence Policy, the establishment of the European Defence Agency, the adaptation of their own security strategies culminating in the issuance on 28 June 2016 of the Global Strategy for the European Union's Foreign and Security Policy, the creation of Permanent Structured Cooperation, the Military Planning and Conduct Capability, the establishment of the European Defence Fund, the conduct of a Coordinated Annual Defence Review Process, the development of numerous projects under PESCO and beyond, the Union becomes much more coupled with the phenomenon of international relations and takes the strategic partnership with NATO to another level, ensuring in complementarity with the Alliance, the security and stability of the transatlantic space. Competition is also growing in the economic field, with China's rise as a global economic partner, threatening to remove Europe as the world's leading economic partner.

The increased development of technologies leads to an excessive digitisation of the entire area of state, private, financial institutions, etc. Thus, with the regional and global increase and spread of this phenomenon, the European area faces exponentially greater risks of identity theft, cyber attacks on bank accounts, theft of classified data and alterations of critical infrastructure all with

hard-to-remedy effects on individual, state and even regional security. In this respect, the cyber dimension of the conflict tends to spiral out of control, being one of the main threats of the last decade. Viruses, which in the last century were considered of little importance, turn into threats with particularly complex structures, an element of novelty being the use of computers formed in groups to execute cyber attacks "which generate the refusal to provide the requested services (DDOS)"¹³. Moreover, the events in Estonia in 2007 show the emergence of this threat on the European continental and the major risk of being used in increasingly complex actions. According to statistical studies in the field, in 2018, the number of cyber attacks has doubled compared to 2017, with the rate of production showing an upward trend. The ways in which attacks are carried out also denote an increasingly diabolical inventiveness and malice of cyber criminals. According to the same statistics, the damage caused by cybercrime in 2020 should be worth about five billion dollars¹⁴.

The consequences of the COVID-19 pandemic globally to date, by infecting tens of millions of the planet's inhabitants and the deaths of some 2 million of them, the numerous crises generated at the global health system, the effects it is printing on the area of factors that determine the security phenomenon of international relations, are right to say that its management and the consequences it will cause represents one of the major challenges 21st century.

Thus, at the level of the European area, there are multiple concerns to put an end to the spread of this virus which, through its aggressiveness and speed of spread, makes mankind remember the sad memories of the effects of the Spanish gipa at the beginning of the last century. In this respect, an eclosure example is the EU Coronavirus Vaccine Strategy, presented in June 2020, by which the organisation aims to ensure that the population of Member States is urgently and fairly access to vaccines against SARS-CoV-2 virus. Although it is widely known that the period of development of a vaccine is between 5 and 10 years, the Union's efforts are conjugated to obtain a vaccine within 18 months, ensuring its quality, safety and efficacy standards. Europe's determination to combat this threat is also revealed by the speech o the President of the European Commission, Ursula von der Leyen: "this is an important moment for science and



solidarity. Nothing is certain, but I am convinced that we can mobilize the resources needed to find a vaccine that will defeat this virus once and for all. We must be ready to produce and make this vaccine available to the population throughout Europe and throughout the world. This vaccine will be a major step forward in the fight against the coronavirus and a testimony to what we, as partners, can achieve when we put our ideas, research and resources together. The European Union will do everything possible to ensure that all citizens, whereon they live, have access to a vaccine¹⁵.

Internationally, the activities carried out by the EU become significant, the organisation being the main emissary of cooperation and unity so necessary to survive this crisis, but especially the consequences arising from the metamorphosis of the coronavirus pandemic. At the same time, the Union as a PARTNER of the US regrets the cumulation of less responsible US actions to withdraw funding for WHO and the withdrawal from other international treaties whose common purpose is to safeguard the rules-based world order: "EU regrets the decline in US global involvement and the US government's decision to withdraw Funding from the World Health Organisation (WHO) and withdraw from the Open Skies Treaty, as well as the general tendency of the current US administration to make a discordant note in several multilateral organisations that have been created to establish a rules-based liberal world order or to undermine them (as happened in the case of the International Criminal Court)"¹⁶. Europe through the EU also takes note and formally condemns the destabilising actions of China and Russia on the pandemic. Thus, the European Commission report identifies threats in the area of misinformation and the dissemination of false information, with Russia and China being presented as clearly identified dangers in this regard: "foreign actors and certain third countries, in particular Russia and China, have engaged in targeted influence operations and disinformation campaigns about COVID-19, in the EU, in its neighbourhood and globally, aiming to undermine democratic debate and exacerbate social polarisation, to improve its own image in the context of COVID-19"¹⁷.

