



The Logistical Challenges Confronting the Afghanistan Drawdown

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This report focuses on the major challenges and particularities pertaining to the international logistical pull-out of military equipment from Afghanistan by the end of 2014. While covering the technical aspects of the “retrograding” operation, it also sheds light on the different regional options available for shipping personnel and materiel back to home units. Related information is available at www.cimicweb.org. Hyperlinks to source material are highlighted in blue and underlined in the text.

The US-led Operation Enduring Freedom (OEF) and the [International Security Assistance Force \(ISAF\)](#) contributing nations will end all combat activities in Afghanistan by the end of 2014 as agreed by the NATO Member States and ISAF contributing countries at the [Lisbon](#) and [Chicago](#) NATO Summits held in 2010 and 2012, respectively. According to NATO Member States, Afghanistan has become more stable, which allows the full transition and hand over of security to the Afghan Security Forces by the end of 2014. Consequently, all international coalition contingents fighting in Afghanistan need to [withdraw their personnel and return equipment](#) back to their homeland before the deadline. This operation, also known in military terms as “retrograding”, is expected to be one of the largest military logistical withdrawals in [recent history](#), considering the number of international troops involved in Afghanistan, the quantity of the accumulated military equipment, the aggressive timeline, the related costs, the security and political context in the region and the limited transit options. This operation will pose significant challenges to the coalition forces present in Afghanistan as they have until now primarily focused on logistical supply and not on [logistical reverse](#). Moreover, the international coalition still operates in a non-permissive and hostile environment, which might complicate or slow down the pace of the reversing logistical operations that have already started, hence demanding extra duties and resources for concomitantly sustaining combat and logistical assignments.

This report presents the major challenges and particularities pertaining to the international logistical “retrograding” from the country, focusing on two major subcomponents of the reversal. The first section will cover the technical details and challenges that military logisticians may face while organising the initial pull out from Afghan territory. The second section covers the characteristics of the potential regional and



international corridors that the international coalition might use for shipping materiel out of Afghanistan.

Size and Scale of the Withdrawal

Since 2001, the international contingents¹ have deployed numerous troops, and massive quantities of military equipment to support their missions in Afghanistan, sometimes at [high pace](#), explains *Time*. Now, within a two year period, the fifty countries participating in Afghan coalition operations must [empty their bases](#) of 130, 000 soldiers, at least 70,000 vehicles and 120,000 containers laden with lethal and non-lethal equipment and materiel, accumulated over 12 years, says *Der Spiegel*. The [US Government Accountability Office](#) (GAO) assesses that the US military has an estimated 90,000 containers full of equipment scattered across Afghanistan, according to *Time*. In addition, the US military need to move 50,000 [vehicles](#) from the country, adds *The Washington Times*. All these materiel has a combined total worth of more than USD 36 billion. It will cost more than USD 5.5 billion to return these assets to the United States or to transfer them to the Afghan forces, reports *Time*. The [British Minister of Defence \(MoD\)](#) estimates that its contingents will have to repatriate 11,000 containers and approximately 3,000 armoured vehicles. Likewise, [Germany's military](#) will be shipping more than 1,700 vehicles and about 6,000 containers. Military experts say a secure withdrawal would take at [least six months](#), and possibly a year, according to *The New York Times*. Considering the scale of the operations, international observers have referred to the withdrawal as a [“logistical nightmare”](#).

Challenges of the Withdrawal

This section highlights issues identified as the main challenges affecting the international logistical withdrawal from Afghanistan. Foremost, there is consensus that the coalition must plan and organise the drawdown in difficult and hostile conditions while coping with technicalities constraining its action. These constraints include the need for additional resources and a limited number of practical options for evacuating materiel.

Particularities of the logistical and operational withdrawal from Afghanistan

For most of the past decade, military [logistics operations in Afghanistan](#) have focused on getting equipment to deployed forces, says Major Rosendo Pagan of the US CENTCOM Material Retrograde Element (CMRE) in an interview with *Time*. Now, military planners and decision-makers in Afghanistan must shift their focus to logistical withdrawal, taking into account the hostile environment, adds Colonel Douglas McBride, commander of the CMRE. Although retrograding operations are not new to military personnel, Colonel McBride explains that the Afghan theatre might invite the military to affect a cultural shift in the future, reducing the level of stockpiled materiel at an early operational stage instead of maintaining a high concentration of equipment in theatre. During the last twelve years in Afghanistan, the international contingents have been [stockpiling equipment and supplies](#) in major compounds as well as remote combat posts and forward operating bases (FOB). Military commanders relied upon [airlifted support delivery](#)² in order to

¹ All the various international military and security actors fighting under different international coalitions (e.g. US-led OEF, NATO, ISAF) will be referred as “coalition troops” or “contingents”. It must be stressed that [ISAF](#) is a NATO-led international coalition, gathering NATO and non-NATO countries. In addition, the USA – which is part of NATO – also run its own separate operations alongside ISAF in Afghanistan within the framework of OEF. For this reason, the ISAF Commander is always a US [“double hatted”](#) officer steering the ISAF “NATO-led” operations and the US-led OEF in the country, as highlighted by the ISAF official website.

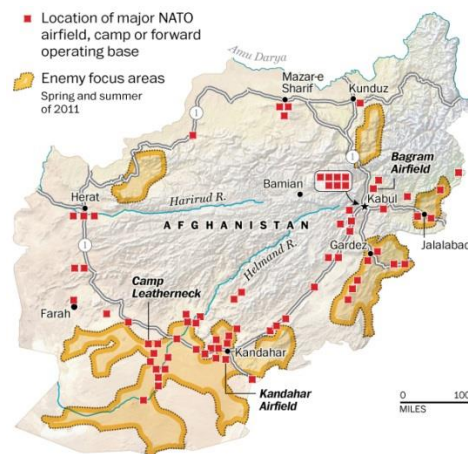
² For instance, logisticians have airdropped pallets of food and repair parts on remote bases and tossed “Speedballs” — body bags filled with ammunition and water — out of helicopters to troops under fire. Along the way, extra equipment has piled up at bases around Afghanistan.



overcome infrastructure limitations, security risks on the ground and the challenges posed by difficult geographical terrain.

