

Selected Aspects of Military Logistic Support to Public Administration in Eliminating the Effects of Crisis Situations

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PART I. CHARACTERISTICS OF CRISIS SITUATIONS IN THE CONTEXT OF LOGISTIC NEEDS

Abstract: in part I, the article presents the characteristics of non-military crisis situations, including natural threats and technical failures, terrorist threats, hybrid activities and disturbance of public order. The specified crisis situations imply specific actions of the public administration, which carries out its mission on the basis of national and international legal regulations. However, the forces and resources of the civil administration are not always able to provide assistance to all victims of crisis situations, in accordance with the applicable procedures. The implementation of procedures for providing aid and liquidating the effects of crisis situations requires specific, logistically prepared forces and resources. The legal regulations introduced on the basis of experience, including Poland's membership in NATO, enable the use of military forces to provide logistical support to the administration in crisis situations, under the so-called crisis logistics. Hence, the second part of the article presents the legal basis for the use of the Armed Forces in the logistic support of the civil administration, with particular emphasis on engineering troops and their support components, prepared for the liquidation of the consequences of crisis situations.

Keywords: threats, crisis situation, crisis management, logistic needs, Armed Forces, engineering troops.

1. INTRODUCTION

Nowadays, for various reasons, the importance and value of the natural environment is growing. Climate change, although not as violent as scientists assumed at the turn of the 21st century, can cause cataclysms and natural disasters. Therefore, crisis situations (natural disasters, technical failures, as well as catastrophes caused by human activity) may pose a serious threat to the security of the state and its citizens. Borders are not a barrier for them, nor are they for terrorism and organized crime. Poor preparation of the state to take action in the event of threats caused by crisis situations means that we do not fully feel the state of security in the public space.

The aim of the first part of the publication is to present, based on the experiences and research of the Authors and analyzes of various institutions, including the Government Center for Security, contemporary threats to health and life, property and the environment, as well as logistic needs in the context of eliminating the effects of these threats.

2. NON-MILITARY CRISIS THREATS

A threat is a situation in which there is a probability of a dangerous state for the environment¹. In another publication, the concept of threat is understood to mean the range of deliberate or random events that have a negative impact on the functioning of the political and economic structures of the state, on the living conditions of the population and the condition of the natural environment².

Maintaining security at the required level requires systematic assessments of possible threats and elimination of factors causing destabilization of the state, both in the military and non-military sphere.

In order to counteract these threats, *crisis management plans* are prepared at all levels of public administration. The basis for the development of the national crisis management plan (in Polish: KPZK) and crisis management plans at lower levels of administration are identified or forecasted crisis situations that occur periodically or may occur in our country. On their basis, lists of threats included in *the Report on Threats to National Security*, prepared and updated by the Government Centre for Security (in Polish: RCB), are prepared. This report is based on *Partial Reports* prepared by voivodes and heads of all government departments.

Figure 1 shows the probability of various threats occurring in Poland and their negative effects on national security.

