



747 SPECIAL ENGINEER BATTALION (747 SpEngBn)

Aut viam inveniam aut faciam»

«We shall either find the path or make it»

HANNIBAL (247 – 183 B.C.)

The High End Engineer Unit of Hellenic Army

The idea ...

From ancient times, world War History has shown how crucial the role of the Engineer Corps is, not only during the preparation of the battlefield, but also throughout the entire development of the Battle. However, the value of the military engineers supersedes its original image. After the end of World War II, military engineers took over many complex missions, such as fortification works, force protection and support operations, infrastructure planning, reconstruction operations, as well as many other tasks taking place in peace. An important role is also being played in peacekeeping operations. Especially in Greece, during the aforementioned period, the Engineers reconstructed the majority of the devastated infrastructure of the country. That was solid proof that military engineers are able to undertake missions during peace time and support not only the Armed Forces, but can also provide services at a national level.

From the early '90s the Greek Engineer Corps grasped the value of multifaceted operations different from conventional warfare and was already functioning the Non-Combat Operation School in the core of its training, the Military Engineer School.

Greek Army Engineer Officers have served in multiple locations worldwide while conducting peacekeeping operations under UN, NATO, EU and OSCE, since Greece is a member state of all these organizations. This led to the acquisition of valuable experience, information and data from other advanced Allied Engineer Units. The level achieved from all these sources, in combination with the priority given to conducting natural disaster operations after the earthquakes and fires that devastated the country the last 15 years, spotlighted a gap in the Greek Armed Forces' operational capability.

The idea of creating a Special Unit was born.

The rise....

Over the last few decades, Greece has been struck by many natural disasters and fires which have caused many human casualties and irreversible environmental disaster. The worst and most devastating blow was when forest fires emerged in several areas across Greece throughout the summer of 2007. Numbers do not lie. A total of 2700 square kilometers (670,000 acres) of forest, olive groves and farmland were destroyed because of these fires. It was the worst season on record in the past 50 years. Only in southern Greece, 1500 km² of a total of 2700 km² forests had been burned. Many buildings were also destroyed in the blaze. The fire destroyed 1,000 houses and 1,100 other non-residential buildings, and damaged hundreds more. On August 2007 alone the death toll stood at 67 people. In total 84 people lost their lives, including several firefighters. All regions of the country were declared in state of emergency, in order to mobilize all means and forces available to counter this disaster.



This national tragedy led the political and military leadership of the country to invest once more in the Military Engineer capabilities. Thus, in 2008, the Greek Army General Staff decided to form the 747 Special Engineer Battalion (747 Sp.Eng.Bn.). The Battalion was originally set up in Larissa. In June 2010, the Unit was redeployed in Loutraki, Corinth.

The 747 Sp.Eng.Bn. is characterized as "Special", because of its unique mission, composition and equipment. This term individualizes the unit from any typical Engineer Unit. Consequently, the Unit can undertake missions related to natural and technological disasters, and conduct Search and Rescue operations. The composition of the Unit includes the Special Disaster Relief Company (SDRC) and all other parts of the Unit can operate complementing this section in every manner imaginable. The SDRC, currently the spearhead of the Hellenic Army in this type of operations, is granted authority in all such

cases. It employs specially trained personnel, so as to deal with civil emergencies and operate in environments devastated by natural calamities.

During peace time the Battalion's mission is of a complicated nature and encloses a wide variety of missions. It protects Army Forces and civilians from natural and technological disasters, and also undertakes various constructions on behalf of the Armed Forces and Public Entities. The Unit also participates in national emergency plans concerning natural disaster confrontation (earthquakes, floods, fires). For the implementation of these emergency plans, the Battalion boasts a number of divergent operational capabilities, such as urban or forest fire-extinguishing (in cooperation with the Fire Department), search and rescue operations,