According to military experts, withdrawal in a non-permissive operational environment has always been one of the [most difficult military manoeuvres](#) throughout the history of warfare, writes *Time*. In the Afghanistan context, coalition troops face a particular and difficult challenge: they must organise and undertake a logistical pull out while providing operational assistance and training to the Afghan National Security Forces (ANSF) and sustaining combat operations against the local insurgency, which has remained highly active in the country. The insurgency's continued offensives both [hamper and slow](#) the withdrawal of coalition troops, as underlined by the UK Defence Secretary Philip Hammond. Additionally, some military commanders have asserted that the increased focus on the logistical operations [diverts capabilities](#) and personnel from combat operations, further endangering the coalition forces in Afghanistan, reports *Reuters*. However, US Major-General Joseph Reynes, director of operations at JFC Brunssum (NATO – ISAF), denied this was the case, mentioning there are [no operational conflicts](#) between the concomitant retrograding and combat assignments. In addition, the coalition has established numerous observation posts, combat positions and [FOBs](#) across the country. These must either be handed over to the ANSF³ or be fully dismantled, mainly in order to prevent insurgents from retaking those positions. This operational configuration poses specific challenges to the coalition forces. These bases are sometimes located in remote and insecure provinces and the materiel stored in those compounds must be returned to the major regional logistical hubs, mainly by road where airlift is not an option, placing personnel and convoys at risk while en route. As of early September 2012, 208 [US and NATO coalition bases](#) had been closed, 310 had been transferred to the Afghan government and 323 remained open, according to a coalition spokesperson cited by *The Washington Times*.

Figure I. ISAF major FOBs, camps and airfield



Source: *The Washington Post*, "[Location of major NATO airfield, camp or FOB](#)", 16 March 2012.

³ This process requires sometimes the base transformation in order to adapt the compound to the needs of the smaller Afghan local contingents. The handover of [major bases](#) (e.g. Shindand, Bagram or Kandahar Air Bases) might be more difficult, according to NATO officials, says *The Huffington Post*.



[Afghanistan's geographic and infrastructure](#) peculiarities complicate the smooth and rapid logistical withdrawal from the country. First, the country is [landlocked](#) with a “[nightmarish](#)” [geography](#) for logistical planners; it does not have access to the sea or nearby ports, from which cargos and containers can be easily shipped abroad, says *Agence France-Presse*. The lack of deep-water ports leaves ISAF at the [mercy of neighbouring countries](#) to transport supplies or complete drawdown operations, highlights Captain Andrew P. Betson, an instructor at the US Military Academy at West Point, in a recent report. In addition, Afghanistan has a surface area of 6.5 thousand square kilometers of which 85 to 90 per cent is mountainous and/or desert. The [central massif](#), broken by deep valleys, rises to a maximum height of nearly 8,000 metres and much of the south and west are sand, rock or salty marsh, as described by *The Atlantic*. [Winter conditions](#) can hamper road transportation and limit the flow of materiel evacuation, especially in mountainous terrain. Some FOBs might even be [cut off from external supply](#) during the winter, explain US servicemen. Afghanistan lacks developed infrastructure and [proper roads](#), further complicating logistical operations planning. The combined effect of Afghanistan's difficult climate and terrain forces the coalition to rely on air assets for movement and delivery of some materiel, says Captain Betson. However, the altitudes in the country stretch the capabilities of rotary wing assets. Thus, ground forces must rely on fixed wing assets, even though these options are far costlier than using land or sea routes, according to the congressional testimony of General Duncan McNabb, former [commander of US Transportation Command](#) (US TRANSCOM) in 2010. Likewise, the [security situation](#) remains volatile across the country, writes *The Huffington Post* while the international coalition lacks [friendly neighbours](#) in the region in order to facilitate the logistical pull out, reminds *Foreign Policy*.

Precedent: the case of Iraq

Drawing contrasts with the recent conflicts in Iraq help shed light on the complexity of the Afghan withdrawal. Indeed, the logistical drawdowns from the Gulf region and Iraq in 2011 remain the largest military operations known in recent history. This comparative approach, thus allows military logistician officers in Afghanistan, whom many coordinated the logistical operations in Iraq, to re-use the lessons learned from the Gulf. retired [US General G. Pagonis](#) – who supervised the departure of US troops after the first Gulf War – explains that unlike Afghanistan, the Gulf region (and Kuwait) offered developed sustainable transport and communication infrastructures as well as seaports, writes *Foreign Policy*. From a political and security point of view, the coalition was operating in a permissive environment, as no hostile entity threatened the withdrawal, unlike the insurgency in Afghanistan. In addition, the coalition could benefit from the support of regional neighbours – in this case Kuwait – in order to stage and ship massive amounts of materiel. It is worth mentioning that international press agencies barely covered the first Gulf War withdrawal operations as the US-led coalition moved at least 370,000 tons of ammunition, 150,000 vehicles, 1,000 tanks, 50,000 containers and 50,000 troops, adds General Pagonis. In Afghanistan, the operation is even more challenging as the coalition forces must remove a far greater quantity of equipment compared to removal operations following the Iraq conflicts, as assessed by the British authorities in a recent [Parliamentary report](#).

The costs

While the total cost of the entire international pull out remains unknown, assessments conducted at this early stage have led to a certain [financial underestimation](#) of the operation, explains Francis Tusa, British military expert. In any case, the logistical operation is expected to be [costly](#) for international coalition countries considering the amount of equipment to remove. The drawdown is certain to be [costlier than the withdrawal from Iraq](#), mentions *Foreign Policy*. For instance, the US authorities assess that the US military currently has about USD 36 billion worth of equipment deployed in Afghanistan while the withdrawal operation is expected



to cost around USD 5.7 billion, according to *Time*. [The British authorities](#) assess that their equipment is worth GBP 6 billion. Further, moving one container by road or rail would cost GBP 4,000 while transporting a container by air would cost GBP 8,000, says *DefenceIQ* quoting George Osborne, the British Finance Minister. However, other data suggests that these figures could be as high as GBP 12,000 and GBP 30,000 respectively. Francis Tusa adds that the UK MoD has underestimated the costs of repatriation from Afghanistan. According to Tusa, the following elements explain this costs underestimation: the large quantity of stockpiled equipment; the need for securing transit routes; the use of airplanes for airlifting materiel and the necessary deployment of specialised logisticians to assist the reversing process.