Conclusions

The beginning of the millennium presents a European space, faced with new challenges,

uncertainty and expansionary trends at its borders, at the heart of which the main exponent of stability and security, the European Union, is becoming increasingly vocal to violations of international law, more persevering in the development of civil and especially military capabilities, representing a pillar of openness to communication, integration, regional stability, with global security vector aspirations.

At European level, developments in science and technology will generate new threats and risks with the benefits to humanity, further widening the gaps between developed and underdeveloped countries. Thus, important scientific advances will occur frequently if two or more disciplines converge, especially in rapidly evolving fields such as biology, robotics and autonomy, information technology, nanotechnology, and energy¹⁸.

Moreover, in a perfectly connected world, a general trend is that of constantly updating partnerships. In this respect, the EU, as an exponent of European power, will seek not only to strengthen its partnerships through open dialogue, transparency and consideration of the interests of all participating States, but also to make small concessions in order to preserve its allies.

The EU will continue to develop both civilian and military crisis management capabilities, with the strategic partnership with NATO the foundation on which it will strengthen its security and defence dimension. Efforts to eradicate poverty, as well as the development goals of the 2030 Agenda, will also be continued.

In a world of global geopolitical competition, the mad rush to secure endangered energy resources is putting indescribable pressure on the EU as it is launching to develop new technologies and create tools and means to ensure its superiority in international relations. European states' concerns are also directed towards the effective exploitation of opportunities and the finding of optimal solutions to protect their vulnerabilities in the future architecture of international relations. In this respect, we appreciate Europe's role in the power equation of the future will be determined by its ability to continuously steer its partnerships towards new horizons and strengthen those already achieved.

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MANAGEMENT OF HUMAN RESOURCES IN THE ROMANIAN MILITARY

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The overwhelming evolution of technology in recent decades, whether in the electronic or technical field, as well as the global security challenges have intensified the development of defense systems and implicitly the necessary resources. In this sense, a very important argument, of the significant progress, of the human resources management within the Romanian Military is the successful support of the military actions together with the members of the coalition. This article will highlight the role, objectives and particularities of human resources management in the Romanian Military, but also the need for continuous modernization of this field, in the context of staged integration into NATO and changes in the security environment.

Keywords: resource planning; human resources management; modernization of military education.

Conceptual Aspects

Starting from the general management, the human resources management borrowed some concepts and study methods and, at the same time, it delimited its own field of activity, respectively the people, approached in another hypostasis, that of human resources.

In the paper *Human resources management*, Professor Aurel Manolescu, based on the analyses undertaken, states that "human resources management has been differentiated and empowered, restricting its issues and subject matter, and, consequently, specialized, having a well specified position in the general management"¹.

The human resource management, as a theory and practical activity, is one of the achievements of the last century and, over time, it has been called: "personnel management", "industrial relations", "management of the personnel activities", "employee development", "management of the personnel" with a substantial impact on performance in all areas of activity, including the military.

Human resources management is defined and interpreted in the paper *Human resources management*², as follows: "human resources management is a set of activities that ensure the procurement, development and conservation of human resources that an organization needs

to achieve its objectives", "it includes all the activities oriented towards the human factor, having as objectives: conception, design, optimal use, maintenance and socio-human development".

Given these areas of activity, De Cenzo, A. David and P. Robbins suggested in the paper *Personnel/Human Resource Management*³ that: "human resource management is a process consisting of four functions: 1. acquiring; 2. development; 3. motivation; 4. maintaining human resources".

The paper *Public Management, Part I – Human Resources Management in Public Institutions*⁴ highlights the operational dimension of human resources activities as follows: "determining the general objectives and policies to ensure the efficient use and fair treatment of resources; the development of a structural support that would allow the division of responsibilities and authority between hierarchical managers and human resources specialists or the revision of the existing structures; planning the necessary human resources; providing human resources; human resources development; conservation of human resources".

Defence Human Resources

The human resources management in the military has acquired a special significance, both due to the significant and rapid changes in the Romanian society, as well as to the structural and content transformations of the military institution in order to respond easily and adequately to the security needs.

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Thus, on October 9, 1862, within the Ministry of War, a central personnel structure was established at the level of the entire military for the first time, carrying out its activity with professionalism and devotion and, going through several stages and holding several names as follows⁵:

- "Personnel and Military Operations Directorate;
- Directorate of General Staff and Infantry;
- Infantry, cavalry and personnel direction;
- General Directorate of Personnel;
- Military Personnel Directorate;
- Personnel and Education Department;
- Personnel Directorate of the Ministry of National Defence;

- Human resources management department".