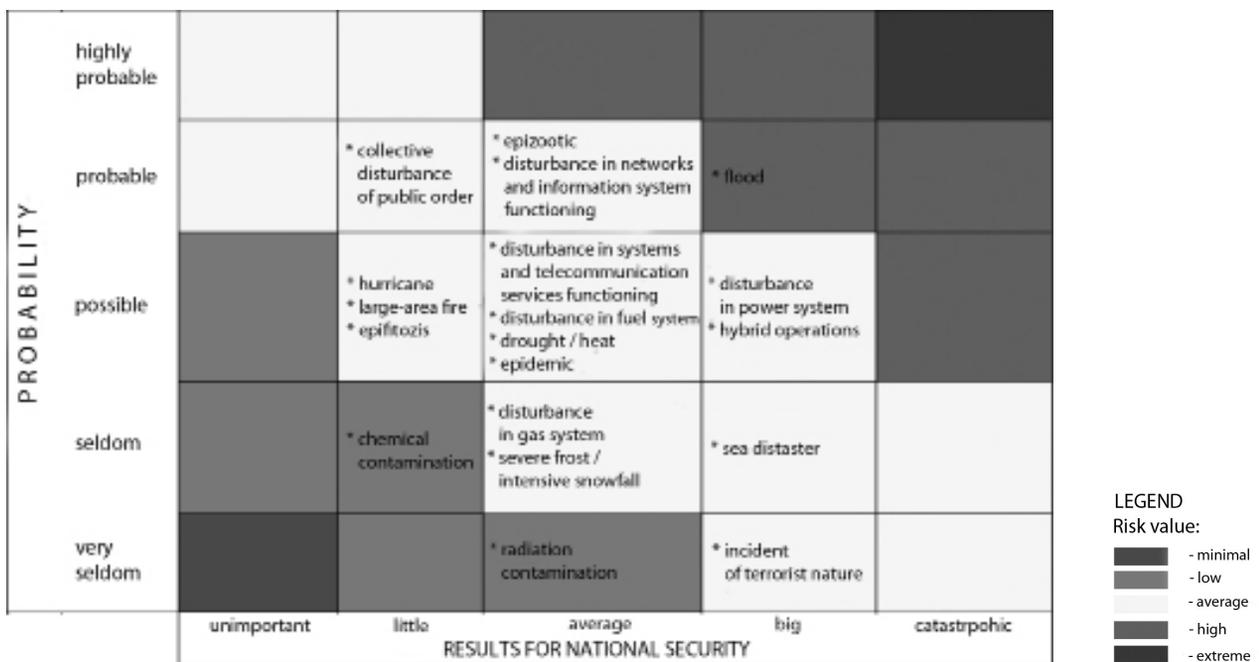


Fig. 1. The likelihood of a threat and its negative consequences for national security

Source: RCB data. See <https://rcb.gov.pl/krajowy-plan-zarzadzania-kryzysowego-gotowy-zecja-dzialan-na-wypadek-wystapienia-sytuacji-kryzysowej> [accessed: 8/06/2021].

¹ Słownik terminów z zakresu bezpieczeństwa narodowego, Akademia Obrony Narodowej, Warszawa 2002; Huzarski M., *Zmienne podstawy bezpieczeństwa i obronności państwa*, Akademia Obrony Narodowej, Warszawa 2009.
² *Krajowy System Ratowniczo-Gaśniczy*, Komenda Główna Państwowej Straży Pożarnej, Warszawa 2009, p. 27.

Of the 19 threats defined by the RCB, the group of natural hazards, natural disasters or technical failures includes: flood, severe frost, heavy snowfall, hurricane, large-scale fire, drought, heat, epidemic, epizootic, epiphytosis, chemical contamination, disruption of systems and telecommunications services, disruption to the energy system, disruption to the fuel system, disruption to the gas system, sea disaster, radiation contamination and disruption to the functioning of networks and information systems.

For the purposes of these considerations, the characteristics of threats are classified into three groups: threats resulting from the occurrence of natural threats or technical failures, terrorist and hybrid threats, and threats originating from dangerous explosive objects.

2.1 NATURAL THREATS AND TECHNICAL FAILURES

Natural and man-made disasters pose a serious threat to man himself, as well as to the environment and national security.

Increasingly noticeable climate disturbances and violent atmospheric phenomena pose a threat to people in places where they have not occurred before. Pursuant to the provisions of *the Act on the State of Natural Disaster* „... natural disasters are natural disasters or technical failures, the effects of which threaten the life or health of a large number of people, property in large sizes or the environment in large areas, and aid and protection can be effectively undertaken only with using extraordinary measures, in cooperation between various bodies and institutions as well as specialized services and formations operating under the uniform management ...”. Natural disasters occurring in our country may be caused by the forces of nature and the development of civilization³. „A natural disaster or a technical failure may also be an event caused by a terrorist activity.”⁴.

Pursuant to the aforementioned Act, a state of natural disaster may be introduced in order to prevent the effects of natural disasters or technical failures bearing the hallmarks of a natural disaster and to remove them. A state of a natural disaster may be introduced in the area where the disaster has occurred, as well as where the effects of the disaster have occurred or may occur. It is introduced for a specified period of time, necessary to prevent or remove the effects of a natural disaster, but not longer than 30 days. The Council of Ministers, by means of a regulation, may introduce a state of natural disaster on its own initiative or at the request of the competent voivode⁵.

Threats resulting from natural disasters may quickly cause emergencies that affect the security and functioning of the entire country or its individual regions (voivodships). At the same time, it should be emphasized that the need to introduce a state of natural disaster is determined by the scale and effects of a natural threat to a significant number of people or a large area of the country. Otherwise, counteracting is carried out as part of crisis management.

The analysis of *the National Security Strategy of the Republic of Poland* and *the Act on the State of Natural Disaster* allows for the identification of several groups of threats, the occurrence of which may result in the use of the armed forces, especially units and subunits of engineering troops. These include: natural disasters, technical failures, terrorism and hybrid operations, and other threats resulting from the presence of explosive objects. A natural catastrophe is considered to be „... an event related to the operation of the forces of nature,

³ Cf. Ustawa z dnia 18 kwietnia 2017 r. o stanie klęski żywiołowej, Dz.U. 2017.0.1897, art. 3 par. 1 point 1.