The temporary “specialised” surge

The international withdrawal might require the temporary deployment of [additional contingents](#), a NATO officer informed *Reuters*. Those [skilled](#) personnel would conduct a variety of specialised subtasks pertaining to the logistical withdrawal, explains *Reuters* and *Der Spiegel*. For instance, German Defense Minister de Maiziere said that Germany requires approximately 250 to 600 extra personnel to support the withdrawal while the Netherlands might deploy some 700 specialists to withdraw its 2,000 soldiers, according to the same source. The United States has deployed [3,000 expert logisticians](#) so far, a US senior logistics commander told *The Huffington Post*, while the [British authorities](#) are still considering the appropriate number of extra personnel to send, according to the British Parliament. At the same time, [Spain](#) and [Germany](#) sent additional helicopters to Afghanistan in April 2013 to provide force protection for their withdrawing contingents, reports *Aviation Week*.

Logistical withdrawal is not limited to transport and shipping activities, but encompasses numerous and time consuming [subtasks](#) undertaken by specialised logisticians, highlights *The Washington Times*. In general, field logisticians start collecting and centralising the materiel scattered across remote bases to local warehouses before organising the transport to major bases in the country, where final shipment is organised by specialised units⁴, as depicted by *Time* in [recent footage](#). The whole process requires the logisticians to keep track of the collected materiel: they must take inventory, address accountability issues and check and inspect the shape of the equipment. For instance, vehicles are [thoroughly checked](#) and cleared from all technical mounted devices, explains US General Steven Shapiro, deputy commanding general of 1st Theater Sustainment Command to *CNN*. Logisticians also prioritise the equipment in order to select the materiel which eventually needs to be brought back and which does not. These determinations are based on financial but also security considerations in order to prevent any potential equipment diversion risks. In addition, the equipment must undergo [cleaning and sanitisation](#) procedures⁵ before being shipped home, says *Der Spiegel*. Through the whole process, logisticians also cope with permanent force protection issues until final shipment out of the country– is complete.

Equipment prioritisation and risk of diversion

Coalition forces’ logisticians – driven by security and financial considerations – distinguish the unwanted and non-lethal equipment from the sensitive and lethal material. Logisticians deem equipment unwanted and non-lethal when their loss does not [have major financial or security implications](#), mentions *Time*. These items range

⁴ [Bagram Airfield](#) is one of the three major US and NATO logistical hubs / airfields in the country. It is used a main [hub for all operations](#) in the north and east of Afghanistan, whichever it is for supplying remote compounds in the region or to supporting the retrograding phase. All collected equipment coming for the remote north-east forward operating bases (e.g. [ISAF Regional Command East](#) in Shank in [Logar](#) Province) will be transported to Bagram before being sent of out Afghanistan, explains *Time*.

⁵ For more explanations, see the footage provided by the [Belgian Mod](#) (in Dutch / French) detailing those particular activities



from office furniture, generators and toilet paper to scrap metal and trash. In general, the unwanted and non-lethal equipment is [transported overland](#), say coalition commanders. Nevertheless commanders need to ensure that [sensitive and lethal equipment](#) (e.g. strategic communications, optical devices, advanced intelligence systems, weapons, ammunition) cannot be seized or targeted by criminal and insurgents, a US senior logistician commander told *The Wall Street Journal*.

Those critical capabilities are in general airlifted – abroad or to a local logistical hub – in order to prevent any [risk of weapons diversion](#), explain the British Lieutenant Charles Ashington-Pickett to the *Belfast Telegraph*.

This issue is even more salient in Afghanistan, which has a legacy of [abandoned weapons and materiel](#), as witnessed after the Soviet withdrawal in 1989. Moreover, neighbouring countries do [not allow the transit of lethal equipment](#) across their soil. At the same time, ISAF nations – like the United States – [rule out transporting lethal equipment by land](#) in the region, as many neighbouring countries are not formally allied nations, explains the Indian *Institute for Defence Studies and Analyses* (IDSA). Therefore, US rules require that all sensitive and classified cargo be transported into and out of Afghanistan via aircraft. All other cargo is shipped via surface routes. Besides, weapons and materiel [accountability](#) remains an important issue for military logisticians, explain US commanders to *Time*. The potential [handover](#) of used coalition military materiel to the ANSF raises further concerns about risks of weapons diversion. Moreover, due to a [decreasing security budget](#), US officials are considering bringing as much materiel possible back to the home units, leaving the US DoD more circumspect about the amount of material to be left behind, said a US retired high ranking logistician to *Foreign Policy*. So far, US General Steven Shapiro, deputy commanding general of 1st Theater Sustainment Command, told *The Huffington Post* that non-military equipment would be [left behind for Afghan forces](#). This would include base refrigerators, tables, chairs, generators and air-conditioning units. Leaving some the equipment would decrease the amount of equipment to remove and ease the strain on combat troops, which consequently spend less time on retrograding assignments. The unwanted materiel will be [tossed out](#), adds *AP*. At the same time, the ex-British Armed Forces Minister Nick Harvey confirmed in March 2012 that military materiel would be left in Afghanistan. However, he emphasised that [potential donations and equipment transfers](#) should be coordinated within an international framework.

