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Engineer Support in the Hungarian Defence Forces – 2009

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Abstract:

Changes in security environment generated changes in the military doctrines as well in past decades. Europe could witness large scale force reductions and modernisation. In the name of modernisation, several reorganisation processes have taken place in the Hungarian Defence Forces (HDF) recently. In my study paper I examine the real situation of engineer support after the restructuring, whether the new organisations are capable of meeting the latest requirements to engineer support and whether the existing capacities are sufficient. My conclusion is the following. Presuming the use of battalion battle groups and multipurpose preparation the engineer support for the battle groups can be provided through the reallocation of existing forces and assets. Nevertheless in the case of a simultaneous deployment of the forces of the HDF (primarily in conventional military operations) the engineer support to operations is not ensured.

Key words:

Engineer, engineer support, combat support engineering, close support engineering, force support engineering

1. Introduction

As our global security has changed, several reorganisation processes have taken place in the Hungarian Defence Forces (HDF) recently. During these reorganisations the key words were reduction, modernisation, efficiency, professionalism. Thought entire branches and combat service support units got "near-extinct". Currently there are more than 1,000 engineer troops in the structure of the HDF so it can be stated that engineers took the upper hand in the restructuring processes. However, among the memorials of the disbanded engineer units in Szentes it is hard to find such a cheerful emotion.

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At this moment there are two engineer battalions and some smaller engineer units in the structure of HDF. In this paper I compare expectations with capabilities regarding engineer support after the restructuring

First of all let us review the situation of engineer support at present.

2. Engineer support

The events in world politics around the late 1980s and early 1990s fundamentally rearranged the global security situation. The threat of a conventional war between the big military blocs significantly decreased and so did – even more significantly – the risk of a nuclear war with the chance to eradicate life on the entire planet. On the other hand, however, there was an increase in the number of mostly isolated tensions and wars between countries, with root causes primarily in ethnic, religious, or economic factors. Terrorist threat and the possibility of using weapons of mass destruction (WMD) by so called rouge states or terrorists have also increased.

Changes in security environment generated changes in the military doctrines, too. Europe could witness large scale force reductions and modernisation. As a result of post-Cold-War changes and the new challenges since that time NATO got from the theory of defensive operations on its own territory to out-of-area multinational operations without host nation support (HNS). In the new global political situation a military budget requesting a lot of sacrifice from society is hard to justify thus it is just the richest countries that can afford to have armed forces with capacities on the full range of military operations. The others, including Hungary, are left with other options: a WELL-THOUGHT-OUT reduction of certain capacities or a more focused specialisation.

The theory and practice of engineer support should be adjusted to real demands as this is the only way to efficiently provide the necessary pre-conditions for operations. To put it simply, in the post-Cold-War time the biggest impact on military operations – including engineer support – came from the fact that armed forces turned into crisis response forces used in out-of-area operations and that the chances of clashes between armed forces of equal or similar strengths significantly diminished. Therefore NATO forces will be used most probably in the circumstances of asymmetric warfare. For engineer support it involves a demand for additional capacities besides maintaining the conventional ones (building roads and bridges, planting explosive and non-explosive obstacles, building fortifications, etc.). Today engineer tasks relate to ensuring the freedom of movement and increasing survivability of friendly forces became top priority. These are followed by preventing enemy movement and also by tasks related to general engineer support. As a new notion infrastructural and environment protection tasks have also appeared or to be more precise got more highlighted. Finally, civil-military cooperation (CIMIC) also generates a number of engineer tasks [1].

Engineer units should be capable of providing support to the full range of operations and have the appropriate structural and technological background for such missions. In Figure 1 the interrelations between applied procedures and operational environment can be seen in relation to force protection. In general it can be stated that engineer procedures used during combat may be efficient in peace support operations (PSO) too, but the objective to be achieved requires mostly the use of "softer"

solutions. In the case of PSOs, for example, it is hard to justify the use of explosive obstacles.

A brief conclusion: advanced engineer support should ensure the execution of specific engineer requirements generated during the execution of operations. Another fundamental expectation to engineer units is that their structure and technological assets should allow an efficient adaptation to a changing operational environment.

