



Grounded

The International Community's Betrayal of UNAMID

A Joint NGO Report

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Organizations endorsing this report

Aegis Trust

Americans Against Darfur Genocide

The Arab Program for Human Rights Activists (APHRA)

ARI Movement

The Cairo Institute for Human Rights Studies

The Centre for Army Conversion and Disarmament Studies

Collectif Urgence Darfour

Darfur Action Group of South Carolina

Darfur Australia Network

Darfur Call

Darfur Hilfe e.V.

Darfur Relief and Documentation Centre

Darfur Union

ENOUGH Project

European Union of Jewish Students

FEMNET

Genocide Alert

Genocide Intervention Network

The Human Rights Institute of South Africa (HURISA)

International Crisis Group

International Refugee Rights Initiative

Italians for Darfur

Japanese for Darfur

NAS International

Olympic Dream for Darfur

Physicians for Human Rights

San Francisco Bay Area Darfur Coalition

Save Darfur Coalition

Save Darfur Canada

Society for Threatened Peoples

Sudan Advocacy Action Forum

Sudan Organization Against Torture (SOAT)

STAND Canada

Team Darfur

United Nations Association (UNA)

Unitarian Universalist Service Committee

Waging Peace

Foreword

A year ago today the United Nations Security Council voted unanimously to deploy UN peacekeepers to protect the people of Darfur. This vote, which came after agreement for the deployment had been struck with the Sudanese government, raised hopes that after four years of killings the international community would finally live up to its responsibility to protect millions of Darfur residents driven from their homes by conflict. After years of passing empty resolutions while watching as about 300,000 Darfuris died according to UN estimates, villages were destroyed, and women and girls were raped, it appeared that at last the outside world was moving from rhetoric to action.

Following the visit that we made to Darfur in 2007, the Elders highlighted our concerns over insufficient international financial, logistical and material support for deploying the UN mission. Almost one year later, our fears have regrettably been borne out. Rather than straining every sinew to make this mission work, the world community has failed to deliver even the basic support that the UN mission (UNAMID) needs to succeed. Today, UNAMID troops go unpaid, they are short on rations, and some are reduced to having to wear blue plastic bags on their heads because they do not even have the standard UN blue helmet. As a result, the people of Darfur remain as exposed as ever.

One of the key gaps in the forces' capability is the lack of helicopters. While no panacea, helicopters are essential for UNAMID to be able to operate effectively and react quickly in a region the size of France. The force is seeking a mere 18 transport helicopters, which compares to around 350 on mission in Iraq. But so far, no country has stepped forward to provide a single helicopter.

This report sets out for the first time which states have the necessary helicopters and estimates how many are available for deployment to Darfur. It identifies a number of countries -- including the Czech Republic, India, Italy, Romania, Spain and Ukraine -- that have large numbers of helicopters that meet the required specifications and are not on mission or mission rotation elsewhere. Many of these helicopters are gathering dust in hangars or flying in air shows when they could be saving lives in Darfur.

The provision of these helicopters and other essential equipment would put added pressure on rebel groups and particularly the Government of Sudan to cease their resistance to

UNAMID deployment; no longer would they be able to claim that the delay in UNAMID's deployment was the fault of the international community.

The UNAMID operation is just one key to the securing lasting peace in Darfur. In addition, there must be broad-based negotiations among the belligerents and civil society actors to negotiate a ceasefire and then permanent peace. Further, the 2005 Comprehensive Peace Agreement, which ended decades of civil war between North and South in Sudan, must be fully implemented to provide the broader national context for democratic governance and equitable distribution of wealth through the country.

The time for action is now; the time of excuses and explanations is long past. We call on the leaders in the countries cited above and others to exercise the leadership and mobilize the political will to immediately make helicopters and other equipment available to the UN mission to save lives in Darfur. Our common humanity demands nothing less.

