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## Logistic Security of Military Units and Institutions During the COVID-19 Pandemic

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**Abstract:**

**Purpose:** The article's objective is primarily to present what logistic security denotes for military units and institutions and demonstrate how the COVID-19 pandemic affects the magnitude of logistic requirements and the way they are satisfied. The further part of the article allows for indicating the directions of measures enabling the appropriate preparation of the logistic potential to meet the generated needs in the event of subsequent crises.

**Research methodology:** As the pandemic continues, the questionnaire survey method was recognized as the most effective and efficient one. By addressing the people directly involved in the ongoing implementation of logistic tasks, there is a high probability of obtaining objective and comprehensive information on how the COVID-19 pandemic affects the magnitude and range of logistic needs and what actions need to be taken to satisfy these requirements at an appropriate level.

**Findings:** The functioning of military units and institutions has been severely disrupted in the times of the COVID-19 pandemic. This stems from several restrictions introduced at the national level. Also, the leadership of the Polish Armed Forces decided to limit training activities, and at the same time, directed part of the military potential to support civil services in combating the pandemic. These disturbances did not relieve the military units and institutions from maintaining operational readiness at the prescribed level. Therefore, in addition to the standard duties, there were limitations and additional duties for society's benefit.

**Practical implications:** Based on the research results obtained, the staff in charge at the Ministry of National Defence are capable of undertaking measures to modify the existing solutions in the field of understood logistic security. In this way, conditions for real counteraction against threats resulting from future crises could be created.

**Originality:** Regarding the functioning of military units and institutions and their logistic support during the COVID-19 pandemic, the research results demonstrated that a flexible response to emerging complications is necessary. This flexibility concerns the acquisition of supplies, the provision of specialist logistic services/laundry, preparing meals, baking bread/ and applying the law, which does not fully consider the conditions resulting from a crisis.

**Keywords:** Military unit, society, logistic security, threat, pandemic, logistic requirements.

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## **1. Introduction**

On March 11, 2020, the World Health Organization (WHO) announced the coronavirus disease (COVID-19). While the information about the virus's outbreak, i.e., its origin and its ability to spread among humans, is still unclear, the number of cases resulting from communication between the infected and uninfected people is increasing. Military units and institutions and entire societies during the COVID-19 pandemic operate in specific conditions. However, this does not mean that they are relieved from fulfilling the constitutional duties of ensuring external security and, in special cases, helping society. These conditions necessitate the evaluation and verification of the standard solutions for ensuring the logistic security of military structures. Based on this assumption, it seems necessary to conduct research allowing the following areas to be defined:

- how should logistic security be understood?
- what tasks are performed by military units in the conditions of the COVID-19 pandemic and what are the logistic requirements resulting therefrom?
- how to meet the generated logistic needs to ensure the conditions for the full implementation of the tasks by military units (Williams, 2012, pp. 18 - 20)?

In order to obtain answers to these questions, which are also partial research problems, it is reasonable to use the method of analysis that will allow for exploring the details about the functioning of military units and their logistic needs during the COVID-19

pandemic. The knowledge gained in this way will allow for establishing a diagnosis regarding the possibility of ensuring logistic security for military units in special operational circumstances. The consequence of this methodological approach will be the presentation of proposals for preparing military units for the execution of tasks in the event of subsequent, not always foreseeable disruptions in the functioning of the state, Europe, and the world. The measurable benefit from the study will be an indication of what tasks should be performed in military units and institutions and to what extent in order to be ready to carry out predetermined tasks in the event of a threat similar to the COVID-19 pandemic, and to be ready to support the public in areas where recognizable danger occurs.

## **2. Understanding the Concept of Logistic Security**

To answer the first question about what logistic security is or how it should be understood, one should refer to the explanation of the general concept of security. The extensive literature on the subject explains and interprets this concept in many ways. However, it seems that the most accurate and relevant statement is the one whereby security is nothing more than a mental state, which is the opposite of fear or danger. Adopting this as a starting point for further discussion, it is necessary to add

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the elements of the environment to the understanding of security as a mental state, namely:

- the legal status of the entity to which security pertains;
- economic situation along with the possessed economic and military potential;
- the level of intellectual development and the technologies employed, whose quantitative and qualitative state allows the entity, to which logistic security pertains, to feel confident that nothing bad - in their understanding - should befall them/the entity/.
- From the point of view of the entity's security, the awareness that there is a possibility of support or assistance provided by other national and international entities operating in the security space (Kozia, 2010) is also important. Such an understanding of the possibilities of support is particularly important for small and medium-sized countries, which cannot ensure their own security in many dimensions.

