
Adrian Grudzień[✉], *Tomasz Rokicki*^{1✉}

¹Warsaw University of Life Sciences – SGGW

Logistical organization of the Armed Forces of the Republic of Poland

Organizacja logistyki w Siłach Zbrojnych Rzeczypospolitej Polskiej

Abstract. The paper describes military logistics, including the administrative and legal norms, that influenced the development of the modern military logistics system in the 21st century. The scope of the military logistic system was shaped by the legal regulations of Poland's joining into NATO. The recent years actions affected the modernization of the entire army system. In this paper, the structure of the Republic of Poland's armed forces is described, including its logistics system, divided into the hierarchy-organizational branches of the army. A detailed description of areas of technical, transport, and material security of the Republic Poland Armed Forces is included as well. These elements are of the greatest influence on the army's battle readiness.

Key words: NATO, logistics, Armed Forces of the Republic of Poland, logistic system, tasks of military logistics

Synopsis. W pracy przedstawiono logistykę wojskową z uwzględnieniem norm prawno-administracyjnych, jakie w XXI wieku wpływały na kształtowanie się współczesnego systemu logistyki wojskowej. Na wymiar wojskowego systemu logistycznego miały wpływ regulacje prawne związane z przystąpieniem Polski do sojuszu NATO. Podejmowane działania w ostatnich latach dotyczyły modernizacji całego systemu armii. W pracy przedstawiono opis struktury organizacyjnej Sił Zbrojnych Rzeczypospolitej Polskiej (SZ RP) wraz z uwzględnieniem w niej systemu logistycznego, podzielonego na poszczególne szczeble hierarchiczno-organizacyjne wojska, a także scharakteryzowano obszary zabezpieczenia technicznego, transportowego oraz materiałowego Sił Zbrojnych RP. Były to elementy w największym stopniu odpowiadające za gotowość bojową armii.

Słowa kluczowe: NATO, logistyka, Siły Zbrojne Rzeczypospolitej Polskiej, system logistyczny, zadania logistyki wojskowej

JEL codes: L30, L38

✉ Adrian Grudzień – e-mail: adriangs@wp.pl

✉ Tomasz Rokicki – Warsaw University of Life Sciences – SGGW; Department of Logistics; e-mail: Tomasz_rokicki@sggw.edu.pl; <https://orcid.org/0000-0003-3356-2643>

Introduction

Military logistics is one of the scientific disciplines that has been transformed very dynamically and multifaceted in recent years. Special challenges connected with the hierarchical character of service, many years of experience gained in training ground exercises, staff exercises or military contingents have shown strengths and weaknesses of this system, thanks to which its essence, structure, and ways of operating can be modified more and more efficiently. Technological, technical, economic as well as social, and geopolitical progress also contributed to the evaluation of logistics in pragmatic terms. In the literature, military logistics is defined as a field of knowledge focused on the supply chain management process and all activities related to the provision of services to the army and the command of units responsible for the above tasks [Nowak 2000]. The contemporary definition of military logistics additionally includes the optimization of transformation processes because of the main criterion, which is the maximization of the defense capabilities of the Polish Armed Forces [Ficoń 2015].

Another definition of military logistics introduces the terminology of logistics system as a set of components of the organizational-functional structure, the target and mutual correlations of which secure the activities of the Polish Armed Forces in times of peace, crisis, and war through the maintenance of executive potential and logistical resources enabling long-term operations in different climatic or terrain conditions [Bursztyński 2009].

Moreover, logistics by combining military and civilian environments creates a unified logistics system, used for more effective management and profiling with the help of, among others, state-of-the-art IT solutions [Bursztyński 2009]. The above-mentioned system in terms of the implementation of tasks in the military environment operates in the following areas [Nowak and Walancik 2018]: technical, material, transport, and medical. Another definition of logistics included in the NATO Dictionary of Terms and Definitions characterizes this issue as a field dealing with planning and maintaining the combat capability of the armed forces, taking into account such aspects as transport and distribution of military equipment, service provision, or health security [MON 2017]. The definition proposed by Bursztyński understands logistics as a set of methods of effective management in the field of maintenance, storage, organization of movement, and management of stocks as the foundation of the army [Bursztyński 2009]. The above definitions, therefore, are heterogeneous and define logistics as a field, a process, and a system or set of methods, however, isolating the pragmatic scope of military logistics, the above aspects include most generally such areas as [Kurasiński et al. 2014]:

- the design and development of military equipment, its operation, and maintenance, together with the acquisition and storage of material and combat assets,
- passenger transport,
- sourcing and providing specialized services,
- construction of facilities, their use and maintenance and decommissioning,
- medical security.