Archbishop Desmond Tutu

Lakhdar Brahimi

President Jimmy Carter

Graca Machel

Members of The Elders

Executive Summary

The United Nations Security Council voted one year ago to deploy a joint U.N.-African Union peacekeeping force, known as UNAMID, to protect the people of Darfur. But the world has failed to deliver the basic support that the mission needs to succeed. One of the key gaps in the force's capability is its lack of helicopters. Without helicopters, the force's ability to respond quickly to events and fulfil its mandate to protect civilians is severely compromised.

The July 8, 2008 attack on a UNAMID convoy in north Darfur underscores the critical importance of helicopters to the mission. The orchestrated attack left seven peacekeepers dead and 19 wounded after nearly three hours of ambush by armed militias. Without helicopters, UNAMID was unable to mount a rescue or reinforcement operation for the beleaguered convoy. The consequences were deadly.

This report, compiled by an aviation expert and endorsed by 36 human rights groups and non-governmental organisations around the world, sets out for the first time data on which countries have suitable helicopters and how many are available for deployment to Darfur.

While acknowledging the difficult political and logistical challenges, the report identifies specific countries that have suitable helicopters, sets out how many of these are known to be committed to other missions, how many are required for national use, and how many are being serviced at any one time. Using this data, the report analyzes which countries are best placed to provide the requisite helicopters to UNAMID.

Using conservative estimates, the report calculates that NATO alone could provide as many as 104 suitable helicopters for the UNAMID force. Among NATO countries, those countries best placed to provide helicopters to UNAMID are the Czech Republic, Italy, Romania and Spain. In addition, Ukraine and India – both countries that traditionally contribute to U.N. peacekeeping missions - could together contribute 34 helicopters. Between them, these six countries could provide an estimated fleet of over 70 helicopters - four times the number required by UNAMID. Countries with the ability to provide these helicopters must do so immediately, and Security Council members – especially the five permanent members - must engage in concerted diplomacy to make sure this happens.

The aircraft surveyed for this report have the U.N.'s stipulated range and lift requirements. While it is possible that some aircraft may need modifications to their subsystems in order

to comply fully with the U.N. requirements for the Darfur theatre, these costs should be met by the countries themselves, by the U.N., or through bi-lateral support from capable nations.

Helicopters are not a panacea for the UNAMID force. The force also needs other equipment, including transport trucks, aerial reconnaissance capabilities, additional engineers and a multi-role logistics unit. Critically, the force needs to streamline the movement of equipment and materials from Port Sudan to Darfur; otherwise, even the contribution of equipment will do little to help the people of Darfur.

Of course, UNAMID is not the ultimate solution to the crisis in Darfur, a ceasefire and real peace talks are essential in order to bring a sustainable end to the fighting. But UNAMID is a key building block in helping to stabilise the situation and move to a context where an authentic peace process is viable. If UNAMID is allowed to fail, it will affect all of the international community's efforts and set back any prospect of peace for many years to come. Helicopters must be contributed now to make the force truly operational and to send a clear signal that the international community is committed to UNAMID and the people of Darfur.

Author Biography

Thomas Withington is a defence analyst and writer based in France. He specialises in examining military aviation and air power issues. He is an Associate Member of the Royal Aeronautical Society (RAeS), a member of the RAeS Air Power Working Group and a Research Associate at the Centre for Defence Studies, King's College, London. He has completed numerous research projects for a range of private and public sector clients on contemporary and historic military aviation issues and is the author of four books.

1.0 Introduction

The United Nations has a clear and pressing need for medium-lift tactical helicopters to support the ongoing joint U.N. and African Union peacekeeping mission in Sudan known as UNAMID (U.N.-A.U. Mission in Darfur).

The helicopters will provide lift for an infantry company, a unit size of up to 250 troops; perform reconnaissance and observation (RECCE); Search And Rescue (SAR); assist in establishing Forward Air Refuelling Points (FARPs) to refuel aircraft on the ground during their sorties; and resupply deployed UNAMID units. Without helicopters, the force's capability to respond quickly to events and fulfil its mandate to protect civilians will be severely compromised.