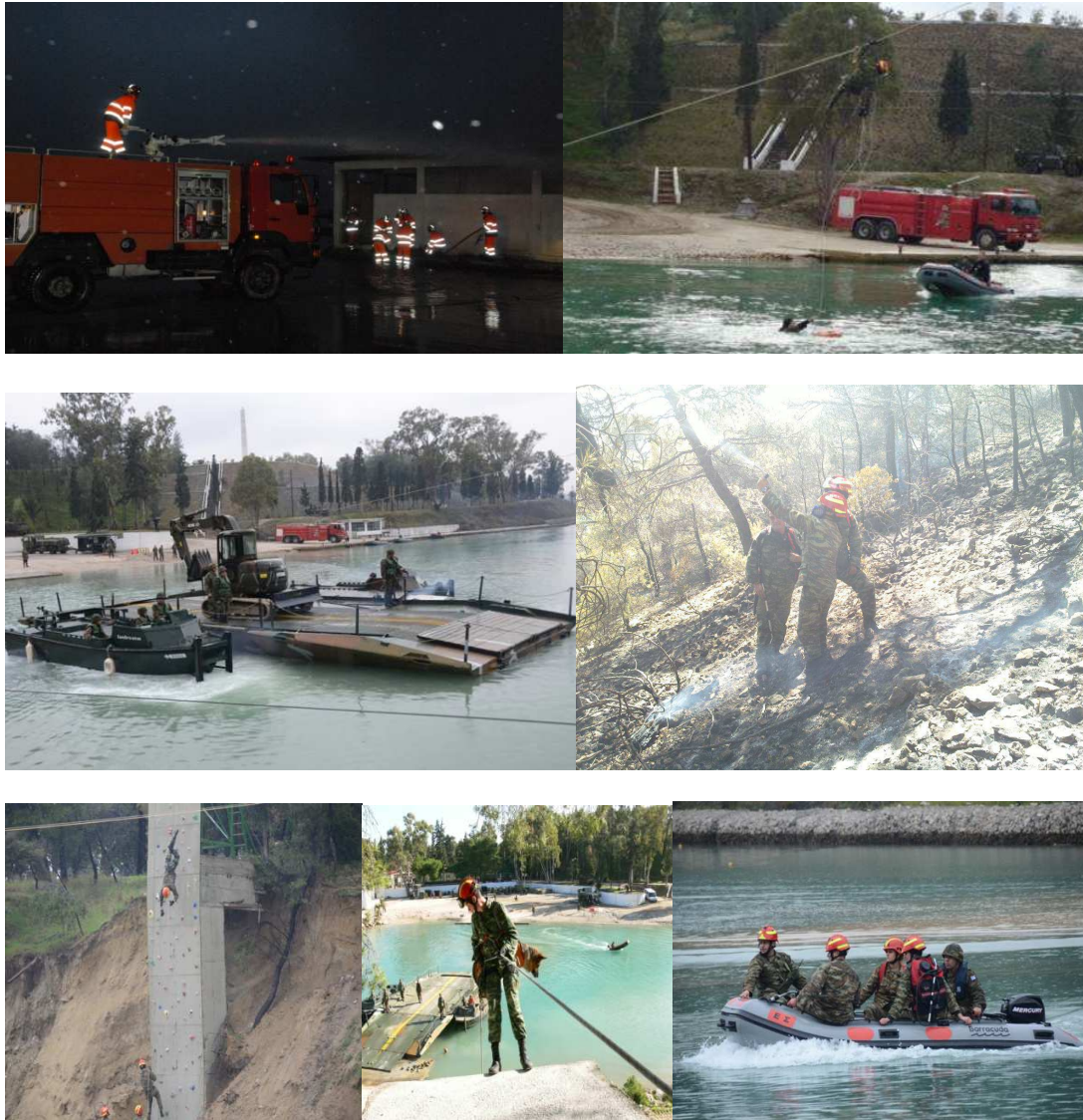
reconstruction of devastated structures as well as maintenance of city infrastructure and road networks, earthworks for precaution measures (fire control zones, anti – flooding works), construction and deployment of bridges. Additional capabilities are the desalination of water from any source and supply of clean water, autonomous lighting and electricity supply, Explosive Ordnance Disposal (EOD) and Counter Improvised Explosive Device (C-IED) operations, as well as Geographic Support (GEO).



**Lieutenant Colonel(LtC)
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Commander of 747 Sp. Eng.Bn.**

The 747 Sp.Eng.Bn.in order to respond to the missions related to natural and technological disasters, deploys the SDRC, which is the most crucial section of the Unit. This Coy consists of trained personnel with appropriate skills and specializations such as rescuers, medic-rescuers, climbers, firemen, rescue dog - escort elements, divers, vessels and rescue-boats crew and rescue-tools operators.





The rescue personnel attend special military training in cooperation with other agencies of the Armed Forces (Special Forces and Navy). Additionally, the personnel attend training programs organized by Civil Agencies such as the Fire Department, the Hellenic Red Cross and several private companies.