The above-mentioned areas direct the scope of activities while emphasizing that the essence of military logistics is to provide such solutions that foster high efficiency of supply delivery to the army and provide specialized and economic services to territorially subordinate entities [Nowak 2000]. Both civil and military logistics definitions take into account the flow of goods understood as the delivery of a product to a specific recipient, taking into

account the demand, the adopted schedule of activities, and the lowest possible cost of implementation.

Analyzing the literature on the subject and normative acts to the basic concepts of military logistics also includes the term logistic supply. According to the definition, logistic supply is a specific striving of a unit to achieve optimal coordination in the flow of materials, their processing, storage, and transfer of the final form to specific entities to function effectively in a specific situation [Dworecki 2012]. Moreover, logistic supply consists of logistic support and logistic security. According to the definition of Dworecki definition logistic security includes the area of planning, organizational, and executive activities at the level of own forces and resources and logistic support includes the implementation of tasks using the forces and resources of allies, neighbors, or higher-level entities [Dworecki 2012]. Another definition specifies the practical form of logistic protection of troops in the area of military logistics covering logistic services and supplies provided for the needs of the Polish Armed Forces [Nowak 2009].

While attempting to define military logistics in the normative aspect, the concept of military logistics system was created and defined as a military organization operating based on the rules of war, composed of units, management bodies, and logistic devices within the framework of mutual relations, the final effect of which is an efficient organization and implementation of supply delivery, as well as provision of specialized services for troops [Nowak 2000]. In parallel with the above term, the concept of logistic device and logistic element was also introduced. According to the definition proposed in the Land Forces Logistics Doctrine, a logistics element is separated forces and resources from military subdivisions created to perform tasks in the area of material, transport, or medical security regardless of the place and combat situation [MON 2007]. The logistic device refers to the means and forces developed in the field of operations directed at the realization of social and living benefits or supply delivery [MON 2007].

Military logistics through correlations with other disciplines of sciences both military and civilian have an interdisciplinary character in pragmatic terms. Modern military logistics draws not only from military sciences but also from social, legal, or technical sciences and thus increases its effectiveness in terms of logistical security of combat operations [Ficoń 2015]. However, the success of military operations is based on logistics not only within the unit itself, the structure, or the hierarchical leadership but also on international cooperation. As can be seen from the above definitions, the term military logistics is not understood uniformly and over the years includes new aspects through accumulated experience and dynamic IT, technological, and transport development.

The main aim of the work was to present and evaluate the organization of Logistics of the Polish Armed Forces. The paper presents the following specific objectives: to show the historical outline of military logistics, to define the organization, tasks and functions of the logistics of the Polish Armed Forces, to present the essence and specificity of the material, technical and transport security of the military logistics of the Polish Armed Forces. Two research hypotheses were formulated in the paper:

1. The existing logistic security system of the Polish Armed Forces is sufficient and flexible.
2. Modern logistic security in the Polish Armed Forces meets the standards of NATO and member states.

Materials and Methods

The area related to Logistics of the Polish Armed Forces was selected for research using the purposeful selection method. The sources of materials are: literature on the subject, normative acts concerning the Armed Forces of the Republic of Poland, websites. The descriptive method was used to analyze and present the collected materials.