⁴ Cf. Ibidem, art. 3 par. 2.

⁵ Cf. Ibidem, art. 4, 5.

Technical failures⁸, which are another group of threats, relate to sudden events and unforeseen damage or destruction of buildings, technical devices or a system of technical devices, which results in a break in their use or loss of operational properties. They are most often caused by hidden design flaws, misuse and human error. The territory of Poland is threatened with contamination by hazardous industrial substances, which include: chemical substances, radioactive industrial substances and biological substances. Such contamination may arise as a result of accidents of industrial facilities, including nuclear reactors, transport disasters and terrorist acts against facilities containing hazardous industrial substances. The factor that increases the area of real threats to human health and life are means of transport carrying hazardous materials.

Construction and industrial failures are a serious threat to the lives of many people. The first include: collapses of buildings, washing bridges, gas explosions in residential installations, landslides of foundation excavations. The latter can cause fire, chemical, biological and radioactive hazards. They can occur as a result of equipment failure, railway, road, air and sea disasters, explosion of tanks, cisterns, etc.

The main threats resulting from technical failures (in the case of fire, also natural disasters) include:

- fires;
- chemical accidents (installations, warehouses);
- radiation accidents and accidents (local, company, public);
- communication disasters (road, rail, river transport, air accidents);
- construction disasters (collapse of buildings, failures of lifting devices);
- breakdowns of technical infrastructure devices (installations: water supply, sewage and gas, power grid);
- mining disasters.

A consequence of the turbulent development of the chemical industry in the world was the emergence of a new category of threats to humans and the environment (water, soil and air, objects) in the form of **chemical contamination** with substances harmful to humans, caused by chemical accidents, for example as a result of the release of toxic industrial substances (TIS).

Radiation contamination is related to „nuclear material, a source of ionizing radiation, radioactive waste or other radioactive substances, causing or likely to cause a radiation hazard, making it possible to exceed the ionizing radiation dose limits specified in the applicable regulations, and thus requiring urgent measures to protect employees. or the population. The causes and types of events that may cause radiation contamination are:

- failure of a nuclear power plant with effects going beyond the site, caused by the violation of safety procedures, a natural disaster, or a terrorist act;
- radiation emergencies caused by the use of radioactive sources;
- during transport: accident, terrorist attack, non-compliance with the law
- and safety procedures, the occurrence of unfavourable meteorological conditions, incorrect technical security;
- improper storage of radioactive sources and radioactive waste⁹.

Disruption of the functioning of telecommunications systems and services means disruptions that affect the security of telecommunications networks or systems or services, in particular those whose proper functioning is important for national security, including the life and health of people, property and the functioning of the state. In urban agglomerations, failures of technical infrastructure devices (gas installations and networks,

⁸ Cf. Ustawa z dnia 18 kwietnia 2017 r. o stanie klęski żywiołowej..., op. cit., art. 3 par. 3.

⁹ *Krajowy Plan Zarządzania Kryzysowego*, Rządowe Centrum Bezpieczeństwa, Warszawa 2017, p. 37.

water distribution and sewage networks, as well as heating and power networks) are a major nuisance for the inhabitants. Taking into account the long service life and the type and quality of the materials from which they are made, an increase in the number of failures should be expected.

A disturbance in the power system (power grid failures) is defined as „sudden events caused by spontaneous damage to network elements, actions of third parties, the influence of weather factors - causing disruptions in electricity supply”¹⁰.

A disruption in the fuel system is closely related to the term „state fuel security”, which is defined as „... a state that enables the current coverage of customers’ demand for crude oil, petroleum products and natural gas, in a specific size and time, to the extent that enables the proper functioning of the economy ... ”¹¹.

Disruptions in the functioning of networks and information systems „... are caused by cyber incidents and include both intentional actions (attacks, sabotages) with the use of IT systems and on IT systems and in cyberspace, as well as unintentional actions (failures, errors). They are one of the most burdensome (in terms of damage) incidents hitting modern society... ”¹². To launch an attack or sabotage act in cyberspace, the only tool you need is a computer connected to the network. It should be remembered that that there are no control barriers in cyberspace, and the probability of finding gaps in security is relatively high. The goals of intentional actions are varied, as computer networks as well as government computers, banking systems, and private businesses and home users are at risk. Their widespread use is associated with an increasing probability of failures and errors resulting in an incident¹³.

Traffic and construction disasters can happen in virtually any area. Major disasters are more likely to occur in high-traffic areas. They are characterized by serious material losses and a large number of victims. It is practically impossible to prevent such events directly.

Another cause of damage and destruction in buildings is overloading of building structures combined with uneven subsidence.

