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PROVIDING LOGISTIC ASSISTANCE BY FORMATIONS OF THE BULGARIAN ARMED FORCES AT TIMES OF NATURAL DISASTERS AND INDUSTRIAL ACCIDENTS

*Key words: formations/modules, logistic support,
equipment and material resources*

Introduction

The Armed Forces provide assistance in rescue and immediate urgency recovery efforts upon instruction by the Minister of Defence upon a request by respective state bodies.¹ In compliance with the vision for using the Armed Forces in taking control over or restoration after disasters, *the Armed Forces keep ready for action its formations for providing assistance to the population in disasters according to the Plan for providing assistance to the population in disasters*. In relation to those obligations of the Armed Forces, the report examines some problems related to the use of formations/modules in more detail.

Disaster is a disruption that physically affects the functioning of a community and causes economic, human, material and environmental damage resulting in a large number of deaths and injuries and exceeding the society's ability to manage using its own resources. A disaster could be natural or anthropogenic (i.e. man-made). In particular, natural disasters may comprise both *slow onset* (slow and gradual) disasters, such as droughts and famine, and *sudden onset* (sudden and unexpected), such as earthquakes, tsunamis and floods.²

The activities related to the protection of the population in disasters and accidents are diverse and providing logistics support by the Armed Forces is a part of many of them. Those activities include:

- search and rescue operations;

¹ *Disaster Protection Act*, Sofia, 2011.

² www.scielo.br/pdf/cint/v40n1/0102-8529-cint-2018400100073.pdf [access: 18.05.2018].

- provision of First aid and Psychological first aid to the affected and the rescue teams;
- explosives and ammunition detonation protection;
- protective measures against the action of chemical, biological, radiological and nuclear agents;
- actions for bringing under control and extinguishing fires; temporary relocation;
- evacuation;
- shelter providing;
- personal protection equipment kits delivery;
- immediate urgency and restoration work and other operations held during disasters and major industrial accidents.³

The Armed Forces provide assistance in immediate urgency and restoration work upon instruction by the Minister of Defence following an official request by respective state bodies in compliance with the Disaster Protection Act. The Armed Forces take part in bringing under control and liquidation of disasters and accidents after-effects. In order to fulfill those functions, the Armed Forces in peace times need to provide for and train their formations to be able to implement them when called upon. Staff needs to be trained to be ready to get engaged in immediate population protection activities as well as in preventive measures. Most of the times the formations of the Armed Forces of the Republic of Bulgaria send modules to take part in disaster relief efforts.

Operations for the protection of the population from natural disasters and the tasks of the modular formations assigned by the Council of Ministers of the Republic of Bulgaria can be carried out in three cases:⁴

- in the absence of immediate threat;
- when a threat occurs;
- in the event of a disaster situation.

First case: In the absence of an immediate threat of disaster:

- maintain readiness to perform tasks of population maintenance and disaster relief;
- plan the activities of the forces and the necessary means to participate in potential disasters, accidents, and catastrophes;
- agree on action plans with government bodies with responsibilities in the time, location, and tasks of managing crisis situations;

³ Lecture *Logistic support in Natural Disasters and Industrial Accidents*, Logistics Department, The G.S. Rakovski National Defense Academy, Sofia, 2017.

⁴ Ibidem.

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- keep ready the means and resources for carrying out emergency rescue and emergency-relief actions in the event of disasters, accidents, and catastrophes;

- lead targeted, specialized training for emergency situations;
- Action to prevent and prevent disaster is being undertaken.
- If necessary, evacuate the population from endangered areas.

Second case: In the event of a disaster, accident or disaster threat:

- Observing, analyzing data and forecasting scenarios for crisis development and specifying action plans.

- Action to prevent and mitigate the effects of the disaster is being undertaken.

- If necessary, evacuate the population from endangered areas.

Third case: In the event of natural disasters, industrial accidents, and catastrophes:

- participation in intelligence gathering and building situational awareness, analyzing and forecasting the possible developments;

- implementation of the plans developed;

- participation in the implementation of emergency rescue, damage control, and emergency restoration activities in the affected areas;

- engaging in rescue and search operations to assist disaster-stricken vessels;

- participation in the evacuation of population, animals and material resources from affected and threatened areas;

- participation in securing order low and order in the affected areas and providing for the security of sites of significant importance;

- participation in providing humanitarian assistance to the population (supply of drinking water and food, medical care, etc.);

- participation in events to tackle environmental accidents.

The tasks of Armed Forces modules are assigned considering the specific situation concerning an accident or a disaster. The modules can function independently when possible and advisable.

With the involvement of military formations, logistics plays an important role that is why in each module there are transport or other assets that need to be prepared for use. Moreover, the main logistical functions supply, transportation, recovery and medical care are invariably accompanying the participants in a given operation, as well as the affected population.

The module tasks are formulated in accordance with the current situation and the corresponding stage of the rescue and relief operations. In order to be able to deliver effectively their services, the Armed Forces in the next few years need to focus on the implementation of the Plan for

the Development of the Armed Forces, the forces modernization and the application of new methods of training.