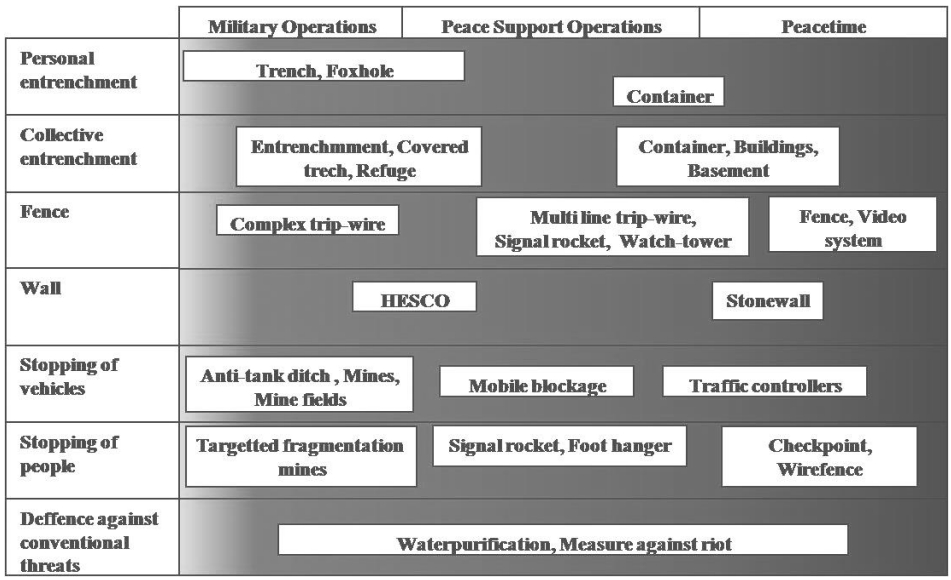

Fig. 1 Assets of force protection in relation to circumstances and tasks (made by J. Padányi [2])

After this short analysis let us go through the doctrinal principles of engineer support in the HDF.

3. Doctrinal principles of engineer support in the HDF

3.1. Draft doctrine of engineer support

It states:

"Activities conducted by engineer troops are:

ENGINEER SUPPORT ACTIVITIES

Engineer work done and measures taken by the combat arms for the sake of their own interests are:

COMBAT SUPPORT ENGINEER ACTIVITIES:

Engineer forces: as a combat support force of a division they provide engineer support to the operations, combat and combat support to both the division and its subordinate units, primarily on the basis of their specialities.

Designation: to conduct special engineer tasks in accordance with their personnel, special equipment and training.

Missions: through the objective-centred use of commissioned or temporarily re-assigned military equipment, technology, and materiel:

To ensure and enhance movement, and survivability of own and friendly troops;

To prevent enemy movement;

To participate in infrastructural, environment protection and disaster relief missions.

…

In general, the major missions of engineer troops are as follow:

a) Movement support;

b) Prevention of movement;

c) Enhancing survivability;

d) General engineer support."[3]

3.2. The Joint Force Doctrine of the HDF

This document also contains an interpretation of engineer support:

"The **joint force engineer support** covers all the range of operations with two basic pillars comprised by Combat Support Engineering and Force Support Engineering. It includes all specific measures and activities necessary for the preparation and execution of a particular military operation as engineer pre-conditions for the success of troops involved in operations.

Both types of missions involve engineer tasks in the field of military geography, cartography, environment protection, and reconnaissance, and also engineer tasks in rather complex conventional demining (or Explosive Ordnance Disposal – EOD) and protection against Improvised Explosive Devices (IEDs).

The interrelation of Combat Support Engineering and Force Support Engineering is fairly unique depending on the level of operations: at tactical level mostly Combat Support Engineering is to be provided while the proportion of Force Support Engineering is insignificant. At operational level the proportion of the two main types of support is approximately equal, while at strategic level the elements of Force Support Engineering are dominant.