2.2 TERRORIST THREATS, HYBRID ACTIVITIES AND DISTURBANCE OF PUBLIC ORDER

Due to the significant increase in the number of terrorist attacks in the world and the active participation of the Polish Armed Forces in the anti-terrorist coalition, Poland and its citizens may become targets of terrorist attacks. As an act of violence, **a terrorist incident** is often directed against innocent and uninvolved targets. Pursuant to *the Act of June 10, 2016 on anti-terrorist activities*, it is „... a situation suspected of being a result of a terrorist offense referred to in Art. 115 § 20 of *the Act of 6 June 1997 „Penal Code”*, or the threat of such an offense ... ”¹⁴. A terrorist attack may be committed deliberately for political reasons by specific groups or secret agents of states. The targets of these attacks may include, inter alia, centres of power and objects of economic and public infrastructure, as well as dams and water intakes, armaments plants, military depots and warehouses, transport junctions and places of mass sports and cultural events.

¹⁰ Ibidem, p. 15.

¹¹ Ustawa z dnia 16 lutego 2007 r. o zapasach ropy naftowej, produktów naftowych i gazu ziemnego oraz zasadach postępowania w sytuacjach zagrożenia bezpieczeństwa paliwowego państwa i zakłóceń na rynku naftowym, Dz.U. 2017, pos. 1210.

¹² *Krajowy Plan Zarządzania Kryzysowego...* op. cit., p. 42.

¹³ Ibidem, p. 42.

¹⁴ Ustawa z dnia 10 czerwca 2016 r. o działaniach antyterrorystycznych, Dz.U. 2016, pos. 904.

Objects of a potential attack in our country may include: crowds of people - places separated due to the presence of a large number of people, in particular sports facilities and the most popular shopping centres.

Terrorist organizations may launch bomb attacks on selected objects, use radiological weapons by detonation with conventional bombs filled with radioactive waste, as well as use first-generation warfare agents such as such as: mustard gas, nitrogen mustard, sarin and lewisite. There is a growing threat of attacks by civilian targets in urbanized areas, the destruction of which may provide media coverage of attacks and cause losses on a massive scale. Today, there is an increase in the threat of international terrorism, which affects citizens or the territory of more than one country.

A real threat may also concern Polish citizens staying abroad or going to countries where terrorist organizations or people capable of carrying out an attack for various reasons are active. Soldiers of Polish military contingents and Polish diplomatic missions may also be targets of a terrorist attack.

Hybrid activities are defined as "... activities aimed at achieving political and strategic goals. They are conducted in a secretive way, making it difficult to assign responsibility for them to the perpetrator. These activities are carried out by state and / or non-state actors in a planned and coordinated manner, and combine various means of pressure and dependence on a potential aggressor. They can be conducted by political, economic, military and social means, incl with the use of national, ethnic and religious minorities. Additionally, there are activities related to illegal migration. The effects of a hybrid threat on people, the economy, property, infrastructure and the environment will depend on the type and scale of operations. One should take into account the possibility of influencing the financial, banking, telecommunications, healthcare, energy, fuel, food and water systems, the functioning of state structures, the economy and industrial security, the defense system, disinformation, the health care system and the life of the population, as well as sovereignty and territorial integrity. In extreme cases, hybrid activities can paralyze their functioning, or even lead to a political and military crisis¹⁵.

The most important role in counteracting hybrid activities is played by the institutions of the non-military system, classified as protection, economic and information links and a command system, supported by the Armed Forces¹⁶.

Collective disturbance of public order is identified as social protests, occupation actions and large-scale strikes, which in consequence may paralyze the functioning of the state, administration and selected areas of life or key sectors of the economy. They can take the form of riots, demonstrations or manifestations. The reasons for disturbance of public order can be economic, social, ethnic, religious, ideological or cultural.

3. IDENTIFICATION OF CRISIS MANAGEMENT

*The Crisis Management Act*¹⁷ also explains the concept of crisis management, which should be understood as follows: in the event of crisis situations and the restoration or restoration of the infrastructure to its original character...."

¹⁵ Ibidem, p. 44.

¹⁶ Ibidem, p. 43.

¹⁷ Ustawa o zarządzaniu kryzysowym z 26 kwietnia 2007 r. Dz. U. 2007, no. 89 pos. 590 (art. 2.).

In the literature on the subject, there are many definitions that define the phenomenon of crisis, the most important, according to the authors, is the statutory definition. In *the Act on Crisis Management...*, a crisis situation has been defined as „... a situation resulting from a threat and resulting in a break or significant violation of social ties with a simultaneous serious disturbance in the functioning of public institutions, however to such an extent that the measures necessary to ensure or the restoration of security does not justify the introduction of any of the states of emergency referred to in the Constitution of the Republic of Poland. It is a situation that has a negative impact on the level of safety of people, property to a large extent or the environment, resulting in significant restrictions in the operation of competent public administration bodies due to the inadequacy of forces and resources...”¹⁸.