Apart from the SDRC Personnel, the Unit's manpower includes machinery operators, an EOD – C-IED team and special vehicle operators. Furthermore, it maintains a Technical Studies and a Civil and Military Cooperation (CIMIC) Office, both sections crucial for the coordination with other Civil and Military Agencies.



Another feature that characterizes this Unit is its advanced equipment. This is used in search and rescue operations and includes general firefighting equipment, divers equipment, climbing - rappelling - rescue equipment, automated external defibrillators, ruins – vehicles lifting bags, rescue boats, stretchers.



Moreover, there are special rescue tools used in evacuation missions, such as reinforced concrete cutters (used to free human personnel trapped under ruins), hydraulic cutters – dilators, high power water pumps and air compressors (drilling in ruins).



Search, rescue and evacuate operations are supported by the Water Desalination Platoon and the Lighting - Electricity Supply Platoon. The Water Desalination Platoon features a mobile Desalination Unit capable of providing sufficient (40,000 lt/day) potable water derived from any source (seawater, contaminated water).



The Lighting - Electricity Supply Platoon features Lighting Towers (capable of providing sufficient light in areas within a radius of up to 75 meters) and a Mobile Electricity Supply Station (the system is capable of producing both single phase and three phase electricity power with maximum power of 350 KVA). This is equivalent to the electricity needs of a town of 5,000-7,000 residents.



The special equipment is completed with a number of vehicles (ambulances, fire trucks, mobile water and fuel tanks, drills, mobile platforms, cranes) and machinery (motor graders, dozers, excavators, loaders, dump trucks).



The Battalion has maintenance facilities that ensure problemless function of all machinery and vehicles in any operation. Its technical crew is sufficient and experienced in conducting all maintenance projects and servicing the equipment, as well as confronting issues that may arise, so that operations can proceed as originally planned.



Emergency activities

The largest operation in both scale and duration, with the crucial participation of the 747 Sp. Eng. Bn., took place on Kefalonia island in February 2014. A powerful earthquake with a preliminary magnitude between 5.7 and 6.1 struck the island causing damage to roads and buildings. Authorities reported that about 16 people were slightly hurt, mainly by falling objects and debris, while roads, homes and shops were damaged and some areas suffered power and water supply cuts. Islanders also had to contend with adverse weather conditions, with pouring rain and low temperatures.





At that time, the Hellenic National Defense General Staff, within the framework of the operational emergency plan, mobilized among other Services the 747 Sp.Eng.Bn. to act and provide its operational capabilities. The day after the disaster, in coordination with the Hellenic Air force and Hellenic Navy, the Unit sent to Kefalonia island personnel, vehicles, machinery and equipment as below:

Urban-type machineries were transferred with a Hellenic Air Force C - 130 aircraft, in order to transport humanitarian aid (tents, medicine etc.) and also to perform assistance works in the camp settled in the soccer stadium of Lixouri.



A landing ship of the Hellenic Navy transferred a number of vehicles and machinery of the Unit (dozer, excavators, loader, dump trucks, mobile platforms, a mobile Electricity Supply Station, a mobile lighting tower).



The operation lasted approximately two months and the Unit carried out a number of extremely demanding projects, constantly operating under adverse weather conditions and during strong seismological activity. The Unit carried out repairs to the main and provincial road network, and contributed to their reconstruction. It also opened the blocked-by-landslides roads, due to the

earthquake, removed the aggregates and ruins, demolished heavily damaged buildings, infilled the damaged road network and constructed new service roads. In total 19 kilometers of repaired road network were delivered and about 3000 cubic meters of aggregates and debris were loaded, removed and transferred.





The execution of these projects contributes to the psychological relief of the indigenous population of the island and the economic recovery of the region. It is important to emphasize that the earthquake occurred shortly before the start of the tourist season and any delay of the projects would have a severe impact on the touristic activity and economy of the island. Additionally, the mobilization of the 747 Sp.Eng.Bn., showed how vital the contribution of the Armed forces is, earning this way the credibility and confidence of the public. This disaster was also a huge challenge for the Unit to demonstrate part of its operational capabilities.