The objective of organising and executing joint engineer support is through the objective-centred use of commissioned or temporarily assigned military equipment, technology, and materiel:

a) To ensure and enhance movement, and survivability of own and friendly troops;

b) To prevent enemy movement, manoeuvres, and activities;

c) To participate in infrastructural, environment protection, and disaster relief missions."

The mission of Combat Support Engineering:

a) to ensure movement of own troops through

   1. to conduct engineer reconnaissance of communication lines (roads, railways, waterways), building and repair of routes;

2. to conduct demining activities;
3. to conduct the negotiation of obstacles;
4. to install and maintain crossing points;
5. to provide warship support to movement on shipping lines
6. to provide support to forward based army aviation units.

b) to prevent enemy movement through:
   1. planting and maintaining obstacles;
   2. preparation and execution of destruction.

c) To maintain and enhance survivability through:
   1. building field fortifications in the encampments of own troops, occupied areas, installing positions and command posts, protecting personnel from weather, and sheltering military materiel;
   2. conducting engineer activities related to camouflage (hiding, deception, and enemy disinformation).

Apart from engineer troops all other branches are involved in the execution of engineer support missions. These carry out certain engineer tasks either independently with their own assets, or in cooperation with engineer units."[4]

"Force Support Engineering is a pre-planned, long-term preparation and not direct support of current and future military operations. Its content is comprised by engineer tasks related to maintaining joint forces during operations. Primarily, it allows and supports operations by providing operating infrastructure.

Force Support Engineering missions include:

a) specific engineer reconnaissance tasks;
b) repair and maintenance of main supply routes of the troops;
c) participation in the elimination of consequences of WMD strikes in order to restore combat capacities of the troops;
d) participation in the prevention of natural and civilisation disasters and in the liquidation of consequences;
e) participation in installing and maintaining airfields and helipads;
f) participation in airfield damage repair and in restoring airfield serviceability;
g) participation in building, repair, and maintenance of important railway, or port facilities;
h) participation in the engineer support to infrastructural activities;
i) preparation of construction modules and structures for engineer special tasks;
j) engineer assessment and demining of terrain, and defusing explosive devices (explosive ordnance tasks);
k) water purification and supply;
l) environment protection-related tasks." [4].

The two doctrines more or less define engineer support tasks in accordance with modern requirements. A particular advantage of the joint force doctrine is the fact that it introduces the notion of Combat Support Engineering and Force Support Engineering. The draft doctrine of engineer support specifies the precise content of major types of tasks in defence, offensive, and attrition. Alas, there is not a word on special engineer tasks in Crisis Response Operations (CROs) or in CIMIC.

Nevertheless, the doctrines comprise a good starting point for establishing an ENGINEER SUPPORT SYSTEM at an advanced level.

4. Engineer support system in the HDF

First of all let us examine the structure of HDF military units. On the website www.hm.gov.hu/honvedseg/alakulatok the units of the HDF fall into administrative support, combat, combat support and combat service support categories.

In my opinion the appropriate engineer support of combat and combat support units is an area which is necessary for the successful execution of military operations. Below I focus only on this field. Let us analyse what engineer elements are at our disposal.

4.1. MH 5. Bocskai Istvan Infantry Brigade

The structure of MH 5 Infantry Brigade includes two engineer support elements for executing engineer tasks. These are: Operation Support Engineer Battalion and Combat Support Engineer Company.

In the case of combat activities the totally similar platoons of the 1st Company of the Engineer Battalion are to be transferred to the infantry companies therefore these platoons are engineer combat support elements of the battalions. The task of the battalion command and that of the 2nd Company is to train new recruits and replace losses after the transition and they are also considered by the brigade commander as a reserve and brigade-level support element.

In the case of appropriate multipurpose training the assets of the platoons transferred to the battalions allow meeting the full scale of Combat Support Engineering requirements at a minimum-level though.

The Combat Support Engineering Company is a brigade-level support element of the infantry brigade (operational level). On the basis of the commander's decision it contributes sapper, bridge-building, and river-crossing capacities to the execution of operations.