The aforementioned Act¹⁹ also explains the concept of crisis management as: restoring or restoring the infrastructure to its original character ...” In addition to the definition, the Act also specifies the authorities competent both in terms of crisis management and its financing (cf. Article 1.). Crisis management is used to control the course of a crisis situation in order to minimize losses and restore stability, security and lost infrastructure. The activity of the competent public administration bodies is divided into two stages: before and after the hazard.

Pre-risk activities are treated as a planning stage consisting of two phases²⁰:

- **the prevention phase**, consisting in monitoring the phenomena that may be a source of threats and, as a result, lead to a crisis situation.

In this phase, the relevant legal acts are developed;

- **the preparation phase**, including careful observation and the creation of appropriate plans, legal regulations, response procedures, training of relevant services, and the necessary organizational, logistic, human resources and financial conditions.

Immediately after the identification of the threat, the second stage begins, consisting in the practical implementation of actions taken to restore the original conditions of life, even before the emergence of a crisis situation. At this stage, we distinguish two further phases:

- **the response phase** that includes the implementation of previously planned activities and procedures. This is a direct response to the situation that has arisen.

The avalanche response phase attracts the opinion of both the media and the public, it is responsible for the coordination of rescue and protective actions;

- **the reconstruction phase** includes all activities aimed at restoring the original state, starting from psychological and social assistance (ensuring a minimum standard of existence through shelter, food, clothing), preparation of reports and documentation summarizing the implementation of specific rescue actions. This phase is not only labour-intensive, but also consumes the most financial and time resources.

Creating a crisis management system adequate to the needs is a complicated and time-consuming task. The beginnings of the Polish crisis management system date back to the period after the flood in 1997, but it was not until 2005 that the Ministry of the Interior and Administration initiated works on the preparation of a government draft act on crisis management. Its final shape was given to the Act on Crisis Management on April 26,

¹⁸ Ustawa o zarządzaniu kryzysowym z 26 kwietnia 2007 r. Dz. U. 2007, no. 89 pos. 590.

¹⁹ Loc. cit.

²⁰ Loc. cit.

2007²¹ and entered into force three months after its announcement, and so far has been amended twice. The act provides for the obligation to create a national crisis management plan and voivodeship, poviast and communal crisis management plans, covering all four phases of crisis management. The Crisis Management System in Poland is multi-level, assigned to individual levels of administration and consists of the following components:

- crisis management bodies,
- opinion-making and advisory bodies competent in matters of initiating and coordinating actions taken in the field of crisis management,
- emergency management centres maintaining 24-hour operational readiness²².

On the basis of the presented considerations, it can be clearly stated that in the Polish crisis management system there is a fairly clear division of powers, in which four levels are exposed:

- organizational, created at the central (national) level,
- coordination, operating at the voivodeship level,
- executive, based on institutions operating at the poviast level,
- executive, that is, communal.

The Ministry of National Defense, as a departmental organ of the national administration, participates in the national and allied (NATO) crisis management systems. For this purpose, it uses full-time and ad hoc structures that plan the operations of the armed forces in the crisis management system and, if necessary, mobilize appropriate forces and resources.

Article 5 of the *Act on Crisis Management ...* mandates the compulsory creation of **Crisis Management Plans** at the national, voivodeship, poviast and commune levels. The purpose of these plans is to plan the optimal use of the available forces and resources in crisis situations and in times of emergency and during war, and to use the Armed Forces of the Republic of Poland to carry out crisis management tasks. Developing a *Crisis Management Plan* seems to be one of the most important tasks of civil planning. It is the result of recognizing threats and preparing for their occurrence. It is a set of information and rules that should be followed in order to minimize losses caused by a crisis situation and to provide assistance to the injured. However, the *Crisis Management Plan* alone does not and does not exhaust the needs of meeting the conditions of peacetime and war threats. Hence, the legislator provided for the obligation to prepare other (departmental) plans ensuring civil preparedness. These plans include, but are not limited to, the following plans: civil defense; flood risk; flood protection and counteracting the effects of drought; operational flood protection; rescue; monuments and others (e.g. environmental protection, spatial development, waste management, etc.)²³.

The above plans complement each other, and in some cases may be part of the so-called sub-plans or appendices to the master plan, namely, the *Crisis Management Plan*.

