

# Modelling of Polish Military Contingent Redeployment from ISAF Operation in Afghanistan

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This article examines several options of Polish military contingent redeployment from the allied operation in Afghanistan. There is a detailed analysis of potential transport corridors, transit times, costs, security of personnel and military equipment. Based on the above mentioned analysis air transport for personnel is recommended. There are also several variants of military equipment movements taking into account its importance, sensitivity and size.

**Keywords:** military logistics, allied operations, movement and transportation.

## 1. INTRODUCTION

Polish Military Contingent (PMC) redeployment from Afghanistan will be one of the biggest and most difficult operations for Polish Armed Forces logistics and especially for transport subsystem carried out by the Movement and Transportation Division – National Movement coordination Centre. In accordance with International Agreements Afghan Operation /ISAF/ will be terminated by the end of 2014<sup>3</sup>. Currently there are negotiations between Polish and US sides on the US level of support during Polish Forces redeployment from Afghanistan. No final agreement was made but nevertheless it is still a big issue which can lead to great amounts of money spent from the public budget to obtain all necessary transportation assets to move back whole personnel and equipment. Regardless of the outcome of the above mentioned talks, Afghanistan redeployment planning is a great

challenge especially that this phase must be coordinated with NATO alliance to avoid any blockade of transportation corridors. In the next chapters there are the analyses of potential ways of force withdrawal from Afghanistan and transport corridors taking into account approximate costs, transit time and security<sup>4</sup>.

It should be added that states taking part in ISAF operation develop their own concepts and analyses regarding the Afghanistan retrograde. During the June 2013 NATO Transportation Workshop in Krakow on multimodal transport during the military redeployment phase from Afghanistan, whose main purpose was civilian support for military<sup>5</sup>, none of the countries taking part in this workshop provided the withdrawal costs, concentrated only on transport options. Those options were similar to those presented in this article, nevertheless authors' proposals are unique and dedicated mostly to Polish financial and transportation means and capabilities and obviously to the geographical location. At this

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<sup>3</sup> Official NATO states ISAF withdraw plans.

<sup>4</sup> W. Biernikowicz, R. Milewski R., T. Smal, *Transport wojskowy w operacjach poza granicami kraju*. ISBN: 978-83-87384-07-4, Wydawnictwo WSOWL, Wrocław 2010.

<sup>5</sup> Materials from the Conference of NATO Movement Group and Ministry of Transport, Construction and Maritime Economy Republic of Poland entitled: *Civil support for military*. 11-13 June 2013 Kraków.

stage it is not possible to obtain detailed financial data regarding the ISAF military redeployment of individual countries. Such documents are classified and only after the completion of operations planned at the end of 2014, it will be possible to reach such information.

## 2. ANALYSIS OF POSSIBLE WITHDRAWAL WAYS

The main overland transportation corridors between Afghanistan and Europe will play a very important role during ISAF redeployment phase because this mode of transport

territory, leading to the Latvian and Lithuanian seaports. For the Polish redeployment it can be modified and can reach Poland via Ukraine. Due to the fact that currently Uzbekistan is hampering military movements, there is a bypass through Tajikistan and Kyrgyzstan. This so called KKT route leads to the capital of Kyrgyzstan Bishkek then goes via Kazakhstan and Russia. Unfortunately, because of Russian restriction, this corridor can be used only for general cargo. Military combat equipment and ammo are strictly prohibited.

The Central corridor was recently modified after the Turkmenistan refusal to allow military



Fig. 1. Possible ISAF redeployment corridors for Polish Army  
Personal elaboration

is more effective and much cheaper than airlift. There is no time pressure for this kind of operation therefore all Ministries of Defence take into account economical aspects of it as a primary task. Therefore, based on approved concepts, capabilities of transportation assets and international agreements we can anticipate that below corridors will be often used during the ISAF withdrawal (Figure 1):

- North corridor – variant no 1;
- Central corridor – variant no 2;
- South corridor – variant no 3;
- Air corridor – variant no 4.

The North corridor goes from Afghanistan through Uzbekistan, Kazakhstan and Russian

convoys pass this territory. It goes from North Afghanistan via Uzbekistan and Kazakhstan to the Aktau seaport on the Caspian Sea. There is a ferry connection between Aktau (Kazakhstan) and Baku (Azerbaijan) then road or rail movement can be executed till Poti seaport in Georgia. Second ferry on the Black Sea from Poti to Odessa (Ukraine) provides connection to European countries or a direct sealift to North America can be organised. Another option is to use rail system from Georgia via Turkey and Balkans to Poland. The new tunnel under Bosphorus which will be finished in 2013 can facilitate this movement.