The above detailed structure of Combat Support Engineering and Force Support Engineering allows an efficient engineer support to the battalions (at strategic level). The reserves of the 2nd company of the Engineer Battalion allow sufficient flexibility for the brigade commander by tailoring engineer support units and groups in accordance with the actual requirements.

4.2. MH 25 Klapka Gyorgy Infantry Brigade

Practically, the MH 25 Klapka Gyorgy Mechanised Infantry Brigade has no engineer support element whatsoever.

4.3. HM 25/88 Light Mixed Battalion

The battalion has one engineer platoon within the Combat Support Company for engineer support purposes. The two sections of the platoon have obstacle elimination and light water-crossing capacities.

4.4. MH 34 Bercsenyi Laszlo Special Operations Battalion

The Special Operations Battalion has no embedded engineer support elements, however, within its groups there are several soldiers with special engineer qualification.

4.5. MH 59 Szentgyorgyi Dezso Air Base

The MH 59 Szentgyorgyi Dezso Air Base has one "conventional" Engineer Company. The main mission of the company is to provide support to the operation of the air base. For such purposes the existing forces are sufficient, however, the company is not capable of carrying out any tasks outside its home base.

4.6. MH 12 Arrabona Ground Based Air Defence Missile Regiment

The MH 12 Arrabona Ground Based Air Defence Regiment has one engineer platoon. At minimum level it is capable of building cart roads and firing positions, supporting crossing water obstacles (2 PTSZ-M; 2 ROCSO speedboats), and of clearing snow from roads.

4.7. MH 86. Szolnok Helicopter Base

The MH 86. Szolnok Helicopter Base has also just one engineer platoon. Its forces can be used for operating the airfield but they are not capable of carrying out any significant support tasks outside their home base.

4.8. Combat support elements

The combat support elements include two engineer units too. The MH 37. II. Rakoczi Ferenc Engineer Battalion is the engineer support element of Ground Forces. It is capable of providing support to operations by building pontoon bridges and shallow water bridges, pre-fabricated wooden constructions, and installing water purification centres. The battalion is capable of building one pontoon bridge on the Danube River or two ones on the Tisza River. The building of shallow water bridges and pre-fabrication of wooden constructions can only be limited by materiel at their disposal. The Water Purification Company of the Battalion is capable of producing 800 m^3 of water at its best. Although the HDF has no Mabey & Johnson bridges the battalion has trained personnel to deploy such bridges.

The MH 1. Explosive Ordnance Disposal and Flotilla Battalion is the engineer support element of the Joint Force Command. It has similar missions to conduct both in peace time and wartime: to defuse explosive devices. The only difference between the missions in peace of wartime is the purpose of activities. While in peace time the fundamental task is to reduce threat to civil population at the time of military operations the objective is to execute operations in a "secure" way.

Unfortunately, it is not possible to compile a realistic picture of the real capacities of the battalion as the information on their activities is classified. On the basis of open source information their capacities seem to be sufficient for the HDF.

The rest of combat support units have no practical engineer support whatsoever.

Fig. 2 shows the link between the supported units and the supporting ones. The dark grey areas indicate engineer units meeting the expected requirements, in my

opinion, while the medium gray ones symbolize units capable of providing limited support only. Particular engineer units include supported units too. The grey colour marks units which can hope for any engineer support only on the basis of their superiors' decision.