Official documents have stipulated that the U.N. requires 18 medium-lift tactical helicopters for its mission in Darfur. The U.N. has articulated a need to secure rotary aircraft with the following characteristics and equipment:

- The ability to lift up to 20 troops with accompanying equipment.
- External fuel tanks to perform missions across UNAMID's operational area in Darfur, a region of around 493,180 square

kilometres (190,420 square miles) in size.

- The ability to lift up to 2500-kg (5,512-lb) of under-slung equipment.
- A sufficient helicopter fleet size to allow a minimum of four aircraft to be available on a 24-hour basis to cover the UNAMID operational area; one of which must be equipped with a Forward Looking Infra-Red (FLIR) system.
- Very High Frequency (VHF) and High Frequency (HF) radio communications.
- Two self-activated Emergency Locator Transmitters (ELT) per aircraft.
- Door-mounted machine guns on all aircraft.
- Range requirements of 550-km (330-nautical miles) minimum and 950-km (510-nm) with external fuel tanks.
- Ability to refuel from barrels at a FARP.
- One-hour alert-to-take-off response time.
- Ability to deploy and station overnight and be flight-ready at forward deployed locations.

The U.N. expects helicopters performing CASEVAC/MEDEVAC to have the following capabilities:

- 24/7 reaction time.
- Alert-to-take-off time of 30 minutes.
- Lift capability for four stretchers.
- Ability to fly in day/night Instrument Flight Rules (IFR) conditions.
- Minimum range of 550 km (300 nm).
- Ability to utilise FARP.
- Minimum 40-m (131-ft) length winch cable capable of extracting two persons.

For aircraft performing RECCE missions, the U.N. stipulates that these helicopters must have:

- 24/7 response time.
- FLIR.
- Daylight video camera and recording equipment.
- Searchlight with up to 30-million candela of power.
- Public Address (PA) system.
- Ability to forward-deployed for up to three days.
- A trained surveillance crew.

The U.N.'s specifications for aircraft to perform SAR are similar to those stipulated for the CASEVAC/MEDEVAC aircraft, however these aircraft must have the following capabilities:

- PA system
- FLIR
- Searchlight with up to 30-million candela of power.
- ELT compatibility with an Automatic Direction Finder.

Despite the very real need for these helicopters and months of appeals for them by U.N. Department of Peacekeeping Operations, so far none have been provided.

This paper sets out some of the countries that have helicopters fittings the U.N.'s specifications. It goes on to set out how many of these are known to be on mission, how many are required for national use and how many are being upgraded. From this data it sets out which countries are best placed to provide the requisite helicopters to UNAMID.

2.0 NATO and leading U.N. aircraft contributing nations' combined medium lift helicopter strength

There are many countries with available capacity at the right specification. This report looks exclusively at the capacities of NATO countries and leading national contributors of helicopters to support U.N. operations.

On paper, the members of NATO and the leading U.N. aircraft contributors potentially have over 3,700 helicopters¹

which are publically reported to have at least some of these specifications in terms of range and payload (*see Appendix*). It is also reasonable to assume that the aircraft have some, if not all, of the equipment specifications stipulated above such as FLIR, winches, machinegun mountings, searchlights, VHF/HF radios, EMT and PA systems.

3.0 Existing NATO member states and leading U.N. aircraft contributing nations' commitments

However, not all of these 3,700 aircraft are available to support U.N. peacekeeping operations in Darfur. Several NATO members already have rotary wing aircraft committed to ongoing military, peacekeeping and overseas obligations around the world. For example, France has helicopters deployed to support the EUFOR Chad/RCA (European Union Force Chad/Central African Republic) mission and aircraft supporting NATO International Security Assistance Force (ISAF) operations in Afghanistan. Moreover, France also has overseas commitments in Djibouti, French

