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Involvement of the Polish Armed Forces in counteracting non-military threats in the light of the participation of the Krakow Military District in the flood relief operation in 1997

Original article

Przemysław Wywiał¹, A-F

ORCID  0000-0002-9761-7669

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¹ University of the National Education Commission, Krakow, Poland

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Abstract

Objectives: The flood that hit the south of Poland in 1997 was an important test for the national security system, including above all the institutions and services responsible for general security and protection of the population. The Polish Armed Forces were also involved in the flood relief operations. The aim of the publication is to analyse the involvement of the forces and resources of the Krakow Military District (Krakowski Okręg Wojskowy, KOW) in the flood relief operation.

Methods: Theoretical methods such as analysis, synthesis and inference on the basis of available sources, including legal acts, the military press (the Krakow Military District magazine *Nasz Refleks*) and scientific studies, were used to achieve the adopted objective.

Results: The article succeeds in achieving its aim. The structure and tasks of the Cracow Military District were presented. The preparation of engineering and anti-chemical troops to fight against non-military threats was discussed. Then the anti-flood action of the army was shown. Finally, the activities of the engineering and anti-chemical forces, which were primarily engaged in removing the effects of the flood wave, were analysed.

Conclusions: The Polish Armed Forces played a very important role in combating the effects of the 1997 floods. The action confirmed the good training and high morale of the soldiers. Engineering and anti-chemical troops performed specialised tasks. A major problem in the first days of the flood action was the chaos in the process of directing the flood action at the

Corresponding author: prof. Przemysław Wywiał - Head of the Department of National Security, University of the National Education Commission in Krakow, interests: security strategy, common defence, pro-defence organisations; e-mail: przemyslaw.wywial@uken.krakow.pl

Introduction

One of the three core missions of the Polish Armed Forces is to provide support to society in crisis situations. The army has specialised structures that can be used to counter the effects of non-military threats, primarily natural and technological disasters. These are mainly units and sub-units of the engineering forces, chemical defence and territorial defence. After 1989 soldiers were repeatedly dispatched to take part in such actions, both during floods and major fires, and, more recently, during the Covid-19 pandemic. A special challenge for the Armed Forces, which at the time still had a completely different structure than today and consisted mainly of conscripted soldiers, was the flood that hit the south of Poland in July 1997. At that time, the forces and resources of the Krakow Military District were involved in flood damage mitigation measures.

1. Krakow Military District

The establishment of the Krakow Military District took place in connection with the socio-political changes that occurred in Poland after 1989 and the associated changes in the national security strategy. The defence doctrine of the Republic of Poland had to be adjusted in view of the exit of our country from the Warsaw Pact and its aspirations for integration into the security structures of the West (Piekarski, 2022, pp. 51-54).

The Krakow Military District was established by virtue of the Regulation of the Council of Ministers of 5th June 1992 *on establishing military districts and specifying their headquarters and territorial range of operations* (Rozporządzenie, 1992, § 2). The District would comprise the area of the Bielskie, Chełmskie, Częstochowskie, Katowickie, Kieleckie, Krakowskie, Krośnieńskie, Lubelskie, Nowosądeckie, Przemyskie, Rzeszowskie, Tarnobrzekskie, Tarnowskie and Zamojskie Provinces. The city of Krakow became the seat of the Krakow Military District and its headquarters.

The district thus covered the area of 14 provinces with a total area of 79,000 square kilometres. This area was inhabited by approx. 15 million people (Zajac, Szymański, after 1995, p. 10).

On 15th September 1992 the President of the Republic of Poland appointed the former commander of the Organisational and Preparatory Group of the KOW, Major General Zenon Bryk, as the Commander of the District (Wijas, 2011, p. 47).

The district was a territorial body of military administration as well as a military command authority over the troops stationed in this area, subordinate to the Chief of the General Staff of the Polish Army. The KOW was designed as an air and land operational formation.

The core tasks of the District included ensuring equal distribution of the defence potential across the country by strengthening it in the south-eastern area; practical preparation of soldiers, structures and equipment of military units for the current and prospective requirements of the country's defence, the contemporary battlefield; and participation in international defence systems and peacekeeping missions.