The airlift

Transporting equipment by air from Afghanistan to regional ports or directly to the country of origin might be the [fastest and safest](#) option for the coalition members. However, this option is among one of the most expensive and it is not without complications, assesses *DefenceIQ*. As assessed in 2010 by US General Duncan McNabb, former commander of the US Transportation Command, it costs [ten times as much per pound](#) to transport material by air than by land or sea. For example, the [German MoD](#) pays EUR 420,000 for each flight on Antonov transport aircraft in order to deploy equipment from the eastern German city of Leipzig, to Mazar-e-Sharif in Afghanistan, says *Der Spiegel*. Disregarding the cost of the airlifting operations, coalition member countries rely on [large cargo planes](#) in order to ship heavy materiel, especially heavy armoured vehicles and helicopters.⁶ Those capabilities are nevertheless available in restricted quantities and can only carry a limited amount of cargo⁷, which might create a competition among coalition countries in order to share

⁶ Usually Antonov An-124 or US C-17 airlifters. For instance, the [French MoD](#) shipped out its heavy vehicles via this capability, reports *Janes*. It seems that the [Spanish MoD](#) relies as well on rented Antonov in order to deploy temporary support during the pulling-out phase, says *Aviation Week*. The [British authorities](#) sent national additional air capabilities in order to provide more cargo support to their troops, reports *UPI*.

⁷ An Antonov can [only transport two Black Hawk](#) helicopters, as explained by *Helihub*. The same issues pertain to [heavy armored personnel carriers](#) like the Mine Resistant Ambush Protected vehicles (MRAPs), says *The Guardian*.



those lifters, warns a British security expert in *Aviation Week*. However, NATO provides and coordinates sharing pools of [strategic airlift capabilities](#) for some NATO nations and partner countries in order to support their cargo operations, as explained by the *NATO Support Agency (NSPA)*⁸. [NATO also coordinates](#) the routes and corridors that the Allied countries use in order to ship out gear out of Afghanistan, explains a Canadian logistics expert at NATO to *Reuters*.

Options for withdrawal routes

In addition to the technical difficulties the coalition might face while withdrawing from Afghanistan, the international contingents will have to overcome an additional and major difficulty: the [use of multi-country regional transit corridors](#), says *The New York Times*. So far, the coalition partners have considered a [mixture of air, land, rail and sea routes](#) and identified alternative routes in case one or several options becomes unfeasible, according to a NATO official. The following sections examine two options considered by the coalition: the Pakistan Ground Lines of Communication (PAKGLOC) and the Northern Distribution Network (NDN).

Pakistan Ground Lines of Communication (PAKGLOC)

The PAKGLOC has been the [primary source of ground supplies](#) transported into Afghanistan since the onset of coalition operations in 2001, says US Army Captain Andrew P. Betson. As the Pakistani corridor has been used for supplying the international coalition, this option could remain open in order to reverse and transport equipment out of Afghanistan. The Pakistani corridor consists of [two major roads](#) stretching from Afghanistan to Karachi port in Pakistan where the materiel is staged and transported by sea, explains *Pakistan Tribune*. One road runs south from Kandahar to Karachi via the Pakistani cities of Chaman and Quetta. The other road runs south-east from Kabul to Karachi via the Pakistani city of Torkham on the Khyber Pass and the city of Multan. It takes [approximately two months](#) for an item shipped from Afghanistan via the PAKGLOC distribution pipeline and ocean vessel to reach American soil, says Captain Betson. Prior to November 2011, all equipment leaving Afghanistan overland [transited Pakistan](#), says US TRANSCOM in its 2012 annual report. Pakistan technically remains the most [convenient and cheapest](#) of all available options for transporting materiel in and out of Afghanistan, offering the shortest land route to deep-water ports,⁹ reports *Reuters*.¹⁰

⁸With the support of the NSPA, NATO tries to create a genuine airlift capability at the service of the Alliance. While the project is still pending, NATO currently runs two interim capabilities programmes aimed at providing cargo support to participating NATO member states and partners. The Strategic Airlift Interim Solution ([SALIS](#)) gathers six leased Antonov An-124-100 transport aircrafts which can be chartered by twelve NATO nations and two partner nations (Finland and Sweden). Those An-124-100 are leased from the heavy cargo charter company “[Ruslan International](#)”. The other is the Strategic Airlift Capability ([SAC](#)), under which ten NATO countries plus two partner countries have purchased three Boeing C-17 transport aircraft.

⁹After reaching Pakistan, materiel is loaded on ships (retrograding) or downloaded (supply) in the Karachi area at two adjacent ports: Karachi and Qasim ports.

¹⁰General Shapiro said *The Wall Street Journal* that the PAKGLOG would enable US forces to [meet US President Obama’s goal](#) for cutting the level of the US contingent in Afghanistan in half by February 2014.

Figure II. PAKGLOC main routes



Source: *Foreign Affairs*, “[Stuck in the Mud The Logistics of Getting Out of Afghanistan](#)”, 18 July 2012.

This option is not without [difficulties and complications](#), according to *The Wall Street Journal*. Diplomatic and security-related challenges might [jeopardise the use of the Pakistani corridor](#), says the *Institute for Defence Studies and Analyses* (IDSA). The availability of the PAKGLOC depends upon the relations between Islamabad and the US-NATO authorities. Pakistan closed its corridors to international military suppliers in November 2011 for a period of seven months in retaliation for a NATO airstrike which [killed 24 Pakistani soldiers](#), highlights *Foreign Affairs*. This incident threatened the supplies for the international coalition in Afghanistan and forced the coalition to find alternative means to ensure its supply routes. Pakistan re-opened its supply routes to Afghanistan in July 2012 after Islamabad reached an agreement and signed a renewed [Memorandum of Understanding \(MoU\)](#) with the American authorities thereby allowing the use of the Pakistani corridors, writes *Reuters*. Meanwhile, the security situation remains highly volatile along both roads forming the corridor, where Afghan and Pakistani insurgent elements continue to [carry out attacks](#) on international convoys, reports *The Express Tribune*.

The availability of the PAKGLOC to the coalition will also depend upon health of [Afghan-Pakistani bilateral relations](#), says *The Washington Post*. For instance, trade and customs disputes surrounding the implementation of the [Afghanistan-Pakistan Transit Trade Agreement](#) (APTTA) contributed to halting positive exchanges and transport between both countries in 2011, an issue highlighted by the *NATO Civil-Military Fusion Centre* (CFC). Recently, tensions between Kabul and Pakistan have become [increasingly strained](#), resulting in limited armed border skirmishes and temporary closure of border crossing posts, highlights *Radio Free Europe / Radio Liberty*. Moreover, Pakistani domestic political factors might also impact the international withdrawal. For instance, Pakistani truckers carrying international equipment between Afghanistan and Pakistan went [on strike](#)



in January 2013. This action came after Pakistani authorities had imposed a policy that local truckers should work only with authorised transport companies when carrying goods for the international coalition, reports *Reuters*. Technically, [Pakistani logistics companies](#) in charge of transporting NATO supplies and equipment from Afghanistan to Karachi port via Pakistan assess that the withdrawal process might take time, says the *Express Tribune*. The representatives of the transport companies point to the limited number of transit trucks authorised by the Pakistani authorities and NATO security policies as main factors affecting the pace of the transportation, reports the same source.