Guiana, French Polynesia, the French West Indies and New Caledonia.²

This is also true of Germany, which reportedly deploys helicopters in support of the ISAF mission along with aircraft which are supporting the Kosovo Force (KFOR) in the Balkans province, helicopters based in Djibouti and aircraft which are supporting the UNIFIL United Nations operation in Lebanon.³

Greece has at least two helicopters deployed domestically to provide an airborne 'flying doctor' mobile surgery

service for the Greek population.⁴ Italy shares UNIFIL commitments with Germany and Greece⁵ and has also deployed helicopters in support of ISAF along with the Netherlands, which has a significant helicopter deployment in Afghanistan⁶. Norway also sends helicopters to support UNIFIL and ISAF⁷ along with Poland, which supports the latter and also has aircraft deployed to support military operations in Iraq.⁸ Spain supports UNIFIL operations in Lebanon with helicopters⁹ as does Turkey¹⁰, which has a commitment to deploy helicopters to northern Cyprus.

Like France, the United Kingdom deploys several of its helicopters to overseas locations including the Falkland Islands and Brunei and the country supports

military and peacekeeping operations in Iraq and Afghanistan¹¹. Finally, the United States has a major commitment of several hundred helicopters to Afghanistan and Iraq.¹²

Several NATO members also supply helicopters to ongoing peacekeeping operations in the former Yugoslavia. However, NATO does not publically release figures on the quantities and national origin of the helicopters deployed to support these commitments.¹³ The same is also true for the European Council which has overarching responsibility for European Union Force deployments to Bosnia-Herzegovina, Chad/Central African Republic and the Democratic Republic of Congo.¹⁴

4.0 Technical issues

In order to sustain a continual deployment of helicopters abroad, countries are required to maintain a number of helicopters at home. For example, according to the UK's Secretary of State for Defence Des Browne, there is a basic 'rule of thumb' that requires three helicopters to support a single helicopter in theatre.¹⁵ Essentially, while one helicopter is operating in theatre, another will be undergoing preparations to replace

the aircraft which has been deployed. This may include installing special equipment such as sand filters if the aircraft is operating in a desert environment, ballistic armour if there is a danger of small-arms fire being directed at the aircraft in the theatre of operations, or specialist self-defence equipment to defend the aircraft against Surface-to-Air Missiles (SAMs).

Meanwhile, a third aircraft may be undergoing Maintenance, Repair and Overhaul (MRO) at home following its deployment during which the helicopter may have sustained damage or may require complex servicing or replacement of essential systems such as the engines, power train, gearbox and rotor blades. Once these items are replaced or serviced, the aircraft will need to perform some flight testing to ensure that it is fully airworthy and ready for deployment.

Thus, in reality, to maintain a rolling three-month deployment of four helicopters to an operational theatre, a country would have to set aside twelve helicopters to support this mission. It is also important to note that MRO and equipment installation commitments increase the more demanding the operational theatre's terrain and climate, and the more hostile the environment.

The challenges that so-called 'hot and high' environments with high ambient temperatures and rugged terrain pose to helicopters are well-documented in the news media. Moreover, helicopters are also highly vulnerable to contamination from sand particles, which can cause extensive damage to rotor blades and which make operations in desert environments hazardous.

In addition to overseas commitments, armed forces will also retain a certain number of aircraft to support other commitments such as domestic aircrew training; military exercises at home and abroad; and aircrews to maintain their flying proficiency. Furthermore, an air force or an army will most probably have a proportion of their fleet undergoing MRO or upgrade programmes at any one time.

Helicopters are 'high maintenance' assets with significant numbers of moving parts and complex propulsion, avionics and weapons systems. A helicopter's rotor, engine and transmission all experience high stress levels, along with its airframe which can be subjected to high levels of vibration. Failures of any of these systems can cause the catastrophic loss of the aircraft and there is a major safety imperative to ensure that the aircraft is in an airworthy condition at all times. This requires the aircraft to undergo regular inspection and maintenance cycles.