The following military formations were subordinated to the district:

- 25th Air Cavalry Brigade 'Prince Józef Poniatowski' in Lodz,
- 3rd Mechanised Brigade of Legions 'Romuald Traugutt' in Lublin,
- 6th Airborne Brigade 'Brig. Gen. Stanisław Sosabowski',
- 14th Armoured Brigade of the Przemysl Region 'Hetman Karol Chodkiewicz' in Przemysl,
- - 21st Podhale Rifles Brigade 'Mieczysław Boruta-Spiechowicz', in Rzeszow,
- 5th Armoured Brigade 'Scorpion' in Opole,
- 5th Brigade of Cannon Artillery in Glogow,
- 3rd Zamosc Brigade of Territorial Defence in Zamosc,
- 1st Special Commando Regiment in Lubliniec,
- 1st Romuald Traugutt Road and Bridge Regiment in Dęblin,
- 2nd Hrubieszow Reconnaissance Regiment 'Major Henryk Dobrzański codename Hubal' in Hrubieszow,
- 3rd Sapper Regiment 'Gen. Jakub Jasiński' in Dębica,
- 5th KOW Command Regiment in Krakow,
- 12th Małopolski Transport Regiment of Nizańska Land in Nisko,
- 25th Mechanised Regiment in Opole,
- 5th Tarnogórski Battalion of Chemical Defence 'Lt-Gen Leon Berbecki' in Tarnowskie Góry,
- Military Training Centre for United Nations Peacekeeping Forces in Kielce (Szymański, Zajac, 1998.).

Formations of the Krakow Military District took part in many exercises and other undertakings of an international character. The activity and attitude of the KOW units in cooperation with the countries of the North Atlantic Alliance, the Partnership for Peace programme and peacekeeping missions contributed to paving the way for our country to join the North Atlantic Alliance. Among others, the 16th Airborne Battalion was formed for the Nordic-Polish Brigade, and its soldiers took part in the mission in Bosnia and Herzegovina (Szmyt, 2011, pp. 119-124). The KOW also cooperated with its eastern neighbours, which resulted, among other things, in the establishment of the Polish-Ukrainian Peace Force Battalion (POLUKRBAT) (Wywiół, 2014, pp. 73-79).

The Krakow Military District was also active in the field of educational, cultural and sporting activities. It collaborated with local authorities, institutions and schools, promoting defence and military matters. It was the organiser of the very popular annual International Military Band Festival in which musicians from all over the world took part. There was also the KOW Museum. Between 1995 and 1999, the monthly magazine *Nasz Refleks* was published by the KOW (Szmyt, 2011, pp. 94-111).

The Krakow Military District was dissolved on 1st September 1999 by virtue of the Regulation of the Council of Ministers of 3rd September 1998 *on establishing military districts and specifying their headquarters and territorial range of operations* (Rozporządzenie, 1998, § 4).

Among the most important tasks carried out by the KOW was the provision of support to state authorities, local governments and society in the event of threats of a non-military nature. It was the engineering and chemical troops that had the greatest useful potential, and the biggest challenge was the flood that hit the south of Poland in the summer of 1997. During that cataclysm more than 50 people lost their lives and material losses were PLN 3.5bn. About 1,700 families lost the roof over their heads. In addition, the list of losses included 3,172 km of destroyed or damaged roads, 1,999 km of damaged or destroyed railway lines, 87 destroyed or damaged stops and stations, 245 destroyed or damaged bridges, about 200,000 flooded cars, 600 flooded and destroyed schools, including 4 colleges; 50 flooded and destroyed libraries, including 38 large ones, 7 damaged dams, including 1 destroyed. At that time, 16,170 professional and voluntary firefighters, 2,665 police officers, 503 soldiers of the Vistula Military Units of the Ministry of Internal Affairs and Administration and 741 Border Guard officers participated in the rescue operations. They were supported by 30,787 soldiers, mainly from the operational forces (Kozinski, 2009, pp. 19-20). A large proportion of these military forces were seconded by the KOW.

2. Preparation of the engineering and chemical troops of the KOW for counteracting non-military threats

Engineering and chemical troops played and still play a special role in counteracting threats of a non-military nature due to their equipment and the training of their personnel and soldiers.