Results and discussion

Basic regulations on military logistics in the Polish Armed Forces

While attempting to specific legal regulations of the Polish Armed Forces logistics it is important to start from normative acts and regulations which for decades have influenced shaping the essence of this issue in the structure of the army not only in the territorial area of the country but also internationally. One of the first and fundamental normative acts which initiated the contemporary logistics system in the Polish army is the document by which Poland joined the North Atlantic Treaty Organisation on March 12, 1999. The North Atlantic Treaty, which was signed at that time, obliged member countries to mutual protection and assistance in case of an armed conflict. At the time, such standardization required a unified model of the structure, system of operation, and related methods of cooperation, so that the allied NATO states would be able to respond in times of need. For Poland, joining the North Atlantic Treaty Organisation involved a reorganization of the entire logistical structure of the army. Restructuring consisted primarily in the creation of a universal system that will operate efficiently in the perspective of the real capabilities of the Armed Forces taking into account the guidelines arising from the allied participation in NATO.

Based on the above, the basic normative document in connection with the organization of logistics in the Polish Armed Forces at the strategic level is the Logistics Doctrine of the Land Forces DD/4.2, DWLąd. 33/2007 of 22.03.2007. This doctrine takes into account in detail the scope, areas, and tasks of logistics standardized within the framework of NATO standards, addressed to the Member States. There is a great complexity of documents, holistically covering essential aspects, which are secured by military logistics within the framework of the Member States and tasks performed within the coalition.

A relatively basic document to define the tasks, scope, and specificity of military service is the Act of November 21, 1967 on the universal defense obligation of the Republic of Poland. On its foundations a number of normative documents were created, taking into account logistics from the level of economic and living tasks related to military service, as well as issues related to the performance of defense services [Ustawa z dnia 21 listopada 1967 r.].

Another important document is the General Regulations of the Polish Armed Forces, in which chapter V describes in detail the logistical security in aspects of the organization of the life of a subunit, schedule of the day, organization of feeding, accommodation, service of military equipment or use of infrastructure in military units [Regulamin Ogólny... 2021]. The knowledge of these regulations is an obligatory element in the service of soldiers and civilian employees of military units regardless of rank, position, or specificity of performed official tasks.

At the operational-tactical level, concerning the types of the Polish Armed Forces, the Land Forces Operation Regulations of November 3, 2008 apply, which describes tactical

tasks with the use of individual types of troops in such combat operations as assault, defense, delaying actions or actions in specific combat environments [Regulamin działań Wojsk... 2008]. However, this document refers to the level of action of individual units in a holistic approach, without taking into account the detailed and quantitative structure of the army. The above-mentioned Rules and Regulations for Land Forces Operations are supplemented by numerous normative documents, taking into account the quantitative structure of the army and these include:

- Regulations for tactical operations of armored and mechanized troops subdivisions (platoon-company-battalion) [Regulamin działań Wojsk... 2008],
- Mechanized troops subdivision combat manual (platoon, squad) [Wyższa Szkoła Oficerska im. Tadeusza. Kościuszki 2020].
- Compendium of Military Logistics [Kurasiński et al. 2014].

Moreover, it is worth mentioning that there are also many decisions of the Minister of National Defence which regulate in detail the elements related to particular activities in the field of logistic security. However, most of them are covered by the secrecy clause and therefore cannot be used for this study. However, the above documents constitute a solid base of information on individual tasks in the field of logistic security that are performed for the army.

When reviewing public documents, regulations, and doctrines, one can see detailed solutions to potential challenges posed to military logistics. An interesting element of each of the aforementioned acts is the fact that they provide ready schemes/areas of action already at the planning stage, taking into account the time, specificity of terrain, climate, or the number of soldiers that may participate in the implementation of a given undertaking. This is a very important element because the dynamic situation resulting from the conduct of logistical security activities for troops in training or exercising requires precise consideration of what in connection with a given tactical situation “the army” can expect, what it will need, and what other ways to secure possible failures.

It is worth noting that in a hierarchical structure, which is undoubtedly the army, the knowledge of the objectives, methods, and means of logistical security by each soldier significantly improves the course of duty. Such a model brings dynamics and fluidity of actions at each level defining specific tasks. In addition, when difficulties arise, it is easier to specify, define and choose a different scheme of action, so we can conclude that flexibility and multifacetedness are undoubtedly strong features of modern logistics security.

