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Selected aspects of military logistics support to public administration in eliminating the effects of crisis situations

Part II. Possibilities of Using Engineering Troops in Crisis Situations

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Abstract

Part I presented 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 make it possible to use military forces to provide logistical support to the administration in crisis situations.

Hence, in the second part of the article, the authors focused on presenting and familiarizing the reader with the possibility of using the Armed Forces in logistic support of civil administration, with particular emphasis on engineering troops and their support components, prepared to eliminate the effects of crisis situations.

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

1. INTRODUCTION

In Poland, crisis situations have forced legal changes, which now allow the use of military forces in crisis situations. Moreover, Poland's membership in NATO resulted in the need to apply solutions adopted in this area in the Alliance member states, where the norm is the solution that the armed forces are prepared not only for military operations, but also - due to the significant human, organizational and technical potential material - to eliminate the negative effects of threats in extreme situations, when other elements are insufficient. Of course, organizational solutions in individual countries are not identical. Among all types of troops, the units of engineering troops are the best prepared for the implementation of logistical support tasks for public administration in the activities carried out in the country.

The engineering troops were, are and will be engaged in the implementation of tasks during crisis situations. In accordance with legal regulations, a significant effort of these troops is to be directed at supporting institutions and civil organizations in the event, especially of local and state administration, when they will not be able to respond to threats or will not have sufficient potential to provide adequate assistance to the victims and eliminate the consequences of events. emergency.

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 activities of the armed forces in the crisis management system and, if necessary, mobilize appropriate forces and resources.

2. THE USE OF THE ARMED FORCES AS PART OF CRISIS MANAGEMENT

The participation of the army in the liquidation of the consequences of crisis situations is possible within the framework of the applicable basic legal acts in the form of: laws and regulations, orders and ordinances of military authorities and plans prepared in the event of a crisis situation. Organizational issues, apart from structures and equipment, are regulated by appropriate organizational structures and equipment of troops as well as procedures for sending the army to carry out tasks developed in the Ministry of National Defense.

2.1 Legal Basis

There are many provisions in Polish law directly or indirectly related with the use of the armed forces in combating and removing the effects of threats to people and the environment.

It is impossible to discuss all legal acts in a short publication (there are over 20 basic acts and the same number of ordinances of the Council of Ministers and almost 30 ordinances of decisions of individual ministries), therefore the focus is on the basic provisions of the most important legal acts regulating the issues discussed.

Article 3 (2) of the Act of 21 November 1967 on the universal obligation of the Republic of Poland¹ provides that the armed forces may also participate in combating natural disasters and eliminating their consequences, in anti-terrorist and property protection activities, in search and rescue operations. or protection of human health and life, in cleaning areas of military explosives and hazardous materials and their neutralization, as well as in the implementation of tasks in the field of crisis management. Moreover, Art. 60, paragraph 8, stipulates that calling up military exercises to be carried out with immediate appearance may take place for the purpose of: 2) participation of military units in combating natural disasters. On the other hand, section 8a specifies that in the case referred to in section 8, point 2, reserve soldiers are called up for military exercises, mainly from outside the area affected by the natural disaster.

Article 25 of the Act of April 26, 2007 on Crisis Management² provides that if, in a crisis situation, the use of other forces and means is impossible or may prove insufficient, unless otherwise provided for by other regulations, the Minister of National Defense, at the request of the voivode, may place at his disposal subunits or divisions of the Armed Forces of the Republic of Poland, together with sending them to perform tasks in the field of crisis management. Military units may participate in the implementation of these tasks, according to their specialist preparation, in accordance with the voivodship crisis management plan, which is subject to agreement with the Ministry of National Defense.

¹ Cf. Act of July 17, 1997 amending the Act of November 21, 1967 on the universal obligation to defend the Republic of Poland, art. 3 sec. 2 (Journal of Laws 2012, item 461).

² Cf. Act of April 26, 2007 on crisis management ..., ed. cit.

Article 18 of the Act of 18 April 2002 on the State of Natural Disaster³ states that during a state of natural disaster, if the use of other forces and means is impossible or insufficient, the minister of national defense may delegate to the voivode in whose area of operation there is a natural disaster, subunits or units of the Polish Armed Forces, together with assigning them to perform tasks related to preventing the consequences natural disaster or its removal. However, section 2 specifies that in the case referred to in section 1, subunits and units of the Armed Forces of the Republic of Poland remain under the command of their official superiors and perform the tasks specified by the voivode. Moreover, pursuant to Art. 11. paragraph 1 during a state of natural disaster, the actions carried out in order to prevent the effects of a natural disaster or to remove them in the area of the voivodeship are directed by the competent voivode. With regard to the activities referred to in paragraph 1, the voivode shall be subordinate to the organs and organizational units of the government administration and the voivodeship self-government operating in the voivodship as well as other forces and resources assigned to his disposal and directed to perform these activities, including subunits and units of the Armed Forces of the Republic of Poland (section 2).