In the autumn of 1995, the Chief Command of Engineering Forces of the KOW prepared a list of facilities exposed to potential flood hazard due to ice and water run-off and requiring army protection. It included a total of 56 road and railway bridges, weirs, water intakes, earth dams, flood embankments and areas of ice dam formation. Accordingly, military protection was provided for facilities on 25 rivers:

- in the Krakowskie Province – 2 facilities (on the River Raba);
- in the Nowosądeckie Province – 3 facilities (on the Rivers Poprad, Dunajec and Łososina);
- in the Katowickie Province – 4 facilities (on the River Odra and the Ulga Canal);
- in the Częstochowskie Province – 4 facilities (on the Rivers Warta and Liswarta);
- in the Kieleckie Province – 6 facilities (on the Rivers Kamienna, Vistula, Lubrzanka, Bielnianka, Koprzywianka and Czarna Staszowska);
- in the Tarnobrzskie Province – 11 facilities (on the Rivers Łęg, Tanew, San, Vistula, Koprzywianka and Czarna Staszowska);
- in the Tarnowskie Province – 8 facilities (on the Rivers Wisłoka, Biała and Stradomka);
- in the Rzeszowskie Province – 1 facility (on the River Wisłok);
- in the Krośnieńskie Province – 2 facilities (on the Rivers Wisłok and Jasiołka);
- in the Przemyskie Province – 2 facilities (on the Rivers Wisłok and Mleczka);
- in the Chełmskie Province – 4 facilities (on the River Wieprz);
- in the Lubelskie Province – 9 facilities (on the Rivers Wieprz and Wisła).

No facilities were included in Bielsko-Bialskie or Zamojskie Provinces (*Przygotowanie* 1996, p. 23).

The facilities that were to be protected by the KOW Engineering Troops included 32 different types of bridge structures, 7 weirs and sluices, 4 sections of flood embankments and 13 other facilities (footbridges, water intakes, earth dams, places of ice jam formation). Those considered to be most vulnerable were:

- a temporary road bridge over the River Mlecza in Gniewczyna Łańcucka (Przemyskie Province);
- semi-permanent road bridge over the River Wisłok in Budy Łańcuckie (Rzeszowskie Province);
- semi-permanent road bridge on the River Oder in Krzanowice (Katowickie Province) (*Przygotowanie*, 1996, p. 23).

The following forces and resources were assigned to participate in the flood control operation:

- 741 soldiers, of whom 140 professional;
- 23,500 kg of explosives;
- 24 passenger all-terrain vehicles;
- 87 all-terrain trucks;
- 34 boats with rescue equipment;
- 12 amphibious transports with equipment for evacuating livestock;
- 7 helicopters, including one for reconnaissance purposes (Mi-2), three for transport and evacuation purposes (Mi-8), three for squads crushing ice blockages from the air and using explosives (W-3 Sokol) (*Przygotowanie*, 1996, p. 23).

If necessary, the forces allocated by the KOW could be backed up by the reserves subordinated to the Chief of the Engineering Forces of the General Staff of the Polish Army.

In the following months, at the end of 1995 and the beginning of 1996, among other things, a survey of the threatened facilities was carried out as part of the preparations for the flood relief operation, the methods of collaboration with the civil authorities in the field and the methods of alarming were agreed; relevant training was provided to the subunits assigned to take part in the operation and to the crew that was going to crush the ice from helicopters. Material costs incurred during the implementation of these undertakings exceeded the sum of 480m old zlotys (*Przygotowanie*, 1996, p. 23).

Pursuant to the '*Instruction on the participation of the army in flood relief operations*', which has been in force since the 1980s, and the order of the Commander of the KOW of 9th January 1996, the costs of participation of the army in flood relief operations were to be borne by the army. However, when concluding agreements with the commanders of military units, the bodies of territorial government undertook to bear any expenses resulting from their obligation to provide quarters for soldiers, rooms for storage of explosives, parking spaces for motor vehicles and civil engineering machinery as well as landing areas for helicopters (*Przygotowanie*, 1996, p. 23).

Pursuant to the Water Law, activities directly related to flood protection involved the participation of the prevention units of the Police and Fire Brigade, Civil Defence formations and volunteer rescue teams led by the flood relief committees that were organised by state administration bodies. The military formations, which were reserves subordinated to the Provincial Flood Relief Committees, were only sent into action after exhaustion of other forces and resources being at the disposal of the committees (*Przygotowanie*, 1996, p. 23).