In 2017, with the entry into force of Law no. 167/2017 for the amendment and completion of Law no. 346/2006 on the organization and functioning of the Ministry of National Defence, the Human Resources Management Department became the General Directorate of Human Resources Management.

Defence human resources management has been a benchmark in the field of human resources, both at organizational and institutional level and at national level and has triggered a favorable evolution over time, addressing an operational personnel management, focused on the development of quality human resources to meet the needs of military personnel both nationally and internationally.

A professional military is defined, first and foremost, by the human dimension. Attracting and generating human resources with high potential for the military profession, the efficient use and development in the military system of competitive resources have been the essential directions of the functioning of the professional military.

The human resources management has undergone an assiduous process of adaptation to the requirements of times, of appropriate solution of the difficulties appeared so as to ensure a high degree of efficiency and at the same time to bring an added value to the institution.

The primary role of human resources management involves attracting adequate human resources, preparing them to the highest level, adapted to the requirements of the positions so as to meet both the needs of the institution and those of military personnel.

In order to optimize the necessary personnel within the military, which is established annually, the General Directorate of Human Resources Management elaborates the following documents⁶: "strategies, policies and regulations specific to the promotion of the military profession, recruitment, selection, admission and initial training of military personnel; the schooling plan in the military education units/institutions and the military structures destined to the initial and continuous professional training; the plan for recruiting candidates for military education units/institutions; the type, form of organization, succession, objectives and duration of the initial professional training programs, in accordance with the law, except for the training programs for soldiers/professional ranks".

Starting from the functions of human resources management, several objectives can be distinguished, such as:

- human resources planning;
- ensuring quality human resources;
- developing the professional competence of the staff;
- modernization of the military educational system;
- staff retention.

Human resource planning is an extremely thorough process, it is done based on the forecast of the necessary short, medium and long term professional skills. At the same time, it is envisaged to ensure the evolution in the career, but also to increase the level of competition and performance of the human resource in correlation with the strategic objectives of the defence.

Ensuring quality human resources is a real challenge in terms of recruitment and selection of human resources, in this sense the aim is to increase the attractiveness of the military profession through various means, including the intensive promotion of the military profession using virtual space, or annual campaigns that involve direct contact with potential candidates. An imperative aspect is the promotion of values specific to the military environment, such as: patriotism, civic spirit, loyalty, courage, respect for the authorities, etc.

The development of the professional competence of military personnel appears as a need to respond to the challenges of the security environment,

but also as a requirement for the application of educational policies and strategies. This involves organizational planning of the individual career and the development of a competitive and efficient professional environment.

The modernization of the military education system aims to improve educational processes, as well as their digitization and development in a large-scale e-learning system. Also, the endowment with modern equipment and the professional development of instructors and teachers are taken into consideration. At the same time, it is necessary to develop partnership programs with the educational institutions of the NATO and EU Member States in order to ensure continuity and gradually increase training at the highest level⁷.

Another aspect that cannot be neglected is the retention of personnel; thorough efforts are required to maintain the system by controlling professional mobility and increasing the quality of life of military and civilian personnel and also veterans. These involve reshaping the legislative framework and regulating salaries and pay other due rights. These are essential to ensure the continuity and harmonious and nonconvulsive change of generations of the military.

The main objective of the Romanian Military in the field of human resources is the development of a modern management system and the remodeling of military education following the three stages provided in the "Strategy for the transformation of the Romanian Military" 2007, the modernization process that will take place until 2025, according to the requirements of NATO and EU integration, as follows⁸:

1. "Stage of completion of basic restructuring (2005-2007).
2. Stage of operational integration in NATO and the European Union (2008-2015).
3. Stage of full integration in NATO and the European Union (2016-2025)".

It can be seen that at the moment the Romanian Military is in the third stage; it is mainly dedicated to improving education according to NATO standards with the development of distance education and professional development of military personnel at the same level as NATO member countries.

The support of the human resources management process in the Romanian military organization, as an intrinsic mission of the functioning of the

military system at the highest standards, was materialized by modernizing the higher military education in its own institutions.

The assiduous development of the higher education structures correlated with the policies in the field of human resources management, constantly aim at ensuring the necessary conditions for the supply of candidates suitable for military service, in the necessary number and at the established quality standards. For the Romanian Military, this means that the military field can benefit from human resources capable of fulfilling the missions and objectives assumed, given the technological developments that increase the diversification and complexity of security risks and threats.