The documents enabling the use of military forces in peacetime also include: the Act of 21 June 2002 on the State of Emergency⁴ and the Act of 29 August 2002 on martial law and the competences of the Supreme Commander of the Armed Forces and the principles of its subordination to the constitutional organs of the Republic of Poland⁵. The cited acts specify the tasks set for the armed forces, the rules of their use, subordination and the competences of soldiers assigned to perform the tasks.

The Act on anti-terrorist activities stipulates that in the event of introducing the third or fourth alert level under Article 16, paragraph 16, if the use of Police units and subunits proves insufficient or may turn out to be insufficient, units may be

³ Cf. Act of April 18, 2002 on the state of natural disaster (Journal of Laws No. 62, item 558, as amended).

 $^{^4\,\,}$ Cf. Act of June 21, 2002 on the state of emergency (Journal of Laws No. 113, item 985).

⁵ Cf. Act of August 29, 2002 on martial law and the competences of the Supreme Commander of the Armed Forces and the rules of his subordination to the constitutional organs of the Republic of Poland (Journal of Laws No. 156, item 1301).

In the event of a threat of a terrorist event or in the event of such an event, one of the four alert levels may be introduced: 1) the first alert level (ALFA level); second alert stage (BRAVO stage); 3) the third alert level (CHARLIE level); 4) fourth alert level (DELTA level). Cf. Act of June 10, 2016 on anti-terrorist activities, art. 16 (Journal of Laws of 2016, item 904; Journal of Laws of 2018, items 452, 650, 730).

used to assist Police units and subunits and subunits of the Armed Forces of the Republic of Poland, according to their specialist preparation, equipment and armaments, and needs.

The analysis of legal acts shows that in the process of logistic support to liquidate the effects of an adverse event in crisis management or natural disasters or other threats, they may participate in the implementation of tasks under the principles set out in the laws and regulations of the Polish Armed Forces. Detailed rules for the use of military units in the period of peace are also regulated by ordinances, orders, decisions of the Minister of National Defense, agreements, regulations and the Ministry of National Defense Crisis Management Plan.

In addition, the authorized superiors issued many documents regulating internal rules of conduct, these are usually orders of commanders of individual levels of the command system, on the basis of which appropriate plans and procedures are created in military units in the event of various types of crisis situations.

2.2 Tasks of the Armed Forces in Crisis Situations

The Minister of National Defense, at the request of the voivode, may place at his disposal sub-units or units of the Armed Forces of the Republic of Poland, and delegate them to perform tasks in the field of crisis management. Units of the Armed Forces may participate in the implementation of crisis management tasks, according to their specialist preparation, in accordance with the voivodship crisis management plan. **This can happen only when**, in a crisis situation, the use of other forces and means is impossible or may prove insufficient to provide assistance to all victims, or when the life and health of a significant part of the society is at risk. This means that the military is not the first-line performer of crisis management tasks, but a supplement in the event of insufficient capacity for the executive potential maintained in the country for the implementation of crisis management tasks. Unfortunately, practice often indicates a different approach of some authorities to this issue.

The unique character and equipment of the Armed Forces allow it to perform the following tasks related to crisis management:

- participation in the monitoring of threats;
- performing tasks related to the assessment of the effects of phenomena occurring in the area of hazards;
- performing search and rescue tasks;

- evacuating the injured population and property;
- performing tasks aimed at preparing conditions for the temporary presence of evacuated people in designated places;
- participation in the protection of property left in the area of threats;
- isolating the area where threats occur or the place of rescue operations;
- carrying out security, rescue and evacuation works at endangered buildings and monuments;
- carrying out works requiring the use of specialized technical equipment or explosives in the resources of the Armed Forces of the Republic of Poland;
- removal of hazardous materials and their neutralization by force and assets of the Armed Forces of the Republic of Poland;
- elimination of chemical contamination as well as biological contamination and infections:
- removal of radioactive contamination;
- performing tasks related to the repair and reconstruction of technical infrastructure;
- participation in ensuring the passability of communication routes;
- providing medical assistance and performing sanitary and hygienic tasks and anti-epidemics⁷.