When the military formations take part in the restoration after disasters and major accidents in the country or abroad a logistic module for evacuation and assistance is formed. One of the tasks of the formations is to provide supplies such as tents, blankets, food and other material resources to those affected. People that left without accommodation or without an access to their homes can temporary be accommodated in designated camps – e.g. tent camps, vans and standing buildings with which have allocated food and sanitary zones in them. In some cases, the camps are built by more than one kind of available shelter. Formations with modular structure and the respective capabilities are involved in the building of camps.

In regard to their function the logistic modules are differentiated as follows:

- Transport and evacuation;
- Supplies;
- Medical;
- Fire extinguishing;
- Industrial accidents;
- Liquidation of after-effects of disasters;
- Destroying not detonated munitions;
- Combined – a combination any of the above mentioned.

The modules are capable of delivering diverse kinds of logistic assistance to the population, the names of the modules suggesting their functional competence. The transport and evacuation modules, for example, can perform tasks related to the transportation of people or material resources as well as evacuation of the population following earthquakes, floods, and severe winter weather conditions. Most of the modules are of the mixed category and they can perform the tasks of more than one module depending on the nature of the disaster and the characteristics of the territory of its origin. The fire extinguishing module and the industrial accidents module are for example two of the modules that can function relatively independently of the other kinds of modules.

Also, Armed Forces provide logistic support that can include the following functional main logistic areas:

- **Supply with material resources;**

This is a very important functional logistic area essential to all operations related to disasters and industrial accidents in Bulgaria where military formations take part. Planning of supply has to be tailored to achieve a balance between the quantity, location of inventories of material re-

sources and the acquisition and supply opportunities for the purpose of the timely, sustainable and long-term provision. Supply with resources is implemented according to a previously confirmed scheme. Usually, this scheme is well-known to military formations that take part in the recovery efforts after different types of disasters.

In many cases, the main role will be coordination between military formations and all participants relevant to supply in the area of the disaster. The coordination is very important because in many cases, until now, formations get stocks and deliver them to specific locations. For example, the stocks can be given from Bulgarian Red Cross but military formations can supply to the specific place.

- **Field services;**

Field services are a functional logistic area that has essential meaning in actions for disaster relieve. In these cases, field services are related to the building of dining and accommodation tents. Of course, if necessary, logistic modules or formations can build field camps.

There were many cases where logistic specialists took part in the building of dining tents and organization of feeding of people. One such example is building dining tents and organization of feeding of people in the town Mizia (BG) in August 2014. On the spot, the servicemen built tents for hot food, where they provided water, too. The tents were equipped as canteens with large and small tables and chairs.

- **Transportation;**

Military formations take part in all operations related to disasters and industrial accidents in Bulgaria. They carry out different actions using transport assets such as transportation of food, water, people in a disaster, field equipment and others.

Furthermore, military aircraft, vessels, vehicles, and trucks take part in different kind disasters and industrial accidents as snow removal from congested roads in snow storms, fire extinguishing in mountain areas and others.

Another example could be given, namely the disaster in MIZIA when military men carried out search, rescue and evacuation tasks for the civilian population (injured and in distress) in the flooded neighborhoods. With the help of boats and high-mobility vehicles, the victims were transported to safe places.

For the supply of material resources, communication lines are established in the Operation Area.

- **Medical support;**

The medical care of personnel from the formations in the disaster-stricken areas is organized by the commanders (superiors) of the military

formations. Usually, if necessary, the unit can give "ROLE 1" - first medical care to the local population. This depends on the size and the capabilities of logistic formations or modules that operate in the disaster-stricken area and it could give emergency medical care and evacuation for next level of care.

In some cases, these teams can interact or work together with teams or modules from Military Medical Academy located in Sofia and civilian medical personnel. Of course, teams from Military Medical Academy and/or civilian medics can provide more activities and capabilities. Teams from Military Medical Academy can carry out air evacuation with providing medical care during the flight or any other type of evacuation.

Several factors may obstruct the logistics support and negatively affect the effectiveness of the involved organizations. Problems such as scarcity of goods and logistics mean to efficiently distribute the goods, location/allocation of distribution centers and storage capacity, etc. may appear at different stages of disaster's operation. In particular, the following problems are displayed:

- **The necessity of special equipment of military formations;**

The provision of logistic support to the population affected by disasters is of great significance before, at the time of and after the events of disasters and major accidents.

Therefore the modules need to be well supplied with resources, equipment, reserves and the necessary skills to perform the tasks. The staff of the formations that are engaged in putting under control and restoration work after disasters and accidents are recruited in accordance with the plans for providing assistance to the population. The plans are created in the formations. The formations originate from any of the three professional services of the Armed Forces. A very important aspect in the preparation of the formations is ensuring that nothing from the necessary equipment, material resources or training is left insufficient.

The availability of the necessary equipment is essential for keeping the modules ready for action. Acquisition of new equipment similar in kind to that which is available now, plus models that cover the different disaster and accidents conditions, is again of great significance.

For example, equipment may be tailored for use in specific conditions, such as special clothing for all personnel extinguishing fires, or another example is helicopter equipment for emergency medical assistance for air evacuation.