Characteristics of Defence Human Resources Management

The most obvious peculiarities of human resources management, determined by the specifics of the military environment, are:

- the organization of positions in a pyramidal structure, which determines that only a part of those who opt for the military career practice it until retirement age;
- the recruitment of military personnel based on criteria determined by the need to identify skills specific to the military career;
- its rigorous selection and retention of only of those with potential for military career;
- the training of personnel and their specialization according to the role and place they will occupy throughout their military career;
- improving the training according to the requirements of each level of the military hierarchy;
- permanent evaluation of performances and identification of the potential for further development, under rigorously defined conditions;
- use of a well-defined motivation system;
- ensuring social conditions – living, medical assistance, feeding, equipment – that allow the total availability of personnel to the requirements and missions of the military profession;
- social protection, including professional reconversion at the end of the military career.

All these contribute to the achievement of an efficient management of the professional human resources of the defence adapted to the realities of the new context of the security environment and



respecting the objectives within the modernization process.

Conclusions

Romania's accession to NATO and the EU required the identification of new objectives in the process of modernizing the defence human resources management, but especially the reorganization of military educational institutions adequate to the requirements of the need to develop a high-performance system in line with the alliance's needs, but also the current training needs of officers at the highest standards.

Practices in this field, within the militaries of NATO and EU member states, impose the need to implement an individual career management system, which will stimulate the desire for professional development of military personnel and keep them active.

The development of human resources management will lead, among others, to the achievement of the proposed objectives, the improvement of professional skills, the efficiency of activities in the field of human resources.

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CERTAIN CONSIDERATIONS REGARDING ISR STRUCTURES FROM LAND FORCES IN SUPPORT OF INFORMATION OF THE JOINT FORCES GROUP

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ISR structures from Land Forces contribute through specific actions with information in support of decision makers in all phases of operations of the Joint Forces Group. The ISR capabilities specific to the Land Forces are permanently interconnected within the information architecture at a combined level.

Keywords: intelligence; reconnaissance; surveillance; Land Forces; Joint Forces Group.

Starting from the premise of the concept of "improving the capacity for rapid management of adaptation mechanisms at local, national and regional level"¹ and following the evolutionary trends of the current security environment and the trends of military endowment in the context of strengthening national resilience, our approach identifies and presents a series of actions specific to the SRI structures of the Land Forces in support of information of the Joint Forces Group.

The ISR elements of the Land Forces support the Joint Forces Group with information in ISR operations, defined as "operations performed by forces whose main mission is to collect data and information"².

By definition, the concept of ISR/Intelligence, Surveillance and Reconnaissance is "a set of information and operations capabilities that synchronize and integrate the planning and operations of all collection capabilities with the processing, exploitation and dissemination of the resulting information, in direct support of the planning, preparation and execution of operations"³. At the operational level, the approach is joint (JISR/Joint Intelligence, surveillance and reconnaissance), representing the integration of all operations and activities involving at least two participating elements⁴.

The combined approach integrates land, naval and aerial images (Land Recognized Picture/LRP, Naval Recognized Picture/NRP, Aerial Recognized Picture/ARP), and operations performed at the operational level take place in a multidimensional operational environment, characterized by mobility, maneuverability and increased flexibility of conventional and unconventional actions.

The ISR structures of the Land Forces apply the ISR principles, which, regardless of the echelon, are: centralized targeting and decentralized execution, sustainability, trust, responsiveness, sharing and accuracy⁵.

At the same time, these ensure the fulfillment of ISR – specific missions in support of the JFG, which are represented by: providing clues and warnings, informative preparation of the operational environment, organization for combat and disposition of the opponent's forces, estimation and monitoring of the situation, support of the target management process and support for force protection⁶.

In order to achieve operational success, the ISR structures of the Land Forces support the operational planning group at operational level/ GPOO to identify critical information requirements, among which the most important is national and international actors with whom they interact. Therefore, other critical information requirements are represented by establishing the essential capabilities for the execution of the operation, support for the early deployment of support forces, considerations regarding the rules of engagement,

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essential command and control elements; critical infrastructure in the assembled area of operations.

For coordination all ISR operations, synchronized information tasks, concentrate effort on the objectives established by Joint Forces Group commander, on joint level, it set up Joint Collection Management Board⁷.

By conducting specific missions, the ISR elements of the Land Forces can support the Joint Forces Group, with information about the opponent, regarding to organization, value, composition, endowment of opponents in large units / units in the joint operations area and identification of the districts and the alignments of the disposition of the armored, anti-armored technique, of the means of artillery and anti-aircraft defence and main control points.

If we analyze contemporary conflicts we can conclude that land or naval operations cannot be carried out without air support. Speed, high strike power, accuracy of air strikes give this category of forces a decisive importance in planning and executing any military actions.