Additionally, the minister may personally decide on the following tasks:

- participation in combating natural disasters and their consequences;
- participation in anti-terrorist activities in order to support the Police and Border Guard;
- ensuring the protection and safety of facilities and the continuity of the functioning of units and organizational units of the Ministry of National Defense, including critical infrastructure facilities used by the Ministry of National Defense;
- evacuation of Polish citizens from abroad;
- support for the Police in the event of threats to public safety and order⁸.

The many different tasks facing the Polish Armed Forces necessitate the logistic planning of the use of troops and subunits from various types of armed forces and troops. This is partly set out in *the National Crisis Management Plan*⁹. Almost all tasks, within the possibilities resulting from the purpose and technical equipment,

⁷ The Act on Crisis Management ..., ed. cit., art. 25 sec. 9.

⁸ Data obtained from the Operational Command of the Armed Forces.

For example: The National Crisis Management Plan, Government Centre for Security, Warsaw 2017, part A, pp. 49-172.

can be performed by units of engineering troops. The type of tasks of the title logistic support depends on the type of crisis situations, for example:

- the main tasks carried out during floods and ice phenomena include: evacuation of people and property and ensuring the delivery of supplies (food, drinking water, medicines, etc.); conducting engineering works related to the emergency repair and strengthening of communication infrastructure facilities (reconstruction and construction of bridges and flood embankments, removal of congestion on communication lines) etc.; protection of flood embankments, bridges, locks, damming devices and other hydrotechnical structures; securing supports and performing other works aimed at maintaining the protected object; reconstruction or temporary strengthening of flood embankments; participation in removing the effects of floods (temporary construction or repair of roads and bridges, construction or repair of flood embankments, etc.);
- the main tasks carried out during rescue and firefighting operations and removing
 the effects of spatial fires include: fire-fighting with the use of explosives; construction of barrier strips with earthmoving machinery or explosives; arranging
 water extraction points; preparation of earth water reservoirs; soil mineralization
 using bulldozers and excavators;
- tasks performed during rescue operations related to the removal of the effects of technical failures of devices with toxic industrial agents (TIA) and radiation accidents include: conducting engineering reconnaissance of the area and objects in the area of danger; carrying out excavations and earth tanks for the storage of TIA; cutting damaged structures and carrying out demolitions; sealing of earth reservoirs on the TIA; construction of sewerage or intercepting devices for liquid TIA; removing contaminated soil layer.

The tasks carried out by engineering subunits (mine patrols of clearing the area of explosive and dangerous objects) as part of removing dangerous explosive objects include: site (facility) reconnaissance for the presence of dangerous items; clearing the area (facility) from explosive and dangerous items; carrying explosives and dangerous to the areas of their destruction; destruction (neutralization) of explosive and dangerous objects¹⁰. To clear the areas of dangerous objects, the armed forces assign 39 engineer patrols and two groups of mine divers.

The action of clearing snow from roads consists in the systematic removal of snow from the roadway when rainfall occurs, in order to prevent the formation of snow

¹⁰ Cf: Defensive norm. NO-02-A043, Engineering Army. Identification, demining and cleaning the areas of explosive and dangerous objects. Requirements, p. 19.

drifts on the roads, or to arrange cross-country roads. For road clearing, plows or graders, high-speed dozers, heavy dozers, dozer loaders and road excavators are used.

Search and rescue operations are carried out in the event of loss or other accident of the aircraft, threat to its safety or forced landing outside the airport. Units of engineering troops assign soldiers with the necessary equipment to operate as part of ground search groups. The main engineering tasks performed by these groups include: arranging and maintaining crossings; terrain engineering reconnaissance (searching for items belonging to aircraft, including bombs, missiles and other dangerous items); paving roads across or through damaged areas and carrying out earthworks.

The tasks carried out as part of the defense against terrorism include: collecting information and analysing the threat for the purposes of the actions taken; depriving the opponent of the ability to carry out acts of terror; performing security and ordering tasks; physical protection of selected objects; performing tasks related to the detection of contamination and warning troops and population, as well as the liquidation of their effects. These tasks can be performed by special forces, Military Police, mechanized and infantry units, as well as engineering and chemical units.

In turn, the Military Sanitary Inspection and specialized units of the Military Veterinary Service were established to perform specialist and medical supervision over the sanitary and hygienic condition as part of anti-epidemic activities.