According to one source it is reasonable to say that at any one time, up to 30 percent of a nation's helicopter fleet may be undergoing MRO or domestic training, proficiency and exercise commitments.¹⁶

These factors radically affect how many spare helicopters a country may be able to provide for a continual rolling deployment abroad. However, when taking these factors into account, an examination of

publically available information on current NATO member and leading U.N. aircraft contributing nations' helicopter strengths and commitments suggests that these

countries have significant spare capacity which it could make available to support U.N. missions.

5.0 Availability of suitable aircraft

Although the paper strength of NATO members and the leading U.N. aircraft contributing countries in terms of medium and heavy lift utility helicopters is impressive, there are questions regarding the suitability of these aircraft for so-called 'out-of-area' operations in places such as Darfur.

NATO's helicopter fleets include legacy aircraft from the days of the Cold War when the helicopter's task would primarily be to perform intra-theatre lift in Central Europe to reinforce and resupply ground troop formations in peacetime, or in the event of a conflict with the Warsaw Pact.¹⁷

That said, Boeing's CH-47 Chinook twin rotor helicopter has a particularly robust construction and has emerged as a tough workhorse in the hot weather and mountainous terrain of Afghanistan. It has a Maximum Take Off Weight (MTOW) of 10,941-kg (22,798-lb) or around 33 troops, with a range of up to 741 km (400 nm).¹⁸ However within the countries surveyed, only Greece, Italy, the

Netherlands, Spain, the United Kingdom and the U.S. possess these aircraft.

Newer medium utility helicopter designs such as the AgustaWestland AW-101 and the Eurocopter NH-90 have similarly impressive weight, accommodation and range capabilities but have only entered service in small numbers. In the case of the AW-101, Denmark, Portugal and the UK have around 48 of the troop-carrying Tactical Transport Helicopter (TTH) version between them. Meanwhile, within the alliance, Germany, Italy, Norway are the only countries which have so far received their NH-90s, with the Belgian Air Component, *Aviation Légère de l'Armée de Terre* (French Army Light Aviation), Hellenic Army, *Exército Português* (Portuguese Army), *Ejército de Tierra* and *Ejército del Aire* (Spanish Army and Spanish Air Force) expected to receive their machines over the next five years.

The rest of NATO's medium helicopter inventory is made up of Cold War-era designs such as the Eurocopter AS-

332/532 Puma family of rotary aircraft (see *Appendix*). The situation is a little improved by the former Warsaw Pact members who have joined NATO such as Bulgaria, Romania and Poland along with India, Pakistan and Ukraine. These countries are equipped with a significant number of Mil Mi-8 and Mi-17 medium-lift aircraft, which are known for their robust construction. However some of these aircraft may require the installation of subsystems such as FLIR or SAM self-defences before they would be adequate for peacekeeping tasks.

This is also the case for medium lift helicopters operated by the Western European members of the NATO alliance which might lack the necessary subsystems to support U.N. peacekeeping operations. Not all of the aircraft owned by the countries surveyed might be fitted with the self-defence systems to allow them to operate with adequate protection in a region which could host a significant number of SAM threats.¹⁹ Sudan is one such country with a high degree of SAM systems, in particular highly-mobile 9K32M Strela-2 (NATO reporting name 'SA-7 Grail') MANPADS (Man Portable Air Defence Systems) which can be operated by a single individual and which have the capability to disable or destroy a helicopter.²⁰

To make matters more complex, several NATO members are in the process of helicopter fleet renewal initiatives.²¹ As discussed above with the NH-90, many NATO members are preparing to retire their older aircraft to replace them with newer helicopters such as the NH-90 and AW-101. The result is that the designs which are being replaced are towards the end of their active lives and are therefore more maintenance-intensive to keep flying.

At the same time, NATO members are faced with an awkward situation by which, due to manufacturing delays on the NH-90, these aircraft are entering service around two years later than originally planned. The result is that there will be further delays until the aircraft can be certified as fully operational and ready for active service.