The South corridor goes from Afghanistan to the Pakistani seaport Karachi. This section of the corridor is extremely dangerous because of threats from terrorist attacks. After the US operation on Bin Laden hide-away in Pakistan, the situation is even more complicated. Karachi is a major seaport from where military sealifts can be executed. This

The North corridor (variant no 1) was divided into two phases (Figure 2). The first phase is a road transport from Afghanistan to Kyrgyzstan and the second phase from Kyrgyzstan to Poland via Kazakhstan and Russia by road or rail. Minimum transit time for this variant is 34 days.



Fig. 2. Minimum transit time of road/rail transport: (left) from Afghanistan to Uzbekistan, (right) from Uzbekistan to Poland

port was used by Polish Armed Forces during the deployment phase to Afghanistan ISAF operation. In order to increase security there is an option to provide intermodal transport (air-sea) airlifted cargo from Afghanistan (e.g. Baghram) to United Arab Emirates (e.g. Dubai, Al Fujarah) and then sealifted back to Poland or other countries.

It goes without saying that direct airlift option from Afghanistan to Poland is also taken into account as a complementary solution specially for the troops and sensitive cargo to minimise risk but this option will be limited to the minimum as a very cost consuming solution.

### 3. DEVELOPMENT OF REDEPLOYMENT OPTIONS

#### 3.1 Transit time analysis

As mentioned above transit time is not a dominated factor for Afghanistan redeployment operation. Nevertheless, to show all aspects of this operation, below there is a very simplified analysis of movement times without any rests, transhipments, customs formalities or transport assets readiness times. Those theoretical transit times in reality are much longer if we take into considerations all the above factors.

Figure 3 shows typical road and rail infrastructure of the North corridor.



Fig. 3. Rail and road infrastructure in Kazakhstan.  
Photos: Dariusz Janasz

The second variant – the Central corridor is divided into several phases to calculate time of equipment movement (Figure 4). Analysis shows that minimum transit time is 25 days.

The seaports infrastructure on the Caspian and Black Seas (variant no 2) is shown on Figures 5.



Fig. 4. Minimum transit time of road/rail transport:  
(left) from Afghanistan to Azerbaijan, (right) from Azerbaijan to Poland  
Personal elaboration



Fig. 5. Rail and road infrastructure in Kazakhstan.  
Photos: Dariusz Janasz

The South corridor is a third redeployment variant which is taken into account and for transit time analysis is divided into two phases (Figure 6). The first phase is a road transport through Afghan and Pakistani territories and the second one this is the sealift from Karachi to Poland. Analysis shows that minimum transit time is 24 days. In the Figure 7 there is an example of the infrastructure in case of variant no 3.

because not every oversized equipment can be transported by this kind of aircraft, secondly because the availability of AN-124 is limited and the cost of using them will ruin the MOD budget. This mode of transport is the most expensive one and surprisingly not the fastest.

Based on the above transit time analyses of different corridors we can assume that minimum cargo transit time via chosen corridor is