- **Delay or shortage in the logistics distribution network;**

Before addressing the military aspects of the logistic support activities it is necessary that attention is paid to the allocation of civilian reserves and of the Armed Forces reserves to cover the needs at times of major accidents and disasters. The issue is of great significance and will continue to be of great significance in the future.

Creating a system of pooling and sharing to be used at times of crises is perhaps the most appropriate solution in carrying out the operation.

In other case, formations have to keep more reserves from stocks that are used more often, for example, fuel, oil, and etc.

In the most cases, material resources are sufficient for the participation of formations, but there are cases where it is necessary to provide more resources for a longer period, such as food (for example the flood in MIZIA in 2014). In this case, if we have created stocks can be used and they will be immediately delivered to the disaster. Of course, this is not related to the creation of stocks in the military formations, but they do the delivery, and in some cases, organize the feeding in case of disaster.

All the above-mentioned will facilitate the delivery of immediate and effective logistic assistance in every type of disaster's operations.

- **Type and size of transportation assets and resources for them;**

The type and size of vehicles will be essential in some operations. Therefore, one of the solutions is to acquire special means of transport that can be easily used in certain types of disasters and incidents. Transport assets are very important and always are used in disasters and incidents. There were so many cases in Bulgaria when military formations used different types of transport assets (vehicles, helicopters and etc.) for natural disasters as flood, forest fires, and others. For example, for transporting/ evacuating people by air, firefighting and many others.

More of these vehicles have an additional equipment which allows them easily to do certain actions in different disasters and incidents. This can be vehicles with winch or crane. Also, if one military formation takes part in a disaster can use trailers if it is necessary however in this case they must have available once. All written above show us how important are all type transports assets.

However, we can use optimization software as LOGFAS system to select the optimal set of transportation assets for any afflicted area. This system will allow us to select the optimal size of transportation assets to optimize the operating cost and maximize the effectiveness.

As a topic of reflection, we may ask: *is there a need for targeted (mostly practical) training of the personnel provided for participation in such actions, especially for earthquake and industrial accidents?* It is quite normal for this issue to be fully focused on the formations envisaged for

participation in such operations. In addition, logistic forces and means are part of them, and so it also applies to them. The answer should be clear and leads to the conclusion that such training is an absolute necessity in terms of practical training. The preparation of the formations is necessary in order to make it easier to carry out urgent rescue and emergency-rehabilitation actions in the event of disasters, accidents, and catastrophes. Therefore, it is necessary to conduct targeted, specialized training for actions in disaster situations. They should be prepared to take action to limit the possibility of expanding a disaster and evacuating and post-disaster action.

Conclusion

In conclusion, formations of the Bulgarian Armed Forces keep ready for action and for providing immediate rescue; relief and reconstruction work in times of disasters and major accidents. They need to carry constant, focused and specialized training for action. They also need to be ready to take action in the prevention of major accidents and where possible of disasters as well.

Using the Armed Forces formations for gaining control over and recovery from the effects of disasters is a mission of highest importance to the Armed Forces. In order to ensure the uncompromised standard of logistic support formations need to be built as modern and well-equipped ones. Using the most appropriate technique and staff that is trained in compliance with the best practice has a huge impact on the way rescue and restoration operations are held. Therefore the great amount of resources is required for organizing the operations, training the staff and ensuring all the necessary equipment is secured and well maintained.

In total, for 2012 only, military formations have participated more than 350 times in disaster relief operations, with a total staff of around 3,000 officers, sergeants, and soldiers and 780 units of equipment.⁵ This information shows us that the formations of the Bulgarian Armed Forces are the main part from the system for reaction in such kind of crises and they have well trained and motivated personnel for immediate action in disasters.

⁵ Report for the participation of military units from the Bulgarian Army in helping the population in disasters for the period from 1 January to 31 December 2012.

Bibliography

1. *Disaster Protection Act*, Sofia, 2011.
2. Lecture *Logistic support in Natural Disasters and Industrial Accidents*, Logistics Department, The G.S. Rakovski National Defense Academy, Sofia, 2017.

Internet sources

1. <http://www.scielo.br/pdf/cint/v40n1/0102-8529-cint-2018400100073.pdf>.

UDZIELANIE POMOCY LOGISTYCZNEJ PRZEZ FORMACJE BUŁGARSKICH SIŁ ZBROJNYCH W CZASIE KLĘSK ŻYWIOŁOWYCH ORAZ KATASTROF PRZEMYSŁOWYCH

Celem tego artykułu jest przeanalizowanie kluczowych kwestii związanych z udziałem formacji bułgarskich sił zbrojnych w udzielaniu pomocy dla ludności w czasie klęsk żywiołowych oraz katastrof przemysłowych. Autor omawia kluczowe kwestie logistyczne oraz przygotowanie formacji i jednostek bułgarskich sił zbrojnych do wzięcia udziału we wspomnianych operacjach. Artykuł akcentuje potrzebę posiadania wykwalifikowanej kadry, wystarczającej ilości odpowiedniego wyposażenia oraz gotowości do działania w tego typu operacjach.

Słowa kluczowe: formacje, wsparcie logistyczne, zasoby sprzętowe i materiałowe