As part of their participation in flood relief operations, the designated sub-units of the KOW Engineering Forces were in readiness to perform such tasks as:

- protection of bridges and hydraulic structures by crushing ice, breaking up ice jams, loading of bridges, etc.;
- protection of flood embankments by strengthening them on an ad hoc basis if they are in danger of being breached;
- removing obstacles that cause damming up of water;
- emergency repairs of roads and bridges;
- evacuation of people and their property from areas that are particularly endangered or flooded;
- transport of food, medical supplies, drinking water and fodder to flooded areas;
- transport of adult people and children from flooded areas to work and school (*Przygotowanie*, 1996, p. 23).

The Chemical Defence Forces were used in peacetime to conduct radioactive contamination monitoring and on-call duty as part of the national nuclear safety system in accordance with their purpose, equipment and training; also, to mitigate the consequences of emergency threats, such as failures affecting nuclear power and chemical industry facilities, as well as chemical and radiation accidents; to protect the environment in the process of training troops, as well as to participate in the mitigation of the impact of natural disasters and to locate and extinguish fires in the area of the KOW. In certain situations, with the approval of the Commander of the KOW or his superiors, the Chemical Defence Forces and their resources could be used to support rescue operations conducted for the benefit of the civilian population (Wronkowski, 1997, p. 15).

A Division of the Chemical Defence Forces was established to manage chemical defence at the District level. Its subordinate structures were, the Contamination Analysis Centre (OAS) deployed in the 5th Command Regiment in Krakow and the 5th Chemical Defence Battalion in Tarnowskie Góry. The OAS was a cell designed to provide direct support to the Chemical Defence Forces in assessing and forecasting contamination and together with them constituted the management centre for the contamination detection system in the district. The 5th Chemical Defence Battalion, in turn, was the main force reserve for the execution of chemical defence tasks for the benefit of the district troops. The reconnaissance and liquidation sub-units of the 5th Chemical Defence Battalion provided the base for the formation of district rescue squads in situations of emergency threats to operate as part of the chemical and radiation emergency team (CHRZA) of the district. The sub-units assigned to the CHRZA were additionally equipped with rescue equipment, and therefore a military group of chemical rescue specialists could be formed to carry out specialised rescue work on their

own after being transported by helicopter to the area of the emergency (Wronkowski, 1997, p. 15).

3. Flood relief operation

On 7th July 1997, the Rescue Staff of the KOW began operating in the Krakow Military District Command, headed by the Deputy Commander of the KOW for Territorial Defence, Major General Mieczysław Karus. The officers engaged in the work of the staff came mainly from the Territorial Defence division, but there were also sappers, logisticians, liaison officers or a representative of the Military Police. In the first period, the largest number of soldiers worked in the area of Oświęcim and Racibórz. Later on, larger forces were transferred to the Rzeszowskie and Kieleckie Provinces, along the Vistula, from Nowy Korczyn to Połaniec. In the following days, an average of 1,500 soldiers were deployed each day in a 24-hour cycle. After the alert was called off, the army was directed to mitigate the damage caused by the flood, primarily to remove carrion, eliminate biological contamination and rebuild the destroyed infrastructure, clear roads, clean water intakes, etc. (Szustakowski, 1997, pp. 6-7).

Soldiers of the 25th Air Cavalry Brigade worked on strengthening flood embankments in Wrocław. Among others resources, a helicopter was used in the action. Thanks to the support of the army, it was possible e.g. to save a section of the dyke in the Pracze Odrzańskie housing estate from the second wave of flooding from the River Oder that was looming (Zajac, 1997, p. 15).

Soldiers of the 6th Airborne Brigade were active above all in the area of the Krakowskie Province. They worked both during the operation itself to protect the flood embankments, but they also contributed to work on unblocking the sluices in the flood embankments, which made it possible for water to run off so that the crops could be harvested in the flooded areas. In total, the Red Berets, as they are commonly referred to, worked more than 4,500 man-hours (Zajac, 1997, p. 15).

Soldiers of the 2nd Hrubieszow Reconnaissance Regiment provided support to local authorities and the public in organising the collection of gifts for those affected and transporting them to the most needy flood victims (Zajac, 1997, p. 15). Also military police officers were engaged in operations during the flood relief. They supervised the transport of heavy equipment sourced from different areas of the country. They performed patrolling and guarding duties, e.g. in Racibórz where police officers delegated from the KOW at the disposal of the Commander of the Division of Gliwice Military Police formed patrols together with the Police and the Border Guards (Szustakowski, 1997, p. 6-7).