An example of other tasks performed by the army may be the use of a logistic battalion in crisis situations, for example to: monitor threats; implementation of transport tasks (passenger and goods transport); water transport and delivery with the use of water tanks and water reservoirs; transport and delivery of fuels with the use of tankers-distributors; electricity supply with the use of a container field power plant and lighting sets; preparation and distribution of meals with the use of a field container casino and field kitchens; water purification for non-food purposes using a container water station; carrying out reloading tasks with the use of vehicles with self-loading devices and diesel forklifts; providing level I medical assistance with the use of sanitary vehicles with service and a field medical facility; conducting rescue and firefighting operations with the use of the Military Fire Service; piloting the transport of oversize cargo and regulating traffic in sensitive points of crisis situation with the use of a traffic regulation team.

The typical tasks of general military units include: participation in the monitoring of threats; performing search and rescue tasks (the possibility of separating the personal status together with the means of transport); evacuation of the injured population and property (the possibility of separating the personal status and means of transport); carrying out tasks aimed at preparing conditions for the temporary presence of the evacuated population in designated places (the possibility of separating personnel to prepare campsites, transport, delivering water and fuel); participation in the protection of property left in the area of threats (possibility of separating personal status); isolating the area of the occurrence of threats or the place of the rescue operation (the possibility of separating personnel); participation in ensuring the passability of communication routes.

One of the essential elements of the executive tasks in the framework of crisis management is the newly established type of armed forces, which are the Territorial Defense Forces (TDF). According to the specialist preparation and the capabilities of territorial defense brigades (TDB) to support public administration in the event of a crisis situation (CS, non-military), TDB forces¹¹ and resources are ready to implement the following tasks in the field of crisis management (CM) under permanent area of responsibility (PAR):

- participation in combating natural disasters and removing their consequences;
- participation in the monitoring of threats;
- performing tasks related to the assessment of the effects of phenomena occurring in the area of hazards;
- evacuating the injured population and property;
- carrying out tasks aimed at preparing conditions for the temporary presence of evacuated people in designated places;
- participation in the protection of property left in the area of threats;
- isolating the area of the occurrence of threats or the place of the rescue operation;
- performing security, rescue and evacuation works at endangered buildings and monuments;
- participation in ensuring the passability of communication routes.

The aforementioned tasks are only selected examples of the use of the Armed Forces, but it should be stated that all these tasks are carried out within the framework of broadly understood logistic support.

The presented task scope of TDF participation in the crisis management system (CMS) concerns TDBs which have become fully ready to participate in solving a crisis situation.

3. THE USE OF ENGINEERING TROOPS AS SUPPORT IN THE REALISATION OF TASKS DURING EMERGENCY EVENTS

The equipment of the engineering troops of the Polish Armed Forces allows for the implementation of most of the tasks assigned to the army in *the Act on Crisis Management*. The type of engineering tasks depends on emergencies caused by natural disasters and accidents, which include:

- fighting floods and ice phenomena,
- rescue and firefighting actions and removal of the effects of spatial fires
- technical accidents with toxic industrial substances (TIS), communication disasters and radiation accidents;
- clearing the area of explosive and dangerous objects,
- snow removal actions,
- search and rescue operations,
- · defense against terrorism,
- anti-epidemic measures.

The main engineering tasks performed during floods and the occurrence of ice phenomena include:

- evacuation of people and property and ensuring the delivery of supplies (food, drinking water, medicines, etc.) with the use of crossing means in areas at risk and flooded;
- conducting engineering works related to the immediate repair and strengthening of communication infrastructure facilities (reconstruction, construction and strengthening of bridges and flood embankments, removal of congestion on communication lines, etc.);
- protection of bridges, locks, damming devices and other hydrotechnical structures
 on rivers by crushing ice, breaking ice blockages, securing supports in the event of
 lifting chambers and carrying out other works to maintain the protected facility;
- removing water obstacles;
- emergency repair of roads and bridges;
- supplying electricity to the most important devices and facilities necessary to ensure the safety and well-being of the population;
- participation in removing the effects of floods (construction of bridges, reconstruction or repair of road sections, repair of flood embankments, etc.).

Another type of natural disaster is fire (rescue and firefighting operations and removal of the effects of spatial fires). The main engineering tasks carried out during rescue and firefighting operations and removing the effects of spatial fires include:

- fire-fighting with the use of explosives,
- construction of barrier strips with earthmoving machinery and with the use of explosives,
- · arranging water extraction points,
- construction of ground water reservoirs,
- soil mineralization using bulldozers and excavators.