In order to fully and unequivocally understand the essence of logistic security, it is necessary to quote the definition of "logistics" in civil terms, which is nothing else than an integrated system of shaping and controlling processes related to the physical flow of goods and information aimed at obtaining the best relationship between the level of meeting customer expectations and the amount of expenditure (Grabarski, Rutkowski and Wrzosek, 2000). Other authors also understand logistics as real processes of the physical flow of material goods and the flow of information streams illustrating material processes, which can be controlled to achieve specific benefits thanks to the available information.

It is also important to clarify what material flows can be encountered in logistic processes (Skowronek and Sarjusz-Wolski, 2008). In "civil" logistics, these are external supply streams, internal flows /between organizational units of an enterprise/ and outbound supply streams, e.g., to individual recipients. In other words, the essence of logistics is to meet the needs reported by a specific consumer. Such an approach, in which, in a way, the interpretation of the concepts of logistics and safety accumulates, takes place in the activities of logistics units, because by satisfying the needs, the awareness of fulfillment or a sense of safety of each consumer is created.

The perception of logistics concerning the armed forces, or the army in general, is slightly different. According to the normative documents being in force in Poland, which are compliant with the provisions of the North Atlantic Treaty Organization, military logistics is ... "Logistics is an area that includes planning, preparation and use of means of supply, as well as the implementation of services and specialist services in order to maintain the army in appropriate combat readiness in the territory of the state and to secure the functioning of troops performing tasks outside its borders".... Military logistics covers the following areas of activity: design and

development, acquisition, storage, transportation, distribution, operation, evacuation, and withdrawal of supplies:

- transportation of personnel and supplies;
- acquisition, construction, maintenance and decommissioning of buildings and installations;
- obtaining and providing services;
- medical protection.

The consequence, or rather the necessary measure, allowing for the practical implementation of the obligations resulting from the so-defined and understood concept of military logistics was to determine task areas that should be filled in with content to meet military units and institutions' needs. Consequently, these areas are nothing more than tasks implemented by individual subsystems that the military logistics system is composed of. These include:

- materiel subsystem;
- technical subsystem;
- transport and troop movement subsystem;
- infrastructure subsystem;
- medical subsystem.

The command subsystem is a supplement and, in fact, an essential part ensuring the conditions of coordinated activity to satisfy the needs reported by military units and institutions. The military logistics system is also supplemented by the civil logistics potential, which includes the national economy and other entities that may satisfy the needs reported by military units and institutions.

Regarding military units and institutions, the logistics system is designed to meet the needs arising in various situations, thus ensuring the conditions enabling tasks' performance (Pawlisiak, 2016).

Therefore, it can be concluded that proper satisfaction of needs is an important premise allowing a sense of security in military units and institutions. Among the numerous examples of such an approach is the supply of appropriate quality and quantity of ammunition to the recipient. As a result, there are no threats in combat assets, and the recipient /military unit/ enjoys a sense of security. Of course, ammunition alone is not enough. Therefore, the armed forces' organizational structures, not only in Poland, possess specific forces and resources that allow the needs to be comprehensively met and thus ensure logistic security for each military unit and institution.

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### **3. Logistic Requirements Resulting from the Functioning of Military Units and Institutions in the Conditions of the COVID-19 Pandemic**

The COVID-19 pandemic, widely commented on and commonly known today, had its origin, at least officially, on November 17, 2019, in China, Wuhan Province. It was recognized as a pandemic on March 11, 2020, by the World Health Organization. Its spread and aggressive nature led to various international measures to prevent the disease's incidence. These included travel restrictions, quarantine, the introduction of curfews in some countries, postponement, or cancellation of several events intended to gather large crowds. Some countries closed their borders or introduced significant trans-border traffic restrictions, including passenger arrivals and border crossing restrictions. Controls at airports, railway, and bus stations were a significant limitation. These limitations are not only simple disturbances or difficulties in the ongoing functioning of societies. The COVID - 19 pandemic has disrupted the functioning of the economy on a global scale. It was still being felt, especially in business operations, and economists claimed that the pandemic had caused a recession on the Great Depression scale. In practice, it manifested itself through the fact that all projects involving many people were canceled. It was also possible to notice shortages of certain goods due to panicky purchases in some countries.