Also involved during the flood relief operation were soldiers from the 12th Małopolski Regiment of Communication of Nizańska Land who took part in the evacuation of people and their belongings with the use of amphibious vehicles (PTS) and landing boats. They operated in the Nowosądeckie, Bielskie and Tarnowskie Provinces (Moszkowicz, 1997, pp. 20-21).

The detailed deployment of KOW soldiers during the flood is shown in Table 1.

Table 1. Deployment of soldiers of the Krakow Military District in the field (at 14.00 hrs on 16th July 1997)

No.	Place of work	Number of soldiers		Remarks
		In action	Reserve	
Regional Military Staff Katowice				
1.	Racibórz	80	60	5th Chemical Defence Battalion
2.	Bielsko-Biała		70	18th Airborne Battalion
3.	Tarnowskie Góry	20	120	4th equipment storage centre
4.	Gliwice	25	38	Military Police, 25th Mechanised Regiment
5.	Bielsko-Biała, Częstochowa, Katowice	32	32	Duty services of the Provincial Military Staff – of the Regional Military Staff
6.	Wodzisław Śląski	15	15	Military Unit Bytom Radzionków
7.	Bieruń Nowy	11	30	72th Squadron of National Air Defence
8.	Racibórz	30		5th Chemical Defence Battalion
Regional Military Staff Krakow				
1.	Krakow, Nowy Sącz	32 45	32 100	Duty services of the Provincial Military Staff – of the Regional Military Staff / of the Military Recruiting Commands, 25th Air Cavalry Brigade
	Tarnów	40		12th Transport Regiment Nisko
2.	Krakowskie Province		120	6th Airborne Brigade
3.	Krakow	13	26	Military Police
Regional Military Staff Lublin				
1.	Lublin, Chełm, Zamość	32	32	Duty services of the Provincial Military Staff – of the Regional Military Staff / of the Military Recruiting Commands
2.	Wilków, Kazimierz	70		3rd Mechanised Brigade Lublin
Regional Military Staff Kielce				
1.	Kielce, Tarnobrzeg	16	16	Duty services of the Provincial Military Staff – of the Regional Military Staff / of the Military Recruiting Commands
2.	Pacanów	40	60	3rd Sapper Regiment Dębica
3.	Połaniec		60	12th Transport Regiment Nisko
			100	1st Road and Bridge Regiment
		30		5th Chemical Defence Battalion
4.		60		3rd Mechanised Brigade

Regional Military Staff Rzeszow				
1.	Rzeszow, Krosno, Przemyśl	32	32	Duty services of the Provincial Military Staff – of the Regional Military Staff / of the Military Recruiting Commands
2.	Borowa	160	122	14th Armoured Brigade, 5th Chemical Defence Battalion
3.	Czermin	100	80	21st Podhale Rifles Brigade, 12th Transport Regiment
4.	Nowa Dęba	20	10	Military Police
KOW Staff		12	12	
Total		915	1167	

Source: J. Szustakowski, Szkoda, że nie można klonować sprzętu. Rozmowa z ppłk. Andrzejem Kaciubą i ppłk. Stanisławem Rogińskim, Nasz Refleks, no. 9:1997.

4. Operations of the Chemical Defence Forces

Those in command of the flood relief operation were aware that once the water had receded from the flooded areas, a variety of contamination incidents might occur at any time. The cataclysm had caused, among other things, the overflowing of cesspits and the flooding of dumps and waste. There was a huge bacteriological and chemical risk in such places, which meant that clothing, household equipment, buildings and farmyards and the area had to be disinfected immediately. Therefore it was decided to immediately mobilise the forces and resources of the 5th Tarnogórski Battalion of Chemical Defence.

The scale of the hazard was enormous. The water flooded, inter alia, warehouses storing plant protection products, farm buildings (often with the livestock), plants and workshops, and public buildings. Biological and chemical contamination (especially with nitrogen compounds) could have occurred everywhere. Furthermore, after the water subsided, dead animals were found in many places. It became necessary to neutralise the risks. The clothing of the teams involved in cleaning up the area also had to be decontaminated and disinfected, likewise the equipment, including the cars and trailers used to transport the fallen animals (Błażkowski, 1997, p. 10).