Generally speaking, it can be said that civil planning functions in two main areas:

- preparations for the operation of a non-military system and the military system supporting it in non-military crisis situations (*Crisis Management Plans*);
- preparation of a non-military arrangement to support the Armed Forces in military crisis situations (*Civil Defense Plans*).

In addition, the **National Critical Infrastructure Protection Program** is being prepared at the national level, the aim of which is to create conditions for improving the security of critical infrastructure, in particular in

²¹ Dz.U. 07.89.590.

²² See: <https://rcb.gov.pl/zarzadzanie-kryzysowe> [access on 21.08.2018].

²³ Zamiar Z., *Planowanie kryzysowe w systemie bezpieczeństwa*, WSOWL, Wrocław 2013, pp. 59-60.

the field of: preventing disruptions in the functioning of critical infrastructure; preparation for crisis situations that may adversely affect critical infrastructure; reacting in situations of destruction or disruption of the functioning of critical infrastructure; Critical Infrastructure Recovery. The program is prepared by the director of the Government Centre for Security in cooperation with the ministers and heads of central offices responsible for systems included in the Act as critical infrastructure systems, and it is adopted by the Council of Ministers. The program, updated at least every two years, specifies²⁴:

- national priorities, goals, requirements and standards to ensure the efficient functioning of the critical infrastructure;
- ministers managing government administration departments and heads of central offices responsible for systems classified as critical infrastructure systems;
- detailed criteria allowing to distinguish objects, installations, devices and services included in the critical infrastructure systems, taking into account their importance for the functioning of the state and satisfying the needs of citizens.

The Crisis Management Plan defines the structures and organizational principles of institutions and teams responsible for the functioning of public administration bodies (at the central level, in the voivodship, poviati, commune) and the implementation of tasks aimed at mitigating the forecast effects of the event, as well as restoring and recreating the living conditions after the event. It formulates the tasks and responsibilities of functional persons during activities related to counteracting and liquidating the effects of events causing crisis situations, taking into account the classic phases (stages) of crisis management, i.e., prevention, preparation, response and reconstruction. It should ensure a systemic, coordinated and effective response to crisis events, such as a natural disaster. Moreover, it should fulfil the following functions²⁵: unify the procedures of carrying out rescue operations by various types of services; define the principles of cooperation as well as the methods and circumstances of seeking help from a higher level, depending on the scope of the resulting threat; define the necessary planning documents in government and local government administration bodies and for entities responsible for carrying out activities in crisis situations.

The plan also defines potential threats in the administered area, as well as the functions of the authorities responsible for: rescue, communications, medical care, evacuation, water supply, food and other material resources; social assistance; transport; energy; alerting and warning; cooperation with the media; finance, public order and law enforcement. These activities are classified according to the fixed stages of crisis management. It defines the participation in crisis situations of many entities that carry out their tasks for the broadly understood protection of the population on a daily basis. Therefore, there is a need to reconcile planning documents with the institutions involved in crisis management and the superior administration body authorized to approve the plan. It is not only a requirement of the legal regulations, but most of all it is about ensuring the compliance of the plan with the plans of higher levels, which should complement each other and take into account the needs and capabilities of public administration bodies at all levels of crisis management.

4. LOGISTICS NEEDS IN CRISIS SITUATIONS

Logistic management in the event of extraordinary events (crisis situations) is an inherent element of crisis management, and thus includes the organization of tasks in a state of increased risk, during the occurrence of such an event, its escalation and restoring the state from before the event. The method of achieving the assumed goals through integration and synchronization of activities is included in the logistics strategy. What

²⁴ Loc. cit.

²⁵ Dynak R., *System reagowania kryzysowego w Powiecie Pułtuskim*, Akademia Obrony Narodowej, Warszawa 2016, p. 25.

connects all activities is their optimization, i.e. management in such a way as to reach the most needy with the most needed supplies and services as soon as possible. Their size and scope can be determined in advance according to appropriate standards, because the essence of logistic activities is to guarantee the possibility of survival of the injured population as a result of the situation, through properly organized processes of supply, communication, evacuation and logistic support of rescue operations.

K. Ficoń and E. Nowak believe that these abnormal conditions are determined by the following factors (determinants)²⁶:

- high dynamics and changeability of the situation;
- occurrence of random events and unpredictability of their effects;
- huge scale and variety of logistic needs;
- the need to maintain certain priorities for logistic security;
- short deadlines for the implementation of logistic projects;
- difficult operating conditions for logistics services;
- accessibility of communication routes;
- regulation of supplies and services;
- time pressure and changing situation.