This report has taken a survey of the medium lift machines now available to the NATO membership and the leading U.N. aircraft contributing nations, which conform to the range and payload requirements stipulated by the U.N. While the countries surveyed have thousand of helicopters in its combined fleet, only a proportion of these machines will adhere to the needs of the U.N. for the Darfur mission.

6.0 Political issues

The problem of securing helicopters for U.N. operations may not simply be restricted to availability; it may also concern national political commitments. The deployment of helicopters to support peacekeeping operations can carry a certain degree of political baggage. Countries may be perceived as actors in a conflict no matter how even-handed and impartial the deployment is intended to be.

Furthermore, the loss of an aircraft to hostile action during a peacekeeping deployment, particularly if it results in fatalities of troops and aircrew, could cause domestic public support for the mission to seriously decline.²²

Demands for helicopters from the leading contributing nations and NATO members to support peacekeeping missions will also have to compete with demands from other quarters for rotary lift. Ongoing military operations in Afghanistan have a significant appetite for helicopters to assist combat in this mountainous country with its harsh climate. Helicopters are the preferred means of mobility given that they are harder to attack than vehicle convoys while also being able to travel at high speeds and can operate without a runway. In November 2007, NATO Secretary General Jaap de Hoop Scheffer asked alliance members to increase the number of helicopters based in Afghanistan.²³

7.0 Current helicopter availability estimations by NATO members and leading U.N. aircraft contributing nations

Belgium, Canada, Estonia, Iceland and Luxembourg all lack suitable helicopters which have a basic conformity in terms of payload, range and accommodation with the U.N. requirements stipulated above. Meanwhile, Norway, Germany and the United Kingdom do not appear to have

surplus aircraft which could be donated to a U.N. peacekeeping operation.

However, Bulgaria, the Czech Republic, Denmark, France, Greece, Hungary, India, Italy, Latvia, Lithuania, the Netherlands, Pakistan, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey,

Ukraine, and the U.S. have some surplus aircraft which could be made available.

In order to produce estimations on the number of helicopters which a country might be able to deploy, it is important to calculate the number of aircraft needed to sustain current operations, along with the number of aircraft required for domestic obligations such as training, crew proficiency, MRO rotations, and upgrade and retrofit programmes.

7.1 Bulgaria

The Bulgarian air force operates Mil Mi-17 and Eurocopter AS-532AL aircraft, of which it has 18 and eight airframes respectively.²⁴ Bulgaria is not reported to have any of these aircraft deployed abroad supporting overseas commitments. Given that up to 30 percent of the fleet may be involved in domestic duties (training/proficiency/exercise, MRO; upgrade and retrofit) this could mean that the country has around 18 aircraft available to support international peacekeeping efforts. Based on the guideline that three helicopters are required to maintain a single machine in a rolling deployment to an operational theatre, the Bulgarian air force might be able to provide around six aircraft to support U.N. peacekeeping operation.

7.2 Czech Republic

With a fleet of around three Mil Mi-8s and up to 37 Mi-171/1sh, the *Vzdušné síly Armády České republiky* (Czech Air Force) has an impressive inventory of medium lift helicopters.²⁵ With around 12 of these machines estimated to be involved in national commitments at any one time, the Czech government might be able to make up to 28 aircraft available to support peacekeeping operations, which could allow for a rolling deployment of up to nine aircraft.

However, the Czech government is thought to be under significant pressure to deploy any surplus helicopters to Afghanistan to support ISAF operations. In May 2008, the U.S. government was reported to be leading an initiative to finance the upgrade of several of the country's Mil-17s to outfit them with NATO-compatible equipment such as night-vision and self-defence systems, identification friend-or-foe transponders and secure radio communications.²⁶ The U.N. might have to compete with NATO in securing any Czech air force medium lift helicopters to support the organisations' peacekeeping efforts.