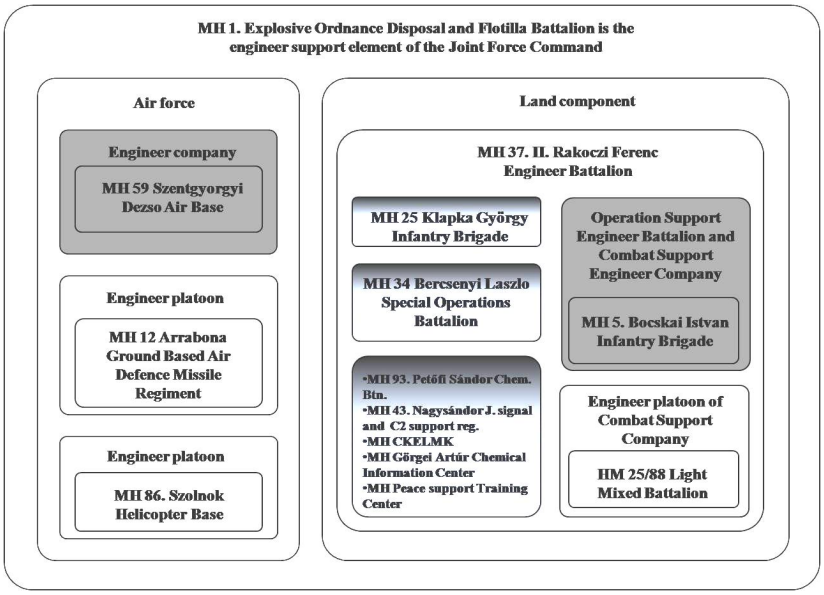

Fig. 2 The structure of engineer support in the HDF

The figure and the above statements clearly indicate that currently it is the MH 5 Bocskai Istvan Infantry Brigade and the MH 59 Szentgyorgyi Dezso Air Base that in the author's opinion have sufficient engineer support units. The majority of the missing capacities cannot be provided even by the superiors as at the JFC level it is only the MH 1 Explosive Ordnance Disposal and Flotilla Battalion which is at their disposal and at the Ground Forces' level it is only the MH 37. II. Rakoczi Ferenc Engineer Battalion which is capable of providing engineer support to the units in the field of bridge building and water purification.

5. Conclusion

In my paper I took the challenge to provide a real picture of the situation of engineer support in the HDF against the modern expectations. The limited size of the present paper does not allow me to give a detailed analysis of the existing engineer capacities therefore I highlighted only the most typical features of the military units. From my point of view, however, the collected information is sufficient to allow us to compile a realistic picture of the current situation.

In my opinion the current engineer support in the HDF does not comprise a unified system. Its certain elements are appropriate while in other fields there are grave shortages. The support to immediate combat units is more or less stabile. Presuming the use of battalion battle groups and multipurpose preparation the engineer

support for the battle groups can be provided through the reallocation of existing forces and assets however, there are not sufficient capacities or enough engineer units for accomplishing most engineer missions in the rear area.

In my opinion the gravest problems are as follow:

- not all combat and combat support units have the minimum engineer units necessary for their basic functions;
- the existing pontoon bridge capacities are insufficient. Because of the hydrographical situation of Hungary I regard the establishment of at least two sets (with spares) for negotiating wide water obstacles necessary;
- there is no road building capacity apart from the simplest dirt road construction capacity;
- there are no units at higher levels to be used for enhancing survivability (position construction, fortification building, command post installing, camouflaging, etc.);
- there are no infrastructural engineer forces to be used in building military encampments;
- there is no operational or strategic-level sapper force.

And there is another very important problem:

"I regard the statement very important that the organisation, command and control of engineer support activities can only be conducted through an independent engineer staff with appropriate level of organisation and responsibilities" Prof. Padányi writes in his academic thesis for the Hungarian Academy of Sciences [2]. However, the modern and "up-to-date" HDF does not have such a staff. At higher command levels the engineer troops are represented by a mere couple of subordinate officers.

It is hard to find the appropriate words for an epilogue. If taking into consideration the deployment of certain elements of the HDF, the situation is not hopeless because the engineer support of missions and even of several battalion-level battle groups can be managed by the regrouping of existing forces and assets. In such cases the existing bridge-building capacities can be sufficient and not even the lack of engineer staffs can be a problem.

However, until the primary mission of the HDF, outlined in the Defence Act, is *"the defence of the independence, territory, airspace, population, and material goods from enemy attacks"* [5] the only thing that can be done is to try to meet these expectations. I do not think that currently in the case of a simultaneous deployment of the forces of the HDF (primarily in conventional military operations) the engineer support to operations is ensured. In such a situation the identified shortages and deficiencies would have a significant backfire.

I do sincerely hope that such a situation happened only due to the present economic hardships and they are temporary. I also hope that if not soon but in the foreseeable future the situation will stabilize as this is in the interests of the Country.

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