In global terms, downward trends on stock exchanges were already noticed worldwide in February. This also applies to the Warsaw Stock Exchange, which recorded the steepest decline in several years. The drops in crude oil prices in the United States were symptomatic for the world economy. This situation led to panic in some locations and the so-called "clearing" shelves of necessities such as food, toilet paper, and bottled water. Disturbances of various intensity were also noted in businesses' operations, and logistic chains kept breaking up.

The presented overview was, in a way, the background of and at the same time, it set conditions for the functioning of military units and institutions from the material point of view. Added to this should be the necessity to involve the military health service in providing support, especially in periods and areas where COVID - 19 was increased. At this point, it is necessary to answer how a military unit or institution functioned in the time of the pandemic.

To obtain a comprehensive answer to such a general question, a survey using e-mail was conducted. A questionnaire was sent to randomly selected representatives of various military units and institutions to provide anonymous answers. It should be noted that feedback was received at the level of 70%. The information obtained draws a picture of how military units and institutions function in the COVID-19 pandemic. It can be honestly stated that military units and institutions found themselves in a somewhat different reality. It consisted of the fact that the Polish Armed Forces were subject to the same rigors as all citizens as an integral part of society. At the same time, no one relieved them of the obligation to ensure state

security, and additional further tasks were assigned to soldiers. According to the respondents' statements, these involved mainly auxiliary activities related to the fight against COVID-19. The largest number of responses (53%) indicated soldiers' participation in collecting samples from the swab collection site to specialist laboratories. Together with the police, the soldiers controlled the quarantine rules' observance by the people who had been ordered to carry it out (21%). It was mainly the Territorial Défense Forces soldiers and the Military Police who participated in this task.

The organization of securing the population's day-to-day functioning in locations with a high incidence of the disease (19%) was an important task carried out by the military. This concerned some hospitals and Nursing Homes. Collecting swabs and transporting people diagnosed with the COVID-19 disease was a specialized task that the soldiers ordered. This assignment was carried out by the servicemen and resources of the military health service from individual units, and the involvement did not exceed 9% of the total Army's participation in combating the COVID-19 pandemic. Occasionally, soldiers were dispatched to patrol the locations where the disease cases' mass occurrence took place (1%).

From the information presented on the soldiers' involvement in performing tasks during the fight against COVID-19, it can be concluded that the content of these tasks and their magnitude did not exceed the executive capacity of the armed forces. The observations provided by the respondents indicate only the necessity to introduce changes to the organization of the current mode of functioning. To some extent, additional tasks disrupted the established way of the day-to-day operation of military units and institutions.

The information obtained from the survey respondents shows that these disturbances referred primarily to the training process. The constraints resulting from the pandemic led to reductions in training undertakings. This was primarily the case for those plans in which more soldiers were supposed to participate. Some of the plans were outright canceled. This would have involved troop exercises and training sessions organized indoors. About troop exercises, the DEFENDER-Europe 20 exercise, which was to be the largest exercise in a quarter of a century and was to have been attended by over twenty thousand soldiers from various NATO countries, was practically canceled.

Application exercises with the use of maps and computer programs were also canceled or significantly limited. There were also other training projects in which a limited number of soldiers participated. Additionally, efforts were made to keep the so-called social distance consisting, inter alia, keeping the distance of at least two meters between soldiers." Remote" classes with the use of the "Microsoft Teams" and E-Learning systems were also conducted, especially at military universities.

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Therefore, it is justified to state that the training process during the COVID – 19 pandemic in the Polish Armed Forces' military units and institutions had to be remodeled.

The implementation of additional tasks by military units and institutions, consisting of supporting civilian institutions in the fight against the COVID – 19 pandemic and qualitatively through the organization of training projects, has left its mark on the magnitude and range of material needs. First, attention should be paid to reducing the requirements for combat assets and fuel. Being confined to the barracks, with shorter distances covered by armored personnel carriers and tanks, reduces fuel consumption by about 50% on average per month. Therefore, it can be said that one should not perceive a qualitatively new situation as an unfavorable event from this point of view. Simultaneously, this does not mean that, for state security, the reduced consumption of some supplies is desirable, since the side effect thereof is poorer training of soldiers, which is at least a disadvantageous situation for commanders.