On the other hand, the engineering tasks performed during rescue operations related to the removal of the effects of technical failures involving toxic industrial agents (TIA) and radiation accidents include:

- conducting engineering reconnaissance of the area and facilities in the area of danger,
- cutting damaged structures and carrying out demolitions,
- carrying out excavations and earth tanks for the storage of TŚP,
- construction of sewage systems for the spread of liquid TŚP,
- removing the contaminated soil layer,
- ground levelling.

The tasks carried out by engineering subunits (sapper patrols) as part of the removal of dangerous explosive items include¹²:

- reconnaissance of the area (facility) in terms of the presence of dangerous objects,
- clearing the area (facility) of explosive and dangerous objects,
- transporting explosive and dangerous items to the area of their destruction,
- destroying (neutralizing) explosive and dangerous objects.

The action of clearing snow from roads consists in the systematic removal of snow from the roadway when it rains, preventing the formation of snow drifts on the roads, or arranging cross-country roads. For snow removal from roads, snow plows or graders, high-speed dozers (BAT-M), heavy dozers (DZ-27S), dozer loaders (SŁ-34) and truck excavators are used.

Search and rescue operations are carried out in the event of loss or other accident of the aircraft, threat to its safety or forced landing outside the airport. Units of

¹² Cf: Defensive norm. NO-02-A043, Engineering Army. Identification, demining and cleaning the areas of explosive and dangerous objects. Requirements, p. 19.

engineering troops assign soldiers with the necessary equipment to operate as part of ground search groups. The main engineering tasks performed by ground search groups include:

- · arranging and maintaining crossings;
- terrain engineering reconnaissance (searching for items belonging to aircraft, including bombs, missiles and other dangerous items);
- · paving roads across or through damaged areas;
- carrying out earthworks.

Engineering tasks performed in defense against terrorism are:

- engineering reconnaissance of terrorist forces and objects of their influence;
- clearing the area of explosive and dangerous objects;
- implementation of works related to the removal of the effects of technical failures with toxic industrial agents (TIA) and radiation accidents;
- carrying out earthworks;
- arranging and maintaining crossings (in the case of mining, damaging or destroying a permanent crossing);
- carrying out road and bridge works;
- water extraction and purification;
- carrying out mining works as part of the demolition of facilities;
- carrying out passages through damage zones.

Engineering tasks performed in the event of certain types of crisis threats prove their great diversity and specificity of logistic support deviating significantly from typical engineering tasks.

4. ORGANIZATION AND FUNCTIONING OF MILITARY RECONSTRUCTION UNITS

The analysis of the frequency of occurrence of unfavourable atmospheric phenomena and the tasks of the administration in eliminating their negative effects resulted in the necessity and need to provide assistance to the society. The necessity to take actions aimed at increasing the capabilities of the Polish Armed Forces to respond to non-military threats was recognized.

Therefore, the Armed Forces developed the concept of establishing Military Reconstruction Units (MRU), adequately prepared and equipped for the crisis

situation and the scope of tasks to be performed¹³. The direction of the development of the capabilities of the engineering troops does not replace the ability of other services, forces and resources, including the State Fire Service, to respond to crisis and help the public. The Armed Forces of the Republic of Poland remain an element supporting the implementation of tasks by civilian entities in accordance with the Act on Crisis Management.

The process of achieving capabilities was carried out on the basis of existing units of engineering troops. The dislocation of engineering units carrying out evacuation and rescue tasks has been adapted to the areas of occurrence of threats and thus¹⁴:

- 1st sappers regiment in Brzeg intended for the implementation of tasks in the following provinces: Śląskie, Opolskie, Dolnośląskie and Łódzkie;
- 2nd sappers regiment in Kazuń intended for the implementation of tasks in the following provinces: Mazowieckie, Łódzkie, Wielkopolskie, Kujawsko-Pomorskie and Podlaskie;
- 5th engineering regiment in Szczecin-Podjuchy intended for the implementation
 of tasks in the territory of the Zachodniopomorskie, Lubuskie and Wielkopolskie
 voivodships;
- 2nd engineering regiment in Inowrocław intended for the implementation of tasks in the Pomorskie, Warmińsko-Mazurskie, Wielkopolskie and Kujawsko-Pomorskie voivodships;
- 1st road and bridge battalion in Dęblin intended for the implementation of tasks in the Mazowieckie, Lubelskie and Świętokrzyskie voivodships;
- 3rd engineering battalion in Nisko intended for the implementation of tasks in the Podkarpackie Świętokrzyskie and Małopolskie provinces;
- 4th engineering battalion in Głogów designed to carry out tasks in the Dolnośląska, Lubuskie and Wielkopolskie provinces.