Nevertheless, the closure of the PAKGLOC in 2011-2012 [did not appear to impact the pace of ISAF operations](#) or the level of supplies entering Afghanistan as ISAF successfully managed alternatives to support the coalition, explains the ex-ISAF Commander General John Allen according to *IDSA*. This trend is confirmed by US TRANSCOM, which assesses that the level of available [supply increased in 2012](#) in Afghanistan. However, the situation may differ in the context of the logistical drawdown: where the inward movement of ground supply to Afghanistan was technically possible without the use of PAKGLOC, the coalition is dependent on Pakistan for shipping out the vast amount of material stationed in Afghanistan within a limited timeframe, says General Allen. It must be noted, however, that all inward supply routes – including the PAKCLOG – are [not yet fully operational](#) for supporting the logistical reversing phase, hence limiting their maximum backward transit capacity, highlights a recent US GAO report. Considering only the financial aspects of the use of alternative routes, it seems though that the PAKGLOC option remains cheaper: in 2012, during the seven-month-long closure of the PAKGLOC, ex-US Defence Secretary Leon Panetta estimated that the use of alternatives roads by air or land cost about an additional amount of USD [100 million a month](#), highlights *Reuters*.

The United States plans to remove roughly fifty to sixty per cent of its equipment (vehicles and non-lethal equipment) via the [ground-supply line](#) running through Pakistan. Sensitive items and equipment, such as weapons and communications systems, would be directly airlifted from Afghanistan, the costliest option, explains *The Express Tribune*. Regarding the [volume of the international equipment](#) transported via Pakistan, the US DoD said it expected to start regular shipments out of Afghanistan along Pakistan's ground routes at a rate of approximately 100 pieces of cargo and vehicles a week, reports the *Wall Street Journal*. That figure would increase gradually over the course of the spring and summer, when the retrograde route will reach its full capacity. The US military plans to move fifty to sixty pieces on a daily basis when the withdrawal phase reaches its expected peak in August 2013.

The Northern Distribution Network (NDN)

In order to ensure the integrity of materiel shipments into and out of Afghanistan, international coalition members began to consider [alternative cost-effective routes](#) to the relatively unsafe and overloaded PAKGLOC in 2008, says *Jamestown Foundation*. This objective became even more salient during the Pakistani border shutdown in November 2011, when the need to develop and [strengthen additional shipping channels became clear](#), especially in Central Asia, explains *Foreign Affairs*. In order to meet that goal, coalition members identified the so-called “[Northern Distribution Network \(NDN\)](#)” as the principal alternative to the PAKGLOC. The NDN is a strategic transportation corridor comprising a 5,000 km network of sea, road, and rail routes traversing the Baltic States, Belarus, Russia, South-Caucasus, Kazakhstan, Uzbekistan, Kyrgyzstan and Tajikistan, terminating in northern Afghanistan. NDN's main goals are to support international operations in Afghanistan by maintaining reliable and safe supply lines, decreasing cost and delivery time, and establishing a road-based two-way cargo flow, describes *Jamestown Foundation*. Since 2010, this route has assured [30 per](#)



[cent of the international military ground supply](#) from Europe to Afghanistan, adds a report of the *International Institute for Strategic Studies (IISS)*. A December 2011 report by the US Senate Committee on Foreign Relations stated that 75 per cent of supplies to US forces in Afghanistan were shipped via the NDN. When Pakistan severed the US' southern supply route to Afghanistan from November 2011 to July 2012, the NDN became the de facto conduit for [100 percent of US ground supplies](#), writes the *Open Society*. However, similar to the PAKCLOG, the NDN provides full capacity only for inward supply to Afghanistan, whereas the reversing capacity [has not reached its full level](#), says the US GAO.

It should be noted that the use of the Central Asian corridor for supplying the international coalition in Afghanistan predates 2008, as some countries such as [Uzbekistan](#) and Kyrgyzstan – with its Manas Air Base – have backed the coalition since the early years of the conflict¹¹. The coalition partners will not ship lethal equipment overland via the NDN territories but instead will airlift sensitive and lethal material directly to the home units. Nevertheless, another report suggests that the US government would ship [sensitive items](#) via the Manas Transit Center in Kyrgyzstan.

From Afghanistan, the [NDN routes](#) involve road (Kazakhstan-Kyrgyzstan-Tajikistan) or rail (Uzbekistan) connections. It also allows shorter transit flights, for example, to the regional airfields in Navoi or Termez (Uzbekistan), Shymkent (Kazakhstan), Manas (Kyrgyzstan) or Ulyanovsk (Russia), explains *Jamestown Foundation*. This range of option remains [cheaper and more attractive](#) than direct airlifts to Europe, adds *EurasiaNet*. From those transit points, the equipment can be further evacuated by road or rail to Baltic ports via the Caucasus region, Turkey (Trabzon)¹² or the Russian territory. Among Afghanistan's neighbours, Uzbekistan plays a major and central function in the NDN network as the country has the [only direct and functioning rail connection](#) from Termez to the Afghan city of Mazar-e Sharif that remains operational during winter¹³, unlike the overland corridors to Kazakhstan-Kyrgyzstan-Tajikistan, explains *Der Spiegel*.