The second-largest type of supplies necessary for the proper functioning of the armed forces is food. The consumption of foodstuffs during the COVID – 19 pandemic has remained virtually unchanged, although a reduced demand for food products can be noted in some locations. This applies to the military training ground areas and planned exercises, which did not occur by previously developed schedules. The catering service's functioning was to ensure the conditions for feeding the personnel remaining in the barracks facilities. Not always were the condition and equipment of the canteen and kitchen facilities adjusted to satisfy current requirements. Other supplies, such as uniform and equipment items, were also used in smaller quantities due to the reduced training efforts and, consequently, their requirements were reduced.

Taking into account the above data, as well as the information provided by the respondents of the survey, it can be stated that the organization of the material support for the military units and institutions of the Polish Armed Forces at the time of the COVID-19 pandemic proceeded without disruptions. Only the personnel garrisoning in some units forced the launch of a fully functioning catering service for meal preparation and distribution.

Limitations on using some military equipment, especially tanks, infantry carriers, fire assets (cannons, howitzers, rocket launchers), resulted in a smaller number of operational damages. Judging from involving soldiers from subunits, units, and repair and maintenance units, this is a beneficial event. It was possible to accomplish scheduled maintenance and repair tasks for military equipment during that time. Also, the reduction of repair and maintenance tasks for military equipment resulted in reduced demand for components and spare parts necessary for repairs to damaged military equipment.

As an integral part of the logistics system, the military transport subsystem is targeted at implementing the tasks supporting other subsystems. The limitation of military units and institutions' training activity resulted in reduced logistic requirements concerning all the Polish Armed Forces components. As a result, the requirements related to troop movement, transporting military cargo, and organizing safe traffic on public roads have significantly decreased. Thus, the subsystem of transport and troop movement, with demand reduced, was able to perform all tasks, adding to them the ad hoc ones related to supporting the civilian population by logistic units subordinated to the Head of the Inspectorate for Armed Forces Support and subunits of the Territorial Defense Forces.

The military infrastructure and personnel responsible for its maintenance and operation have not been significantly affected by the effects of the COVID – 19 pandemics. In practice, as presented by the respondents, the situation in the infrastructure subsystem has not been disturbed in any way. The infrastructure facilities were secured in terms of the possibility of their usage, and the only noticeable disturbance was slight delays in the implementation of renovation and investment tasks. They resulted largely from inherent constraints related to the freezing of economic operations in Poland took place in the first phase of the COVID – 19 pandemic.

The results obtained during the research entitle the Author to a general statement whereby the COVID – 19 pandemics has left its mark on military units and institutions' logistic security. However, it should be noted that it has not caused considerable adverse effects but indicated areas, tasks, and subsystems that should be adjusted after analysis so that they will be able to function better in the event of other national or global random events.

#### **4. Satisfying Logistic Requirements in the Time of the COVID-19 Pandemic**

The results obtained during the questionnaire survey indicate that, in practice, there are no general problems with satisfying the logistic needs and thus ensuring the logistic security of military units and institutions. The author deliberately used the term "general problems," pointing to the entire logistic system. However, delving into details and carefully analyzing the respondents' answers, one can find several areas where the obligations of ensuring logistic security for military units and institutions were not fully observed properly in the times of the COVID – 19 pandemic.

The primary problem regarding meeting logistic needs in the COVID – 19 pandemic lies in the training organization and its consequences. Under regulations in force in the Polish Army, a military unit is obliged to provide catering when carrying out exercises in permanent dislocation or on the training grounds located near the barracks. It is one meal, usually dinner if the training lasts 10 – 12 hours and full



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board if it exceeds 12 hours a day. These are usually various exercises in the pandemic as a re-placement for exercises on the military training grounds. The senior officer's duty regarding catering entails further detailed tasks consisting of obtaining fresh products for meal preparation. This kind of additional and ad hoc created task is difficult to implement because it must consider the applicable provisions, particularly the Public Procurement Law, which defines the framework of the procedure in the process of executing an order.