The catalogue of military engineering capabilities to respond to non-military threats covers areas in which engineering troops have full capabilities to perform such tasks as: destroying ice jams, treating water for the needs of the civilian population and removing dangerous explosives of military origin. At the same time, the areas within which the necessary organizational and full-time changes were made and the units were equipped with specialized engineering equipment as well as equipment and means of logistics supplies. These areas included:

Koncepcja rozwoju zdolności inżynierii wojskowej w zakresie reagowania na zagrożenia niemilitarne, Sztab Generalny Wojska Polskiego, Warszawa 2012.

¹⁴ Ibidem.

- reconstruction of road and bridge infrastructure,
- removing the effects of construction disasters and adverse weather phenomena,
- evacuation of people and property with the use of crossing equipment,
- supplying electricity to small areas (clusters of up to a thousand people).

In total, by the end of 2014, ten MRUs were organized on the basis of engineering units (four were created in the first stage, and six in the second stage).

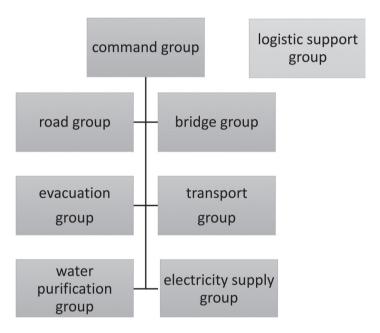


Fig. 1. An example of the modular structure of MRU Source: Military Engineering Board of DG RSZ

As a result of the changes, independent mobile military units were formed, capable of carrying out evacuation tasks, logistic support of activities and engineering works, with the possibility of separating 1-2 task groups from each engineering unit, ensuring:

increasing the evacuation possibilities and reconstruction of the road and bridge
infrastructure by retrofitting evacuation equipment and increasing the number
of bridges assembled in engineering units, as well as retrofitting with specialist
equipment necessary to perform auxiliary works on the construction of bridges;

- obtaining the ability to eliminate the effects of communication and construction disasters, hurricanes and storms by equipping with specialized pneumatic tool kits, rescue kits and high-power power plants;
- mobility and independence of specialized engineering subunits in the implementation of tasks by retrofitting transport vehicles (including multi-tonnage vehicles) and low-loader sets.

Summing up, it should be stated that in a short time the troops of the Polish Armed Forces can allocate forces and resources, not only from the Military Reconstruction Unit and the resources of engineering units, but also from other units of the Land Forces.

In the case of extraordinary events with strong consequences and unfavourable development of the situation, the size of the military component may be even up to 11,000. soldiers, and 1,400 units of equipment¹⁵.

5. SUMMARY

Threats resulting from natural disasters, technical failures or terrorist threats can very quickly lead to a crisis situation and pose a serious threat to people, the environment and national security.

The Armed Forces have the personnel and organizational potential and equipment that can be used to support the civil environment during natural disasters, breakdowns and technical catastrophes, as well as other extraordinary threats, when the use of other forces is impossible, insufficient or their resources have been exhausted.

The type and scope of tasks undertaken by the Armed Forces as part of crisis management is difficult to predict and each time depends on a specific event and the risks caused by it. For this reason, especially the scope of tasks and the number of forces and resources needed are difficult to forecast.

The Act on Crisis Management provides for 15 tasks that can be performed by the Polish Armed Forces as part of crisis management. Their specificity causes the need to maintain units and subunits capable of carrying them out in all types of armed

Piątek Z., *Procedury i przedsięwzięcia systemu reagowania kryzysowego*, Akademia Obrony Narodowej, Warszawa 2011, p. 112.

forces and types of troops. Units of engineering troops have special abilities in this respect. The most common tasks or works carried out by the forces of engineering troops include: evacuation of people and mines (mainly by arranging and maintaining crossings), cleaning roads, extracting and purifying water (setting up water extraction and purification points), carrying out earthworks (using engineering machines), demolition of life-threatening structures (use of explosives) and participation in monitoring of the situation (engineering reconnaissance).

The catalogue of tasks of military units and subunits performed in crisis situations may be richer than the tasks listed in this publication. Therefore, it should be a key factor taken into account when planning the use of forces as part of crisis management, determining the methods of command and their logistical support, as well as cooperation with military and non-military entities participating in the activities.

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