Despite the large scale operation on Kefalonia, over the past five years, the 747 Sp.Eng.Bn. has participated in a number of operations related to natural disaster throughout the Hellenic territory. The most outstanding ones are the restoration of the provincial road network in Akrata, due to landslides caused by intense rainfall, bridge construction and placement in Klitoria and construction of a bypass road.





The latest mission accomplished was the participation of the Unit in the forest fire occurred in Kalamata in September 2014. This period, after extinguishing the fire, the Unit is constructing fire control zones in order to protect Europe's largest archaeological area, in Ancient Messene.



This short report refers to the capabilities and the work that has been completed so far, and shows that the decision of the political and military leadership to invest in the creation of this Unit, was necessary and proved successful. The Commander and personnel of the 747 Sp.Eng.Bn., make an enormous effort to ensure that the unit maintains a high operational and readiness level by conducting exercises, demonstrations and training programs. The facilities of the Unit offer all the means necessary so as to ensure that the staff will be able to deal with any assigned mission.

Training Opportunity

In addition, the Unit organizes military schools and is capable of providing training to personnel of domestic departments and foreign army and agency personnel. The experience, special equipment, technical facilities and sufficient trainers of the Unit help ensure the high level of training provided and results gained. Training of NATO country-members personnel in this type of special operations is yet another aspect of the Unit's capabilities and importance.

Lesson Learned

In recent years as time advances it becomes increasingly obvious that there is a huge demand for the Armed Forces worldwide to become engaged in natural disaster operations. It is because of the attributes that characterize the Armed Forces, that they are capable of producing outstanding results. These characteristics consist of available personnel, organized training, specialized means, discipline, a chain of command, rapid deployment capability and experience in surviving and operating in harsh climates.

In any case the leading Authority that will command and supervise must be one and one alone. For the appropriate conduct of natural disaster operations, Search and Rescue parties and First Aid administration teams do not suffice. It is vital that a number of other specialties are also available, such as Horizontal and Vertical Construction companies, Explosive Ordnance Disposal (EOD) Units, Bridging companies etc.

Natural disaster operations must primarily be a subject of Engineering Units, due to the means and machinery they possess, as well as the technical expertise they have acquired, which is owed to the inherent relation of the Engineer Corps with the ground (constructions, fortifications, bridges, structural reinforcements, tunnels, shafts, etc.).

The Chain of Command and the Logistics support are necessary to have been planned ahead. This limits the time wasted for any Unit to be deployed, and in particular in cases of providing humanitarian aid, where operations must be fully orientated and focused.

Units that carry out natural disaster operations, in contrast to other Units, need to maintain a different profile and communication policies in order to establish themselves and to be known. All parties involved rely heavily on the number of personnel which they can deploy. In particular Units that focus on civil protection missions need to be fully manned, because time reaction is critical to the success of these missions.

Another factor that needs be taken into consideration is that the Unit's base has to be centrally located and near a major axis of transportation, such as a highway or an airport. This ensures the quick transportation of all vehicles

and machinery required for the mission, facilitates access to more areas and enables the Unit to respond and operate faster and more efficiently.

The Unit deployed is necessary to have maintenance capabilities and facilities for all vehicles and machinery. It is vital that it is autonomous in maintenance equipment, spare parts and technical crew, so that it may operate quickly and efficiently, whether deployed in a distant location or conducting repair and maintenance projects for everyday activity.

The personnel of such a Unit needs to be experienced and devoted to its mission. This cannot occur if the personnel isn't granted enough time to accumulate experience, undergo specialized training and conduct a sufficient number of drills and exercises, so as to better familiarize itself with the unique demands of future missions. The 747 Sp.Eng.Bn. is currently manned at a ratio of 95% by skilled professional soldiers and is aiming to increase this number to a full capacity of professional personnel.

Last but not least, all Units that pride themselves capable of conducting operations relating to natural disasters need to pay attention to the certification of the personnel, as well as survey its performance and capability function through constant evaluations.

Finally, the 747 Sp.Eng.Bn. is ready to execute any mission it is assigned. Our "Logo" is the phrase "Aut inveniam viam aut faciam" ("We shall either find the path or we will make it") of the hellenic-educated great Carthaginian General Hannibal. Although originally a cavalry commander, he was quick to grasp the importance of engineer operations. This phrase was allegedly his response when his generals told him that it was impossible for elephants to cross the Alps. He eventually succeeded in crossing the mountains and reached the Walls of Rome, finding the way, wherever it existed, or constructing a new one, wherever there was none.



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