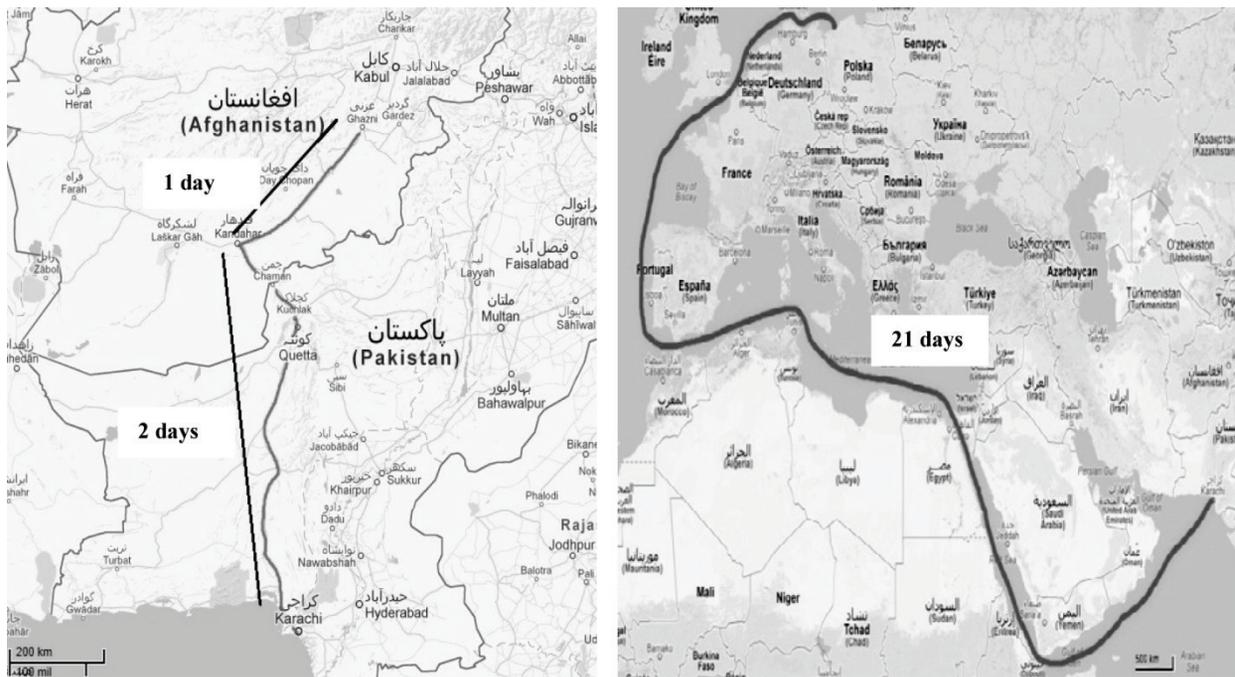


Fig. 6. Minimum transit time road/sea:  
(left) from Afghanistan to Pakistan, (right) from Pakistan to Poland  
Personal elaboration



Fig. 7. Road in Afghanistan and Al Fujarah seaport (UAE)  
Photos: Dariusz Janasz

In case of airlift (variant no 4) assuming that there are approx. 500 containers and approx. 300 trucks and two AN-124 per day are at our disposal, whole equipment would be moved back within 40 days. Of course in practice it is not possible firstly

approximately 24-30 days. In practice this time is sometimes doubled or tripled. To calculate real whole contingent redeployment time from Afghanistan to Poland it is necessary to take into account availability of transport assets in different

options and capacity of corridors. As of today such data is not available to complete calculation.

### 3.2 Transport costs and security

Cost of transport is one of the most critical factors which has to be considered during the Afghanistan redeployment planning. There is always a dilemma of how to move contingent in the most effective and safest way. The costs of transport for the above mentioned options are well known for military transport specialists. It does not matter whether they are military

or commercial assets. The overland movement price for one 20' container is between 10 000 and 15 000 EUR and 40 000 EUR for the air transport. It is easy to calculate taking into account different variants that redeployment of contingent's whole equipment will cost approx. 14 million EUR plus costs of passenger aircraft for personnel.

Personnel safety is the highest priority for Polish MOD therefore troops will be moved back using the air system. Equipment based on its value, dimensions and importance will be transported by different corridors which are not always secured.

To calculate risk of the above mentioned variants it is also necessary, the same as for the transit times, to divide different corridors into phases. The first phase of all variants is very dangerous especially in Afghanistan and Pakistan. The South corridor to Karachi is extremely dangerous as being threatened by terrorist attacks. After the US operation on Bin Laden hide-away in Pakistan the situation is more complicated. Therefore some type of cargo can be airlifted from Afghanistan to the United Arab Emirates. The second phase – sealift is very safe. The Central and North corridors are quite safe. There are no terrorist attacks threats in Uzbekistan, Kazakhstan, Azerbaijan and Georgia from Al-Kaida side and Poland has good relations with those countries. Variant no 4 – airlift of course is the safest but very expensive.

## 4. SUMMARY

The type and dimensions of military equipment will determine the choice of redeployment option. There is no doubt that because of security and transit time Polish troops will be moved by air. For the equipment decision is needed which of them is strategic, sensitive or typical general cargo. Analysis of possible redeployment options allows to create the following conclusions:

- Road – sea transport concept executed via the South corridor can be used for heavy equipment, oversize cargo and all types of containers;
- Rail or road transport concept via the Central and North corridors can be used only for container movements of general cargo;
- Air – sea transport concept is a airlift of strategic goods from Afghanistan to so called saved country (in our case UAE) to avoid any terrorist attacks on Afghani or Pakistani territory and sealift to the final destination;
- Direct airlift is a primary concept of personnel redeployment. It can also be used for high value or sensitive cargo, crypto equipment and ammunition.

All concepts have to be agreed by international community and require transit countries diplomatic clearances, which sometimes is not easy. Unfortunately Polish diplomacy not always follows the military needs.

Experience which Polish military logistics will take from ISAF redeployment operation is crucial. This is the next such complicated logistic operation after Iraq and Chad. Incoming operation is not easy but Polish military specialists based on previous experiences will for sure fulfil the tasks.

## BIBLIOGRAPHY

- [1] Biernikowicz W., Milewski R., Smal T., *Military movement in abroad operations* (In Polish). ISBN: 978-83-87384-07-4, Publishing Office: WSOWL, Wrocław 2010.
- [2] Materials from the Conference of NATO Movement Group and Ministry of Transport, Construction and Maritime Economy Republic of Poland entitled: *Civil support for military*. 11-13 June 2013 Kraków.

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