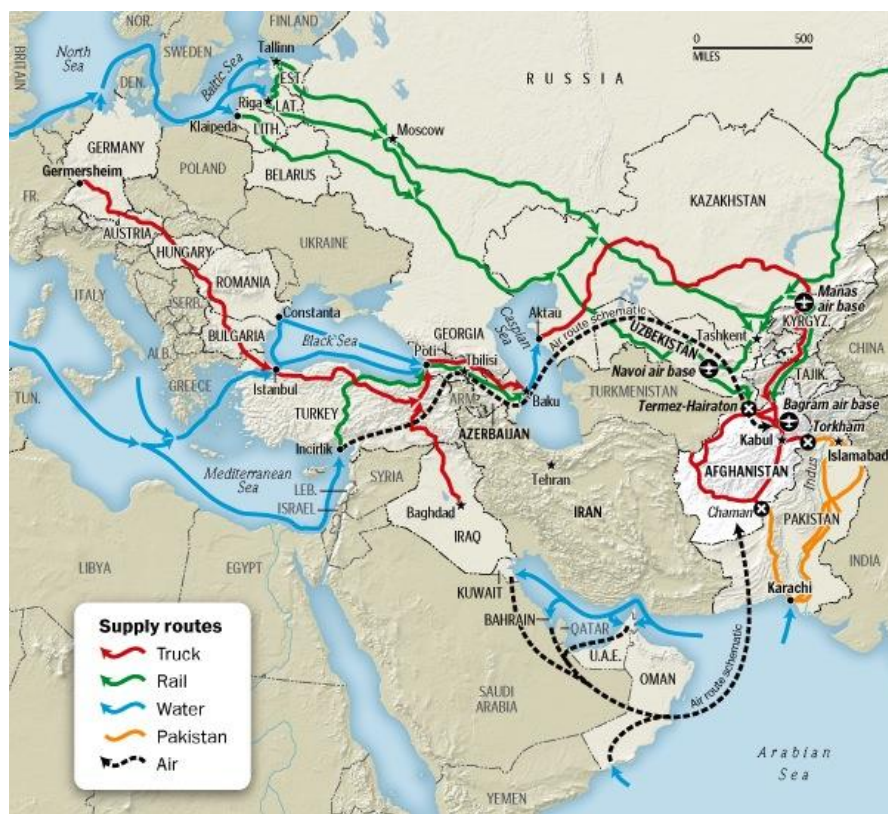
¹¹ However, the US and the West stop using the Uzbek territory (and the "K2" base in Karshi-Khanabad) in 2005 after Western voices criticised the deadly crackdown conducted by Uzbek security forces in [Andijan](#), and the subsequent ban imposed by the Uzbek authorities on the deployment of a Western military base on the territory, says *EurasiaNet*.

¹² The Turkish city on the Black Sea is used by the [German MoD](#) for instance, reports *Today's Zaman*.

¹³ The line begins 70 kilometers away in Mazar-e-Sharif and leads to the river port at Hairatan. This railroad route can be used to bring weapons and equipment to Uzbekistan and on to Russia, although the cargo will have to be unloaded and reloaded several times en route, says the source.



Figure III. Northern Distribution Network: overall map



Source: *The Washington Post*, "[A logistics miracle](#)", 02 July 2012

Current agreements and used corridors

NATO officially announced in June 2012 that the Alliance had [concluded agreements](#) (whose contents remain undisclosed) with all the aforementioned NDN-participating countries in order to evacuate materiel. In addition, some coalition countries signed bilateral agreements with the NDN Central Asia countries. For instance the United States, the United Kingdom, Germany and France are the main users of the Baltic seaports as logistical hubs for transportation to and from Afghanistan, reports *Jamestown Foundation*. [Kazakhstan](#) was the first country in Central Asia to sign overland reverse transit agreements with the United States, the United Kingdom and other NATO members to facilitate this process, mentions *Jamestown*. In January 2013, the Kazakh government in Astana signed a deal with Paris to assist in withdrawing non-lethal elements of French military hardware and equipment from Afghanistan by air to Shymkent, and then over land through the NDN.

In addition, British and the Tajik authorities signed an agreement on 18 April regarding British military [property withdrawal](#) from Afghanistan via the Tajik air space and territory, reports *Asia-Plus*. According to the terms of agreement, the British authorities have the right to fly over Tajik territory and land on Tajik soil only in cases of emergency, adds *Asia-Plus*. British authorities confirmed that they would use the Uzbek railroads in order to ship equipment out of Afghanistan, says the official transit agreement between the [British government and the Uzbek authorities](#). In October 2012, the US Ambassador to Tajikistan, Mrs. Susan Eliot, said that the United States had signed an agreement with Kyrgyzstan on the use of the Manas Transit Center until 2014

which is a [critical supply and reverse logistical hub](#) for US and international operations in Afghanistan, highlights *EurasiaNet*. The US authorities are currently discussing the possibility of extending the base lease after that period. Likewise, on 2 April the Kyrgyz Parliament approved the official agreement between NATO and Kyrgyzstan in order to allow the transit of non-military cargoes out of Afghanistan through the [Kyrgyz territory](#). According to Kyrgyz authorities, the Kyrgyz State Customs Service confirm the transit flow has already been initiated, says *C-A News*. So far, only the German contingents seem to use the Russian air transit hub in [Ulyanovsk](#)¹⁴ for reversing, says *Der Spiegel*, even though [Russian authorities](#) officially offered to support NATO logistical transit manoeuvres in and out Afghanistan through their territory, writes *EurasiaNet*. According to NATO Deputy Secretary General Alexander Vershbow, the Russian corridor is underutilised by international coalition partners for [cost-related and financial reasons](#), as this option requires more frequent and longer airlifts.

Figure IV . NDN main regional air hubs



Source: *Der Spiegel*, "[Air hubs used by the Bundeswehr and the US Army](#)", 03 April 2012

¹⁴ And [Krasnodar](#) for the German contingents, which negotiated a special agreement with the Russian authorities, reports *Der Spiegel*.