To the flood-affected areas, The Tarnogórski Battalion sent mainly IRS decontamination trucks and ZP-800 pumping units which were used e.g. to remove water from basements and lower-lying buildings. In the vicinity of Borowa, Trzciana and Pacanów, field bathing tents were provided for several thousand people so that they could have a bath. In Racibórz, 26 clothing disinfection cycles were carried out using the AGW system (Błażkowski, 1997, p. 10).

The 5th Battalion was divided into so-called decontamination groups (with about 25 specialists in each) for special operations. They were equipped with 3-5 decontamination trucks, a pumping unit and a field bathing tent, as well as repair and transport resources. At a certain point, there were seven such groups operating simultaneously. The needs turned out to be so huge that all soldiers in the unit were trained to operate the decontamination equipment. The roles of drivers and decontamination specialists were often played by non-

commissioned officers, warrant officers and on many occasions even officers (Błażkowski, 1997, p. 10).

Various substances and solutions of calcium hypochlorite, sodium hypochlorite, monoethanolamine, chloroamine, etc. were used for disinfection and decontamination, and those were distributed by means of distribution systems in buildings or in the field. Soldiers in Rybnik were faced with an unusual hazard. Due to torrential rains, part of the municipal cemetery collapsed (the graves were not old), causing an epidemic threat. After an all-night operation of the IRS decontamination trucks, a high-performance special device (WUS) was also brought into action to deliver a very large quantity of disinfectants and disinfectant preparations to the targeted place in a short time. Thanks to this, the danger was soon averted (Blazkowski, 1997, p. 10).

Participation in flood relief operations on such a huge scale made it possible to gather experience and conclusions on the structure and training of chemical defence specialists. Major Jerzy Blazkowski concluded, *'Participation in the mitigation of the effects of the flood by the soldiers of the 5th Chemical Defence Battalion made it possible to acquire new experiences regarding organisational structures and the quality of equipment, and the methods of operation. It is absolutely necessary to increase the amount of equipment for decontamination and the number of trained soldiers, to replace the ZP-800 power pumps with ones that are more efficient and easier to transport, and the field bathing tents with field bathing containers, and to equip at least group commanders with high quality means of wireless communication or mobile phones so they can keep in touch with the rescue headquarters and the battalion commander, and to increase the number of vehicle-based repair workshops. As far as decontamination and disinfection agents are concerned, apart from calcium hypochlorite, others should also be available, such as sodium hypochlorite, monochloroamine, monoethanolamine, and chlorinated lime'* (Blazkowski, 1997, p. 10).

At the climax, 70% of the personnel of the 5th Chemical Defence Battalion and about 60 units of specialised equipment were involved in the operation. In the area of the southern part of the KOW, from Raciborz through Kuźnia Raciborska, Rybnik, Goczałkowice, Gliwice, Sosnowiec, Limanowa, Borowa and Trzciana to Pacanów, a total of 9 decontamination groups were active (*W każdej chwili*, 1998, p. 12).

By the end of September, the soldiers of the battalion had disinfected a total of 820 buildings, 1,350 farms with farmyards, 23 educational institutions, four churches with adjoining buildings, nine enterprises and industrial plants, two sewage treatment plants, three municipal waste dumps, a water treatment plant, 133 vehicles, 54 hectares of land, and three municipal cemeteries. They performed sanitary treatments on 1,465 people. In addition, they removed about 1,600 dead animals (*W każdej chwili*, 1998, p. 12).

In addition to thanks and congratulations from civilian and military authorities, the battalion was awarded the badge of honour 'For Merits to the Rzeszowskie Province' for great dedication and sacrifice (also at risk of life) in performing rescue tasks in the flood relief operation and mitigating the impact of the elemental disaster in the Borowa and Czermin communes (*W każdej chwili*, 1998, p. 12).

On the occasion of the Day of the Chemical Defence Forces on 6th June 1998, the Commander of the KOW, Major General Zenon Bryk wrote these words in a letter addressed to the soldiers, *'The exemplary execution of tasks during the mitigation of the effects of the flood in 1997 and the achievement of full operational capability within the Chemical and Radiation Emergency Team of the Krakow Military District prove that Chemists can be counted on also in situations of peacetime threats'* (*W każdej chwili*, 1998, p. 12).