Military logistics system of the Polish Armed Forces

While attempting to present the structure of the military logistics system, it is worth mentioning that it is determined by the tasks set for the Armed Forces in the realization of current operations as well as those planned for times of crisis or war. The needs for logistic protection were also extended when we joined NATO, where not only the command and control system of the Armed Forces was restructured but also the need arose to ensure the coherence of the logistic department with North Atlantic Treaty standards of member states. Such changes became a task and a leitmotif for working on a new model of the system, which at the same time would efficiently and effectively secure the troops in training, but also meet the requirements of member states for possible international cooperation.

The main programs launched then experimentally to define the logistic structure under the cryptonym “Garnizon” and “Garnizon 2002” lasted two years, during which the optimization of the realization of tasks in the area of logistic and financial security of military units was analyzed [Nyszk 2013]. The final effects of the aforementioned experimental programs revealed numerous imperfections of the current system, mainly in the area of separating economic and financial functions from training and operational functions in military budget units [Nyszk 2013].

The most important logistic authority in the Polish Armed Forces is Inspektorat Wsparcia Siły Zbrojnych (IWsp) based in Bydgoszcz. It is an organizational unit formed to provide logistic support for soldiers of the Republic of Poland, both at home and abroad, as well as to secure their operations in case of natural disasters or crisis threats. The Inspectorate was appointed by the Minister of National Defence according to decision No. Z-74/Org./P1 of 6 October 2006 [Inspektorat Wsparcia Sił Zbrojnych].

Subsequently, in an attempt to improve the then functioning system, numerous pilot programs were implemented, which finally gave rise to the formation of a new territorial system of protection of military units in 2010 based on the functioning of Regional Logistics Bases (RBlog) and subordinate Military Economic Branches (WOG) [Szymański 2011].

According to the definition in the Compendium of Military Logistics-Regional Logistic Base is an organizational unit, which is an executive body of the Head of the IWsp, whose tasks include planning, collection, storage, and rotation of equipment resources for Military Economic Branches stationed in their area of responsibility [Kurasiński et al. 2014]. In addition, logistics security also deals with the planning and implementation of maintenance and repair activities of military equipment, coordination of the movement of troops or tasks arising from the obligations of the host country [2. Regionalna Baza Logistyczna...].

However, the Military Economic Branch in general is a logistic unit focused on tasks in the area of logistic and financial security of territorially subordinate units, as well as troops performing official tasks in their area of responsibility [Nyszk 2013].

It is worth noting that the above territorial divisions are based on the administrative systematization of the country while maintaining the rule of the maximum distance of operational units from WOG not more than 50 km. In addition, each military unit has in its structures individual so-called Security Groups, whose task is to secure units directly in the place of their permanent dislocation [Słowikowski 2018]. Such a solution significantly relieves top-level units, such as RBlog or WOG, from strictly organizational and technical tasks in favour of the possibility of forming detailed needs by units subordinated to them through persons appointed to coordinate in this respect.

The whole of the above procedure takes place through a hierarchical chain of command, hence the importance here of proper communication, clear operating rules, and knowledge of the legal provisions related to the execution of tasks by individual functionaries.

Summarising the above information, the military security system was based on the activity of Regional Logistic Bases (RBlog), for which the WOG is a field organ responsible for the distribution of supplies to final recipients, which are individual military units [Szymański 2011].

Concerning the information presented above, the military logistics system can be considered in the area of its structure and functionality. The first aspect refers to the logistic management and executive bodies, and functionality focuses on the targeted action of logistic

bodies to ensure the continuity of logistic support at any place, time, and conditions [Bursztyński 2009].

Moreover, to fully outline the functioning of the military logistics of the Polish Armed Forces it is important to take into account the so-called logistic security of mobilization development of troops, for the realization of which all levels of logistics are responsible. The term itself refers to war reserves purposefully allocated and stored in military units to supply the troops in the initial period of war [Zdrodowski 2008]. However, because most of the materials in this area are classified as confidential, they cannot be used for this thesis.

The military logistics system in peacetime is based on the operation of functional divisions related to the implementation of transport, material and technical security, in addition, in wartime also detailing the medical division [Zdrodowski 2008]. The essence of the above divisions functioning within the military logistics system is to maintain the needs of the military assortment, specialized supplies, and services related to the supply of materials and transport at the highest level, ensuring the proper functioning of the Polish Armed Forces during peace, crisis or mobilization or war.