Over the centuries, mankind has struggled with all kinds of cataclysms and crises, on the basis of which it was possible to create a common statement of the logistical needs of the population affected by the situations. This register is very extensive, but it cannot be concealed that the most important and absolutely priority category is ensuring the safety of life and health protection, i.e. first aid and medical care. Only when this is ensured can further life needs be realized, such as the supply of material goods or the provision of necessary services.

According to the catalogue proposed by K. Ficoń, seven basic categories of needs have been distinguished²⁷:

1. needs in the field of medical assistance and medical care,
2. needs in the field of transport services,
3. needs in the field of social evacuation of the population,
4. water supply needs,
5. supply needs in the field of food supplies,
6. needs for the supply of consumer goods,
7. needs in the field of economic and living services.

Of course, the gradation of needs is relatively relative, as it depends primarily on the balance of casualties and losses, the scale of damage or the number of victims. Some needs, due to the uncontrolled development of the situation, may arise suddenly during the operation of services on the scene or gain a lower or higher priority. However, in order to determine the necessary measures to effectively cover them, it was necessary to clarify the classification of needs in terms of urgency in relation to the operational time, as shown in Figure 3

²⁶ Ficoń K., *Logistyka kryzysowa. Procedury, potrzeby, potencjał*, BEL Studio, Warszawa 2011, p. 183.

²⁷ Ficoń K., *Zabezpieczenie logistyczne ludności podczas niemilitarnych sytuacji kryzysowych*, [in:] Chrabkowski M., Tatarczuk C., Tomaszewski J. (eds.), *Bezpieczeństwo w administracji i biznesie we współczesnym świecie*, Wyższa Szkoła Administracji i Biznesu im. Eugeniusza Kwiatkowskiego, Gdynia 2011, Pt. 1, pp. 128-144; Ficoń K., *Logistyka kryzysowa...* op. cit., pp. 228-229.

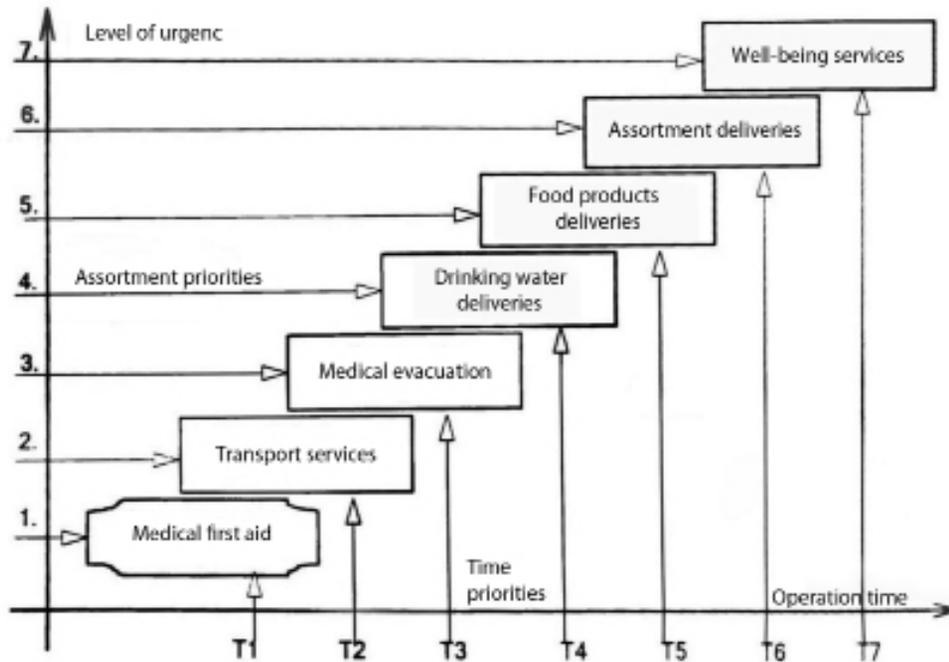


Fig. 3. Gradation of the needs of the agglomeration according to K. Ficoń

Source: K. Ficoń, *Crisis Logistics - Procedures, Needs, Potential*, BEL Studio, Warsaw 2011, pp. 227-228.

Figure 3 shows that there is a certain relationship between the operative time and the degree of urgency. On a scale from 1 to 7 - 1 means the most urgent need, while the time scale from T1 to T7 presents the time in which a given need must be met and so wiewed which can be executed (if it is required at all) as the last instruction.

The participation of the Armed Forces in the implementation of the catalogue of logistic needs in extraordinary events is presented in the second part of the publication.