7.3 Denmark

The *Flyvevåbnet* (Royal Danish Air Force) has a fleet of around eight AW-101 aircraft which were delivered from 2007.²⁷ These are advanced medium lift helicopters which could be ideally suited to assist U.N. missions. The country is estimated to maintain at least two of these aircraft for national commitments which means that around six aircraft could be available to support U.N. operations theoretically allowing for a rolling deployment of two AW-101s.

7.4 France

France has one of Europe's largest medium lift helicopter fleets. The country has just over 200 SA-330Ba, AS-332C/L1, AS-532UL and SA-365N aircraft spread across the *Armée de l'Air* (French Air Force), the French Army and the *Aviation navale* (Naval Aviation).²⁸ At the same time, the country has a significant quantity of international commitments; with around three aircraft permanently stationed in Chad to support the French military presence in that country, this is in addition to the ten aircraft which are supporting the EUFOR Chad/CAR mission and the approximately 10 helicopters based in Djibouti.

The French government also deploys helicopters to French Guiana, French Polynesia and the French West Indies, in

addition to around five machines which are based in New Caledonia.²⁹ To maintain the rolling deployment of these aircraft, the French armed forces are thought to require a total of over 130 helicopters to support around 40 deployed aircraft. In addition, the country is estimated to have around 60 aircraft permanently employed in support of national commitments. The result is that the government may not have much spare capacity to deploy additional aircraft and may only be able to muster about 10 additional machines to allow for a rolling deployment of around three aircraft.

7.5 Germany

Like France, Germany operates an impressive number of helicopters across its *Luftwaffe* (Air Force) and *Heeresflieger* (Army Aviation) operating around 86 AS-532U2, NH-90 and CH-53G aircraft.³⁰ It is important to note that of the 80 CH-53G machines that the country possesses, only around 20 of them are considered fit for deployments to support military operations. The country has several international commitments. In addition to the estimated 30 machines Germany has deployed for national commitments, the German armed forces reportedly deploy around six helicopters to support ISAF operations in Afghanistan³¹; around 17 to support of KFOR commitments in Kosovo; plus three machines which are deployed to

Djibouti and around four which support the UNIFIL mission in Lebanon. These commitments effectively rule out any possibility that Germany could deploy additional helicopters to support additional U.N. operations. However, an upgrade programme for the 60 CH-53G aircraft not considered fit for purpose for overseas missions could give some extra capacity to support the Darfur peacekeeping mission, although this could be time consuming and the German Ministry of Defence might not have the available funding for such a project.

7.6 Greece

Greece operates around 24 Eurocopter AS-332C1 and Boeing CH-47D helicopters.³² The country has international commitment deploying helicopters to support UNIFIL and for domestic medical services. It is estimated that Greece may have up to three surplus machines which could be deployed in support of U.N. operations, which would allow for a single aircraft to be permanently based on a rolling deployment.

7.7 Hungary

Like Bulgaria, the Czech Republic and Poland, the Hungarian Air Force operates around 23 Mi-17 and Mi-8 aircraft.³³ The country is not reported to have any international commitments for its

helicopters and estimates predict that Hungary may have up to 16 surplus machines which could be deployed in support of U.N. operations. This could permit around five helicopters to be permanently based in support of such an operation on a rolling deployment.

7.8 India

The *Bharatiya Vayu Sena* (Indian Air Force) uses around 130 Mi-8 and Mi-17 helicopters and is one of the largest operators of these types in the world.³⁴ However, the country deploys around 30 of these aircraft in support of existing U.N. operations globally.³⁵ These deployments are estimated to require around 90 supporting aircraft to maintain the commitments. In addition, the Indian air force is estimated to have around 40 helicopters supporting domestic obligations. Theoretically, this could mean that the country has up to 63 aircraft which might be available to support U.N. operations in Darfur. This could allow the country to provide around 20 machines to assist this operation.