5. Operations of the Engineering Forces

Immediately after the flood wave receded, engineering troops were sent to rebuild the damaged and destroyed infrastructure.

Soldiers of the 1st Road and Bridge Regiment from Dęblin were directed to help the community of Tymbark commune where at the beginning of July the Rivers Dobrzanka, Słopniczanka and Łososina and numerous mountain streams overflowed the banks, as a result of which 72 people had to be evacuated. Soldiers began their work by regulating the River Słopniczanka along a 500-metre stretch and rebuilding access roads to the most important bridge that provides access to 35 farms. They then made a makeshift road to the Dudówka-Zapałów housing estate, which enabled access to fields and the harvesting of crops from around 400 ha, rebuilt a small bridge and a wooden bridge with a load capacity of 30 tonnes, as well as a makeshift bridge on the diversion road connecting Tymbark with Dobra, thanks to which car and tractor traffic was restored as well as the only connection between the village of Podłopień and Tymbark. The Dęblin regiment also assisted in the construction of a bridge over the Rybkowski stream and in the reconstruction of the bridge to the village of Zagonie. In addition, the army provided protection against landslides on the 'Węglarka' road, on the 'Kopana Droga' road and against a 50-metre landslide near the military cemetery. During the ceremonial farewell to the soldiers that took place on 27th September 1997, the head of the Tymbark municipality handed over a colour TV to the Dęblin unit and small gifts in kind to all the soldiers (Szus, 1997, p. 18).

The Dęblin regiment worked not only in Tymbark. Already on 27th August its soldiers commissioned a new bridge in the municipality of Ślemień in the Bielskie Province. The bridge over the River Łękawka, with a load-bearing capacity of 8 tonnes, reconnected 51 farms that had been cut off by flooding in July with the world. Forty-one soldiers were involved in the construction, including 36 conscripts and a lieutenant from the Military University of Technology doing a summer internship (Dytko, 1997, pp. 8-9).

Immediately after the flood wave receded, the soldiers of the 12th Transport Regiment from Nisko embarked on rebuilding bridges. As early as on 1st August, the bridge in Trzciana on the River Stradomka (30 m long, 5 m wide, and half-metre wide pavements on both sides) was put into use. In August and September they rebuilt over a dozen more bridges, including those in Lipnica Murowana, Rajbrot, Bytomsk, and Borówno and in the territory of the Żegocina municipality. In October 1997, the bridge group from the regiment proceeded to build three bridges in the municipality of Łapanów at the same time (Moszkowicz, 1997, pp. 20-21).

The July flood also interrupted the planned work of the engineering troops for the benefit of the community. It was already in the summer of 1997 that there was a lot of talk about the need for the army to build a bypass folding bridge in Krakow which would operate as a temporary measure in the vicinity of the Dębnicki Bridge scheduled for repair. Specialists from the KOW even carried out a first survey at the time. The topic was brought up again in February 1998. After the relevant arrangements had been made, the KOW Commander, Major General Zenon Bryk, appointed the head of the Division of Transport Logistics of the KOW, Colonel Jerzy Jaremka, MSc (Eng) to direct the construction. On 17th March a stake was driven into the ground to mark the axis of the bridge, which was given the name Lajkonik. As agreed with the city authorities, the bridge was to be put into service on 15th May, but the army assured that it would attempt to complete it even earlier, i.e. on 2nd May (*Nazwano go*, 1998, pp. 19-21).

It was built by soldiers of the 12th Transport Regiment from Nisko. The regiment had a lot of experience in building such structures as it had been building crossings on the River San every year as part of exercises, and had recently participated in mitigating the effects of the July flood. The soldiers had already built over a dozen bridges in the Podbeskidzie region, including a permanent one at Jazowiec near Łącko with a length of 136 metres (*Nazwano go*, 1998, pp. 19-21).

The Lajkonik was 176 m long, with two separate bridge lanes, each with a width of 4.2 m, four piers in the water with 16 piles in each. A total of 64 piles were driven and two outermost supports on slabs were constructed. The piers in the water were made of 508 mm diameter steel tubes, each with an SPS-69 superstructure (collapsible steel support). The load-carrying capacity of the bridge was 30 tonnes (*Nazwano go*, 1998, pp. 19-21).