*Associated costs of the PAKGLOC and the NDN*

Cost remains a decisive factor influencing coalition military planners for identifying and prioritising withdrawal routes. Although the NDN is currently insurgency-free, this route is far longer than the PAKGLOC, thus more costly, claims *Der Spiegel*. International coalition countries have not disclosed the average costs of using the NDN; nonetheless, US authorities acknowledged that the transport of equipment via the NDN was costing more than USD 100 million a month during the Pakistani border shutdown in 2011-2012. Even if the US and Pakistan resumed full collaboration, US authorities assess that the NDN option would still cost [USD 61 million more a month](#) than using the PAKGLOC, reports *Reuters*. Currently, the US pays [USD 60 million a year](#) to the Kyrgyz authorities to lease the Manas Airbase, reports *EurasiaNet*. So far, [the Russian corridor](#) (via Ulyanovsk) is underutilised as it does not offer any comparative cost-wise advantage; shipping a container from Afghanistan through Ulyanovsk costs EUR 50,000, while dispatching the same load via Termez (Uzbekistan) costs only EUR 30,000, explain Russian Defence experts in *The Moscow Times*.

Special agreements with the NDN-participating countries

The NDN crosses different regions and countries, mainly stretching through Central Asia. Therefore, the NDN's full availability and reliability greatly depends upon the relations between ISAF countries and Central Asia nations. For instance, most Central Asian countries require [compensations and conditions](#) for the use of their territories, including [customs taxes and clearances](#), which might limit the use of the NDN for reversing operations. In addition, many NATO member countries have voiced concerns about Central Asia's poor records on human rights and democratic standards, writes *The New York Times*. The EU authorities even imposed [a temporary weapon embargo](#) against Uzbekistan after Tashkent squashed the Andijan uprising in 2005, reminds *SIPRI*. Meanwhile, ISAF countries depend upon Central Asia for shipping materiel and accessing the NDN. Therefore, the use of Central Asian territory becomes a strategic stake which can be bargained against political, strategic or economic advantages. That is why Central Asian states have supported the war in Afghanistan in order to use this positioning as an opportunity to gain a status of [strategic partners](#) with the West and to demand the end of the Western criticism about their domestic policies, considers *Jamestown Foundation*.

Based on the same rationale, the Central Asia countries try to bargain the use of their territory in exchange of the [acquisition of weapons and military equipment](#), writes *The New York Times*. For instance, Uzbekistan, which plays a central strategic role in the NDN, might be one of the largest beneficiaries of such agreement with NATO countries, says *Jamestown Foundation*. The country's armed forces are expected to receive [USD 700,000 worth of military equipment](#) from the United Kingdom with similar compensation from the United States and other allies. Uzbekistan seeks to boost its domestic security and enhance its border protection capabilities after the international coalition withdrawal in 2014. In February 2013, Phillip Hammond, the UK Defence Secretary, indicated that the British government has no reservations concerning [equipment transfers to Uzbekistan](#) linked to the Afghanistan drawdown:

“We have a general principle that we don't transfer equipment that might be used for internal repression, but the Uzbeks [sic] have a clear challenge in the post-2014 period around their long border with Afghanistan. This is not just against an insurgency or Islamists, but also against crime and narcotics”, quotes Jamestown Foundation.



London will transfer spare Land Rovers and a number of trucks to Tashkent as part of its wider equipment transfer strategy, adds the source. In addition, in February 2012, the Obama administration secured an [end to the de facto US arms embargo on Uzbekistan](#), reports *Jamestown Foundation*. During a visit by senior Uzbek government officials to Washington on March 2013, the US agreed to supply Uzbekistan with twenty Raven unmanned aerial vehicles (UAVs) to boost border security. The US authorities could also hand over some of their [military equipment to Uzbekistan](#) during their withdrawal from Afghanistan, including armoured vehicles, helicopters, night vision goggles, small arms, mine detectors, and navigation equipment, writes *Der Spiegel*.

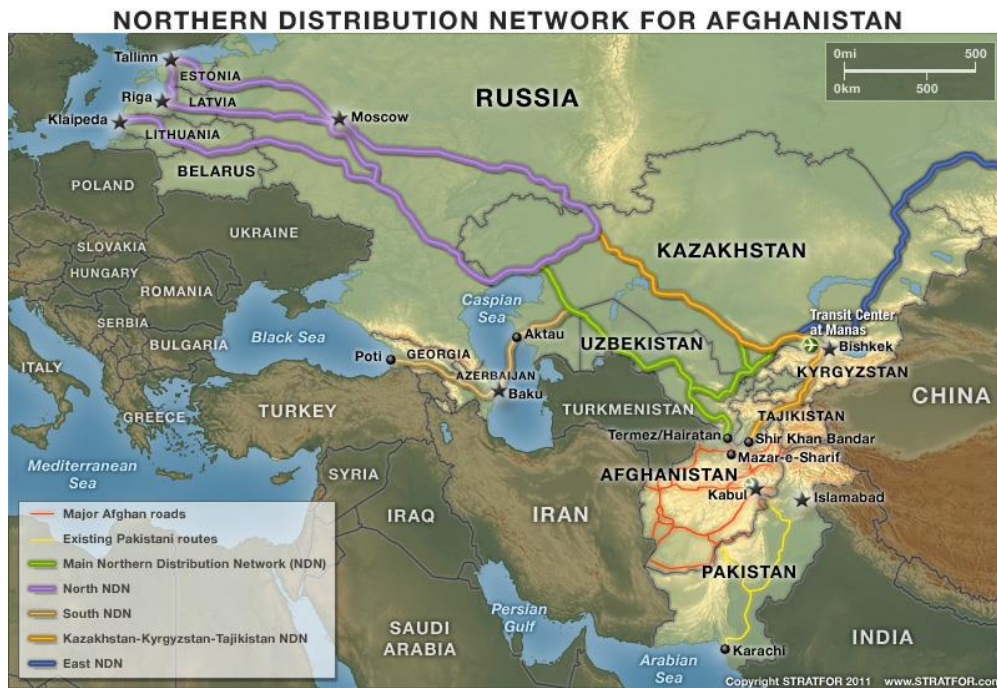
[Kazakhstan](#) has shown less interest in the Central Asian scramble for weapons and equipment transfers, and remains more narrowly focused on assisting in the drawdown. The list of equipment transfers requested by Astana mainly covers engineering and logistics transfers, mentions *Jamestown*. However, after Uzbekistan, Kazakhstan will be the other large beneficiary of weapons and equipment donations from the British authorities. In comparison with Astana and Tashkent, Kyrgyzstan and Tajikistan will most likely receive a more limited amount of military equipment from London. Robin Jeremy Ord-Smith, the British Ambassador to Tajikistan, said on 18 April that the current British-Tajik transit agreement does not cover a potential [British equipment handover](#) to Tajikistan, reports *Asia-Plus*. The British ambassador said that the issue of handover would be discussed in late April 2013 within the framework of a meeting by defence officials from both countries, adds *Asia-Plus*.