REFERENCES

- [1] Ficoń K., *Zabezpieczenie logistyczne ludności podczas niemilitarnych sytuacji kryzysowych*, [in:] Chrabkowski M., Tatarczuk C., Tomaszewski J. (eds.), *Bezpieczeństwo w administracji i biznesie we współczesnym świecie*, Wyższa Szkoła Administracji i Biznesu im. Eugeniusza Kwiatkowskiego, Gdynia 2011, Pt. 1, pp. 128-144.
- [2] Cieślarczyk M., Kuriata R., *Kryzysy i sposoby radzenia sobie z nimi*, Wydawnictwo Naukowe Wyższej Szkoły Kujawskiej, Łódź 2005.
- [3] Dynak R., *System reagowania kryzysowego w Powiecie Pułtuskim*, Akademia Obrony Narodowej, Warszawa 2016.
- [4] Ficoń K., *Logistyka kryzysowa. Procedury, potrzeby, potencjał*, BEL Studio, Warszawa 2011.
- [5] Huzarski M., *Zmienne podstawy bezpieczeństwa i obronności państwa*, Akademia Obrony Narodowej, Warszawa 2009.
- [6] *Słownik terminów z zakresu bezpieczeństwa narodowego*, Akademia Obrony Narodowej, Warszawa 2002.
- [7] *Koncepcja rozwoju zdolności inżynierii wojskowej w zakresie reagowania na zagrożenia niemilitarne*, Ministerstwo Obrony Narodowej, Warszawa 2012.
- [8] Kowalkowski S., *Wybrane aspekty zarządzania kryzysowego w świetle użycia Sił Zbrojnych Rzeczypospolitej Polskiej*, Akademia Sztuki Wojennej, Warszawa 2019.

- [9] *Krajowy Plan Zarządzania Kryzysowego*, Rządowe Centrum Bezpieczeństwa, Warszawa 2017.
- [10] *Krajowy System Ratowniczo-Gaśniczy*, Komenda Główna Państwowej Straży Pożarnej, Warszawa 2009.
- [11] Piątek Z., *Procedury i przedsięwzięcia systemu reagowania kryzysowego*, Akademia Obrony Narodowej, Warszawa 2011.
- [12] *Popularny słownik języka polskiego*, ed. by Dunaj B., WILGA, Warszawa 2000.
- [13] *Strategia bezpieczeństwa narodowego Rzeczypospolitej Polskiej*, Rządowe Centrum Bezpieczeństwa, Warszawa 2014.
- [14] Szczurek T., *Formalnoprawne aspekty podejmowania decyzji przez Ministra Obrony Narodowej w sytuacjach kryzysowych*, Akademia Obrony Narodowej, Warszawa 2005.
- [15] *Wojska inżynieryjne w okresie pokoju i zagrożenia wojennego*, ed. by Cieślak P., Akademia Obrony Narodowej, Warszawa 2004.
- [16] Zakrzewski W., *Zdolności wojsk inżynieryjnych do wsparcia układu pozamilitarnego w warunkach zagrożenia niemilitarnego Polski*, Akademia Obrony Narodowej, Warszawa 2016.
- [17] Zamiar Z., *Planowanie kryzysowe w systemie bezpieczeństwa*, WSOWL, Wrocław 2013.
- [18] Ustawa z dnia 10 czerwca 2016 r. o działaniach antyterrorystycznych, Dz.U. 2016, poz. 904.
- [19] Ustawa z dnia 6 czerwca 1997 r. „Kodeks karny”, Dz. U. 1997, nr 88, poz. 553.
- [20] Ustawa z dnia 18 kwietnia 2017 r. o stanie kłęski żywiołowej, Dz.U. 2017.0.1897.
- [21] Ustawa z dnia 16 lutego 2007 r. o zapasach ropy naftowej, produktów naftowych i gazu ziemnego oraz zasadach postępowania w sytuacjach zagrożenia bezpieczeństwa paliwowego państwa i zakłóceń na rynku naftowym, Dz.U. 2017, poz. 1210.
- [22] Ustawa z dnia 7 lipca 2005 r. o ubezpieczeniu upraw rolnych i zwierząt gospodarskich, Dz.U. 2005, nr 150, poz. 1249.
- [23] Ustawa z dnia 5 grudnia 2008 r. o zapobieganiu oraz zwalczaniu zakażeń i chorób zakaźnych u ludzi, Dz.U. 2008, nr 234, poz. 1570.
- [24] Ustawa z dnia 20 lipca 2017 r. „Prawo wodne”, Dz.U. 2017, poz. 1566.
- [25] Ustawa o zarządzaniu kryzysowym z dn. 26 kwietnia 2007, Dz. U. 2007 nr 89 poz. 590.
- [26] <https://rcb.gov.pl/krajowy-plan-zarzadzania-kryzysowego-gotowy-zestaw-dzialan-na-wypadek-wystapienia-sytuacji-kryzysowej>

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