The army actually did manage to complete the bridge ahead of schedule. On 30th April 1998, it passed its load test and was put into service during the night of the 3rd to 4th May. It was the second largest crossing over the Vistula in the country (after the Syreny bridge in Warsaw) made by military transport units. Seventeen officers and 81 privates worked on the construction of the bridge. During the load test, the strength of the new crossing was tested by buses of the Municipal Transport Company and a T-72 tank (*Most*, 1998, pp. 9-10).

6. Public perception and first reflections

Following the completion of the flood relief operation, the Commander of the Krakow Military District received a number of thanks from the state and local government authorities, social organisations, schools and citizens. In a letter addressed to Major General Z. Bryk, the Mayor of Krakow Józef Lassota wrote, among other things, *'Please accept my most sincere thanks, which I extend to you and your colleagues as the Mayor of the City of Krakow and as one of its citizens for your great commitment and for coordinating and efficiently carrying out the necessary safety measures during the flood relief operation. At the same time, please accept my personal words of apology to the subordinate soldiers for any organisational shortcomings that resulted from the inexperience of those in charge and carrying out the orders of the Municipal Flood Relief Committee'* (Szus, 1998, p. 9).

The head of the municipality of Czermin in the Rzeszowskie Province, in a letter to the commander of the KOW, drew attention to the links of the 'Podhalanczy' ('Podhale Riflemen') with the region of Rzeszow and to their high morale, *'I wish to thank you sincerely on behalf of all the inhabitants of my Czermin commune for the help that your soldiers from the 21st Brigade of Podhale Riflemen offered to us during the rescue operation after the flood. Some of these soldiers were born and raised here. We see that we have given our sons into good hands. We are proud that they are commanded and led by such good and experienced superiors'* (Zajac, 1997, p. 15).

Some instant conclusions from the flood relief operation were expressed by Lt. Col. Andrzej T. Maczyński who in an article published in the KOW magazine *Nasz Refleks* proposed the construction of a modern security system that should ensure, *'the interest of all political forces and society as a whole in the creation of broadly understood security, both structural and individual; the professional preparation of the governing bodies, as well as the maintenance of forces and the provision of the necessary material means sufficient to counter various threats; the full integration of the efforts of all state bodies, economic entities and social forces called upon to combat threats.'* In his opinion, it was necessary to develop legal standards and operating procedures to ensure the efficient functioning of the Civil Defence, and the basic principle to be applied in the operation of the Civil Defence was to be the decentralisation of the management of rescue operations. Local self-governments should effectively motivate the local community to actively participate in the creation of self-defence as the foundation for the functioning of the Civil Defence system in the municipality, e.g. by using financial and material incentives. The persons responsible for organising protection of the population would be state and local government officials, from the minister of the interior to the mayor – each in their own area of operation. At the same time he expressed the hope that perhaps the flood disaster would accelerate the implementation of the 'Programme for the Future of Civil Defence of the Republic of Poland' (Maczyński, 1997, pp. 8-9).

Conclusions

The experience of the flood relief operation in July 1997 confirmed the need for a territorial military organisation based on military districts in the defence system of the Republic of Poland. The Commander of the District collaborated on an ongoing basis with state and local authorities, associations, and institutions in his area, learning about their needs and arranging the principles and procedures of cooperation in crisis situations. Immediately after the threat occurred, he was able to direct appropriate forces and resources to where they were most needed.

The military also played a major role after the flood wave receded, carrying out specialised work in the decontamination of land, facilities and people (chemical defence troops) and the reconstruction of infrastructure (engineering troops). It turned out that the troops and sub-units of the engineering troops were able to carry out certain works faster, more efficiently and cheaper than civilian companies. High morale and professionalism were demonstrated not only by the professional military personnel, but also by the conscripted soldiers who often carried out specialised activities.

A major problem in the first days of the flood relief operation was the chaos in the process of managing the flood relief operation at the local level. It also soon became apparent that there was a lack of actual, and not just existing on paper, Civil Defence structures that could carry out humanitarian actions for the affected population.

Unfortunately, the following years saw further reductions in the Armed Forces, including structures responsible for assisting the public: territorial defence and engineering troops. Military districts were also abolished. Therefore, in 2010 the army was only able to commit far fewer forces and resources to support society than in 1997. There was also no effort to rebuild the Civil Defence formations, which is still a problem to this day.

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