Conclusion

After twelve years of combat operations, the international military withdrawal phase from Afghanistan – expected to be one of the [biggest logistical challenges](#) in recent history – is still in its early stages. The challenges awaiting the military logisticians are numerous and depend upon several factors which might impact the operational context. At the Afghan level, coalition troops must keep pace with the logistical withdrawal – sometimes in remote and volatile sectors and difficult terrain – [while carrying on fighting](#) the insurgency and training the local Afghan forces. The operational context might request the temporary deployment of [extra personnel](#) in order to assist the logistical operations. Considering the operational particularities and constraints affecting the Afghan theatre, the coalition will likely be forced to develop complex “[multimodal solutions](#)” for retrograding, requiring a mixture of different routes and modes of transports, which might vary according to the fluctuating operational framework. Those parameters might impact the [pace of the operation](#) and the [costs](#), which remain a critical element of the withdrawal. Logisticians need to consider other issues as well, such as accountability and the risks of weapons and equipment [diversions](#) during the logistical manoeuvre. Military planners need to set strategic choices such as utilising regional transit hubs and corridors in order to transport the equipment out of Afghanistan. Although Pakistan remains the [cheapest and easiest](#) option, it is also [less safe and vulnerable](#) to future potential shutout depending upon the Pakistani decisions and relations with ISAF and its neighbours. The [NDN](#) is the primary and safest alternative to the Pakistani option, although the route is [longer and costlier](#). In addition, international coalition partners need to negotiate and conclude [agreements with various partners and countries](#) in order to ensure the transit of their equipment through the entire NDN.



Annex A. PAKCLOG and NDN factsheet



Source: STRATFOR cited in Foreign Policy, [“The Northern Distribution Network Nightmare,”](#) 06 December 2011.

The Russian NDN route:

- i) Route: Riga-Moscow-through Russia-Kazakhstan-Uzbekistan (Border at Termez)-into Afghanistan
- ii) Distance:
 - a. By truck: Uzbekistan (Border at Termez)-Kabul: 538 km.
 - b. By rail: Riga-Termez: approximately 4,020 km
 - c. Total: 4,560 km

The Georgia Route (via Poti)

- i) Route: Poti-Baku (Azerbaijan)-Aktau (Kazakhstan)-Uzbekistan (Border at Termez) into Afghanistan.
- ii) Distance:
 - a. By truck: Poti-Baku- approximately. 800 km; Termez-Kabul- 538 km
 - b. By rail: Aktau-Termez –1,689 km
 - c. By ferry: Baku-Aktau – 402 km
 - d. Total – 3429 km.



The Pakistan GLOC

Karachi-Torkham (Pakistan Border) = 1,762 km

Transit times: (average)

NDN Russia Route: 98 days

NDN Caucasus route: 122 days

PAKGLOC: 78 days

Cost: On average, NDN costs are approximately double the costs of PAKGLOC. The average cost of transport of a 20-foot container through PAKGLOC is approximately \$=USD 8,300 (2010).

Source: US TRANSCOM via IDSA, "[Opening the NATO Supply Route: Does Pakistan have any Option?](#)", 06 June 2012



Annex B. Resources on The international drawdown from Afghanistan

Readers interested in this issue may wish to refer to the following documents, several of which have been specifically referenced in the preceding text.

- [2012 Annual Report](#), United States Transportation Command, 2012
- [Afghanistan Drawdown Preparations](#), United States Government Accountability Office (GAO), December 2012
- [Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Republic of Uzbekistan \(...\)](#), Government of the United Kingdom, 5 September 2012
- [Securing the Future of Afghanistan](#), British House of Commons Defence Committee, March 2013
- G Balachandran and Smruti S Pattanaik, [Opening the NATO Supply Route: Does Pakistan have any Option](#), IDSA, June 2012
- Kevin Baron, Gordon Lubold, [How soon is now? Afghanistan and drawdown logistics](#), Foreign Policy, October 2012
- Captain Andrew P. Betson, [Nothing is Simple in Afghanistan: The Principles of Sustainment and Logistics in Alexander's Shadow](#), U.S Army Military Review, September-October 2012
- Judy Dempsey, [No Easy Exit for NATO in Afghanistan](#), Carnegie Europe, December 2012
- James Fallow, [Getting Out of Afghanistan: William R. Polk](#), The Atlantic, February 2013
- Vanda Felbab-Brown, [Stuck in the Mud: The Logistics of Getting Out of Afghanistan](#), Foreign Affairs Magazine, July 2012
- Andrew C. Kuchins, Thomas M. Sanderson, [The Northern Distribution Network and Afghanistan](#), CSIS, January 2010
- Graham Lee, [The New Silk Road and the Northern Distribution Network: A Golden Road to Central Asian Trade Reform?](#), Open Society Foundations, October 2012
- Roger McDermott, [NDN 'Reverse Transit,' Uzbekistan and the Failure of Western Grand Strategy \(Part One\)](#), Jamestown Foundation, March 2013
- Roger McDermott, [NDN 'Reverse Transit,' Uzbekistan and the Failure of Western Grand Strategy \(Part Two\)](#), Jamestown Foundation, March 2013
- Algirde Pipikaite, [Lithuania's Role in the Northern Distribution Network](#), Jamestown Foundation, February 2013
- Georgiy Voloshin, [Russian-US Military Competition in Central Asia Threatens to Compromise Regional Security](#), Jamestown Foundation, March 2013
- Georgiy Voloshin, [Kazakhstan Proposes to Expand its Transit Facilities on the Caspian to Facilitate NATO's Withdrawal from Afghanistan](#), Jamestown Foundation, May 2013