Therefore, from the aerial perspective, the ISR structures of the Land Forces support the execution of the process of preparation of information of the operational environment / JIPOE with details regarding:⁸ identification of some risk factors; the organization of the opponent; probable main and secondary directions of action; probable targets that can be hit by the opponent's air means; the probable time and duration of the air action; the probable intensity of military actions on their various stages.

Analyzing the doctrinal aspects, the ISR structures of the Land Forces can contribute information about the air opponent, in support of JFG, as follows: identification of air bases, aerodromes, landing sites; the composition, nature, value and possibilities of the air opponent; the vulnerabilities and the attrition on certain moments of the operations of the opponent's aircraft; calculation of the estimated time on certain directions of action.

The unprecedented impact of the technological evolution so far but also the speed with which it develops in the future, determines us to adapt the ISR capabilities and to accelerate the endowment process with modern, state-of-the-art equipment. Therefore, we consider it essential to develop

unmanned aerial vehicle systems for ISR structures in the Land Forces.

For example, among the main unmanned aerial vehicle systems that can be used tactically we can mention UAS class I operated by a single operator, within the limits of direct radio visibility between the control station and the UAV, these are small, portable and perform missions at low altitudes below the coordination levels provided by the Air Code but also UAS class II for the operational level, which have the possibility to operate up to a radius of 200 km from the control station.

These, through communication systems, can achieve a BLOS (beyond line of sight) or LOS (line of sight) connection and can be limited in terms of direct visibility between the UAV antenna and the GCS (ground control station) or can be achieved by means of a re-translation relay. The data obtained are complex, with dynamic images and can be transmitted in almost real time to the maneuvering structures by OSRVT (one system remote video terminal) and ROVER (remotely operated video enhanced receiver)⁹.

According to some military specialists in the field, there are several directions for the development of future systems. unmanned aircraft, as follows: will be heavily armed and will have a very powerful endurance; they can be fed from the air; will implement "Stealth" technology; will ensure the interoperability of the systems; will have extra stratosphere travel capabilities (over 50 km); there will be platforms from which many systems can take off.¹⁰

ISR structures in the Land Forces can support the Joint Forces Group through maritime / river space surveillance missions. The success of surveillance by observation is closely linked to the existence of networks of interconnected observation posts, high-performance communications and satellite links, observation equipment with digital technology, training of staff in the organization, composition and actions of the maritime and river opponent.

We consider that ISR structures must perform the observation continuously, through a judicious organization and distribution of the elements, in a unitary conception, having the possibility to transmit data and information in a timely manner. Through maritime surveillance, the following are performed: systematic observation of the opponent's

ships, identification of the main naval platforms; identifying and warning of possible attacks.

We also believe that ISR structures in the Land Forces can support JFG by collecting data and information from open sources (OSINT), which can be focused on both the intentions and mode of action of opponents and potential opponents. Through open sources, ISR structures can contribute to supporting missions at the operational level identifying clues and early warning and contribution with information to the targeting (identifying, locating, prioritizing, hitting targets)¹¹.

The information obtained by intercepting data transmitted in cyberspace, other than those obtained from open sources, are CYBERINT (Cyber intelligence) operations and are represented by "intrusive or non-intrusive activities carried out to collect data and information necessary for the operational preparation of cyberspace"¹².

Intrusive activities are the exploitation of the opponent's and private networks, while non-intrusive actions are the exploitation of information from their own and public networks.

Therefore, we can say that ISR structures of the Land Forces through the Cyber intelligence structures, can support the Joint Forces Group by participating in the informative preparation of the operational environment of the cyberspace.

Conclusions

ISR structures in the Land Forces support the operational level, in fact certifying the "system of systems", a multiple network that should be interconnected, in our opinion, at all hierarchical levels, respecting the principle of "operating on the same map"¹³, ensuring the accessibility of all beneficiaries through the use of access and network security policies, compliance with the level of access to classified information, as well as the principle "need to know"¹⁴.

By interconnecting all the sensors in the network, the ISR structures in the Land Forces can merge the data and information, thus adding useful details to improve the common operational image/COP of the battlefield.

The unpredictable operational environment of the future will be defined by the existence of numerically reduced maneuvering structures, such as assembled weapons, flexible and easily

adaptable for the execution of a diverse spectrum of missions, with the support of high technology and high precision depth.

Therefore, we believe that in the future the process of gathering, centralizing, processing and disseminating information by ISR structures in the Land Forces in support of the Joint Forces Group will be an essential condition in the execution of joint operations, and the development of ISR equipment and systems must be a continuous, flexible and efficient process, adapted to the ever-changing operational requirements.

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