To sustain and maintain continuity in the process of securing material, technical and transport reserves are created, establishing them in terms of quantity and type at each level of supply, i.e. district, tactical and central. By assumption, they should maintain the uninterruptedness of supply during changes from typical industrial production to war production [Bursztyński 2009]. Because their maintenance, however, generates high costs, they are set as small as possible.

When dividing stocks, a distinction is made between war stocks and mobile stocks, i.e. for current use. War stocks, in the specifications, are referred to as “W” time receivables, which should be sufficient for the mobilization of troops to proceed smoothly until supplies are received from the economic mobilization program. Movable stocks can be subdivided in turn into elements, i.e. current use and independent use. In peacetime, movable stocks account for only 15–25%, and independent stocks about 75–85%. The situation changes in wartime when these proportions are reversed [Bursztyński 2009].

Attempting to characterize material security, it should be emphasized that its subject is the needs of troops in the field of specialized services and means of supply. Activities in the above scope take into account the use of not only military but also civil potential, in situations where they are operationally, economically, and legally justified [MON 2007].

Conclusions

The organization of Logistics in the Armed Forces of the Republic of Poland is not a widely considered topic, which affects its attractiveness in terms of scientific knowledge expansion in this direction. This paper presents two research hypotheses to which answers have been given. The first one is as follows: The existing logistic security system of the Polish Armed Forces is sufficient and flexible.

After studying many items from the literature on the subject, including military websites, as well as numerous legal acts, i.e. the Constitution of the Republic of Poland, or laws or regulations issued by the Minister of National Defence, it can be proved that today's military logistics system is very well adapted to the prevailing situation in the country, as well as in the international arena.

Military logistics uses knowledge not only from strictly military sciences, but also draws on the experience of civilian fields, i.e. technical, social or legal. This significantly increases its effectiveness and continuously raises the level of military logistic security.

The characteristics of logistics of the Polish Armed Forces are based on an interdisciplinary system whose task is to plan, solve and, most importantly, execute its assumed undertakings, resulting in a permanent combat capability, both in peacetime and during mobilization or war. To systematize and unify coordination between different levels, bodies, and units, the military logistics system benefits from many legal regulations that undeniably improve modernization. The basic regulations concerning the above are Logistics Doctrine of the Land Forces DD/4.2 of 22.03.2007 and General Regulations of the Polish Armed Forces.

In addition, the smoothness and efficiency in logistics operations is often affected by the knowledge of the objectives and methods of logistics security by all soldiers at every level. However, such a model has the potential to work efficiently due to the hierarchical structure of the Armed Forces.

Separate units deal with logistical and strategic planning, and at the tactical level with the implementation of statutory tasks. All this confirms the hypothesis of flexibility and sufficiency of the currently existing system of logistic security. However, it cannot be ruled out that this sufficiency of the system will be a permanent issue. Undoubtedly, the changing geopolitical, economic and financial situation in the world will enforce modifications to the present system, but it is thanks to its flexibility that it will be able to quickly evolve to further efficient operation.

The second research hypothesis set in the study was as follows: Contemporary logistic security in the Polish Armed Forces meets the standards of NATO and member states.

When Poland joined the North Atlantic Treaty Organisation on March 12, 1999, it decided to adapt to its norms and standards. This alliance is largely based on the assistance and protection of member states against possible armed conflicts. Such pragmatic assumptions were therefore connected with the need to standardize the structure of action and methods of cooperation between the allies so that the NATO allies could react quickly.

Based on NATO requirements, among others, the Land Forces Logistics Doctrine DD/4.2, dated 22.03.2007, was created. At that time, the structure of command and control of the army under the alliance had to be changed to unify the system by all the states. In Poland, the implementation of these changes lasted for years, taking into account many variants in each area. Finally, the Inspectorate for Armed Forces Support, with the help of four Regional Logistics Bases and subordinate Military Economic Branches and Security Branches, provides the army with material, technical, combat, and transport resources, etc. The presented arguments confirm the readiness of logistic security in terms of NATO alliance standards.