Another problem, or rather the difficulty in meeting the nutritional needs, is the quantity, technical condition, and production capacity of kitchen facilities. In a way, these difficulties result from previous actions consisting of partial liquidation of some kitchen facilities or their shutdown. The conditions of the COVID – 19 pandemics forced the catering service's management bodies to verify the policies implemented so far and verify the content of previously made decisions. An equally unfavorable phenomenon was the insufficient number of soldiers and employees of the Ministry of National defense with professional training to organize mass catering for soldiers.

The respondents rightly pointed to the need to adopt a solution according to which field kitchens should be used. These kitchens, developed within the barracks facilities, will prepare the right amount of appropriate quality meals. The added value of this solution will be practical training for the soldiers serving in the foodservice division. Therefore, it can be stated that, albeit with difficulty, it is possible to ensure security to satisfy the food requirements of the soldiers undergoing training during the COVID-19 pandemic.

In the process of satisfying logistics requirements, stockpiling appropriate supplies, both in terms of their quantity and quality, is an important element. In the respondents' opinion, the conditions of the COVID-19 pandemic are not a factor that has a significant impact on the size and assortment of supplies. Still, specific stock-taking should be conducted, bearing in mind possible future unexpected threats and opportunities arising from this state of requirements.

According to the survey respondents, the consequence of such an approach is the possession of an adequate amount of personal protective equipment in the form of reserves. Their insufficient quantity and quality were evident when supporting civilian medical services in areas/sites/with an increased number of people infected with the COVID - 19 viruses. Therefore, it is necessary to have re-serves in the amount that allows for meeting the current needs resulting from military units and institutions' operating principles and institutions and supporting the society in crises.

During the survey, the respondents suggested considering solutions that would enable military units and institutions to hold specialist equipment in reserve supplies to support society. In addition to sanitary vehicles, decontamination and deactivation equipment and even specialized fire-fighting vehicles were listed. These responses

testify to the soldiers' concern for ensuring society's security in military terms and various crises not related to the enemy's impact in the military sense. Isolated opinions pointed to the need for earlier legal regulations that would allow us to use the potential of military units and institutions to help the society in the event of future threats related to any pandemic without undue delay.

According to the survey participants, military units and institutions must have infrastructural resources that can be used for society's needs in a possible pandemic or other disasters, not only natural ones. This view may be disputed since military units and institutions allocate the infrastructure at their disposal to ensuring the conditions of current functioning, training, and, possibly, during the time of threat or war, as a place to accommodate personnel reserves. Obviously, in special cases, such as a pandemic, it is possible to temporarily make available the infrastructure already at the disposal of military units and institutions. However, possessing facilities intended for the society "just in case" is not justifiable since it would be an irrational and economically, socially, or militarily unjustified measure.

Almost all the respondents emphasized the necessity of military units and institutions having conditions of full logistic autonomy and self-sufficiency. This requirement was particularly supported by arguments whereby current military units and institutions, considering the rational management of budgetary resources, often use outsourcing. Such a measure means that some areas of logistic operations are the responsibility of civilian entities.

For example, the survey respondents mentioned laundry services, services related to day-to-day catering, and universally understood utilities provided by entities from outside the military unit. The issues related to this should be and even must be the subject of analyses and discussions because during any military operations for which the military is intended, obtaining support from civilian entities will be difficult and most likely impossible. In conclusion, it can be noted that the soldiers' concern for the proper preparation of military units and institutions to ensure logistic security is ubiquitous and fully justified.

## **5. Conclusions**

The COVID-19 pandemic, perceived as a significant threat to society, resulted in a wide variety of measures that significantly disrupted the functioning of states, economic entities, as well as military units and institutions. This disturbance made it obvious to the authorities that not all are prepared to act in a pandemic's specific conditions. This applies in equal measure to military units and institutions for which logistic security must be ensured for their proper functioning. In the opinion of the Author, this safety has been ensured.

However, the research results indicate the need to act, allowing for better preparation in logistics in new, different, hitherto unidentified threats. It can be stated with full

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responsibility that ensuring full logistic autonomy and self-sufficiency of military units and institutions is a requirement that allows for proper functioning and being ready for military operations and for being able to help society in crises.

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