References

2. Regionalna Baza Logistyczna im. gen. Augusta Emila Fieldorfa ps. „NILA”, [electronic source] <https://2rblog.wp.mil.pl/pl/pages/zadania-2017-01-16-4/> [access: 01.05.2021].
- Bursztyński A., 2009: Logistyka marynarki wojennej, Akademia Marynarki Wojennej, Gdynia.
- Dworecki S., 2012: Logistyka w zarządzaniu bezpieczeństwem cywilnym. Wybrane zagadnienia, Szkoła Główna Służby Pożarniczej, Warszawa.
- Ficoń K., 2015: Trzy logistyki. Wojskowa, kryzysowa, rynkowa, BEL Studio, Warszawa.

- Inspektorat Wsparcia Sił Zbrojnych, [electronic source] <https://www.wojsko-polskie.pl/iwsp/informacjeogolne/> [access: 01.05.2021].
- Kurasiński Z., Juniec K., Pawlisiak M., Woźniak J., Kazimierzczak M., Słomiany W., Malinowski Z., Byłeń S., 2014: Kompendium logistyka wojskowego, Sztab Generalny Wojska Polskiego. Zarząd planowania logistyki P4, Warszawa, [electronic source] https://www.academia.edu/32242592/SZTAB_GENERALNY_WOJSKA_POLSKIEGO_ZARZD_PLANOWANIA_LOGISTYKI_P4, [access: 03.04.2021].
- MON, 2007: Doktryna logistyczna Wojsk Lądowych DD/4.2. Załącznik E-Słownik terminów i definicji, Warszawa.
- MON, 2017: AAP-6 Słownik terminów i definicji NATO. Zawierający wojskowe terminy i ich definicje stosowane w NATO, Warszawa.
- Nowak E., 2000: Logistyka wojskowa – zarys teorii, AON, Warszawa.
- Nowak E., 2009: Logistyka w sytuacjach kryzysowych, AON, Warszawa.
- Nowak E., Walancik M., 2018: Logistyka akcji ratowniczych, PWN, Warszawa.
- Nyszk W. (red.), 2013: Współczesna logistyka – wybrane aspekty, AON, Warszawa.
- Regulamin działań Wojsk Lądowych z dnia 03.11.2008 r. (DWŁąd Wewn. 115/2008), Warszawa, [electronic source] https://inob.uph.edu.pl/images/Legia_Akademicka/Regulamin_dzialan_wojsk_ladowych.pdf [access: 03.04.2021].
- Regulamin Ogólny Sił Zbrojnych Rzeczypospolitej Polskiej, 2021, [electronic source] <https://archiwum2019.mon.gov.pl/dokumenty/dzial/dokumenty/regulamin-ogolny-sz-rp-103259/> [access: 03.04.2021].
- Słowikowski A., 2018: Regionalne Bazy Logistyczne i Wojskowe Oddziały Gospodarcze w Systemie Zabezpieczenia Logistycznego Sił Zbrojnych Rzeczypospolitej Polskiej, ASZWoj, Warszawa.
- Szymański K., 2011: Wojskowe oddziały gospodarcze. Terenowe organy systemu logistycznego SZ RP. Zbiór podstawowych zasad funkcjonowania (Poradnik), Sztab Generalny Wojska Polskiego. Zarząd planowania logistyki – P4, Warszawa.
- Ustawa z dnia 21 listopada 1967 r. o powszechnym obowiązku obrony Rzeczypospolitej Polskiej (Dz.U. 1967 nr 44 poz. 220), [electronic source] <https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU19670440220/U/D19670220Lj.pdf> [access: 03.04.2021].
- Wyższa Szkoła Oficerska im. Tadeusza Kościuszki, 2020: Podręcznik walki pododdziałów wojsk zmechanizowanych (pluton, drużyna), Dowództwo Wojsk Lądowych, Warszawa [electronic source] https://inob.uph.edu.pl/images/Legia_Akademicka/Podrecznik_walki.pdf [access: 03.04.2021].
- Zdrodowski B. (red.), 2008: Słownik terminów z zakresu bezpieczeństwa narodowego, AON, Warszawa.