7.9 Italy

The *Aeronautica Militare* (Italian Air Force) operates around 39 CH-47C aircraft.³⁶ Italy maintains international commitments deploying around six helicopters to support the UNIFIL and ISAF missions, although it is thought that these

deployments do not always use the large CH-47 aircraft. If this is indeed the case, it could allow Rome to deploy up to 39 aircraft in support of U.N. peacekeeping operations, which would allow around 13 aircraft to be based on a rolling deployment.

7.10 Latvia

The *Latvijas Gaisa spēki* (Latvian Air Force) has a small force of around four Mil Mi-8 aircraft.³⁷ At least one of these machines will be deployed at any one time supporting domestic commitments and therefore the country could probably only spare a single aircraft to support a rolling international helicopter deployment.

7.11 Lithuania

Like Latvia, the Lithuanian air force has a small fleet of Mi-8 aircraft, possibly numbering around eight aircraft.³⁸ It is estimated that at least two of these aircraft might be deployed supporting national commitments at any one time which in turn might mean that up to six helicopters could be available to help support international peacekeeping deployments. This could permit a rolling deployment of up to two aircraft. As with all of the Mil helicopters operated throughout NATO, there might be the need to significantly upgrade these helicopters with new subsystems before

they could be considered fit for U.N. operations.

7.12 Netherlands

The Netherlands operates a significant number of helicopters across the *Koninklijke Luchtmacht* (Royal Netherlands Air Force) with a fleet containing around 28 CH-47D and AS-532U2 medium transport helicopters.³⁹ The country also has significant international commitments deploying around three CH-47s to support ISAF operations in Afghanistan⁴⁰. At any one time, around eight aircraft will be deployed to support national commitments. This leaves a balance of around eleven helicopters which could be used to support a rolling deployment of up to four aircraft to support a U.N. peacekeeping operation.

7.13 Pakistan

Pakistan Army Aviation is a significant user of Mi-8 and Mi-17 helicopters.⁴¹ The force operates around 40 of these aircraft types. Of these helicopters, around six are deployed to existing U.N. operations⁴², with a further 11 aircraft estimated to be involved with domestic obligations. Potentially, this could mean that the army might have around nine aircraft which could be made available to support the U.N. mission in Darfur, which could allow

the country to maintain a rolling deployment of around three airframes.

7.14 Poland

The Polish armed forces have one of the biggest Mi-8 and Mi-17 fleets in NATO with over 50 aircraft spread across the air force, army and navy.⁴³ The Polish government has committed around eight of these aircraft to support ISAF operations in Afghanistan which could require around 24 helicopters to be earmarked to support this deployment.⁴⁴ When national commitments are taken into account, which probably absorb around 15-20 aircraft, this could leave approximately 10 Mi-17s or Mi-8s to support international peacekeeping operations. These 10 aircraft would allow the Polish government to maintain a rolling deployment of around three helicopters.

7.15 Portugal

The Portuguese are one of Europe's newest AW-101 operators and around 12 of the aircraft serve with the country's *Força Aérea Portuguesa* (Portuguese Air Force).⁴⁵ The country is not reported to be deploying any of these aircraft for international commitments, although it is estimated that around four of the helicopters may be supporting national obligations at any one time. That would potentially leave the air force free to

deploy up to eight aircraft to support U.N. peacekeeping efforts, allowing for a deployment of between two to three helicopters.

7.16 Romania

The *Forțele Aeriene Române* (Romanian Air Force) operates a mix of Western and Russian-designed medium lift helicopters in the form of Mi-8 and ICA-Brasov IAR-330L helicopters; the latter being a locally produced version of the Eurocopter SA-330 Puma.⁴⁶ A number of these aircraft are also operated by the *Forțele Navale Române* (Romanian Navy) which gives the country a medium lift utility helicopter fleet of around 37 aircraft. Like Portugal, it is unknown whether the country deploys any of these aircraft in support of international obligations, although domestic commitments could require the country to use around eleven machines. This potentially would make around 26 aircraft available to support U.N. peacekeeping operations, which could translate into the country being able to maintain a permanent deployment of up to nine aircraft.

7.17 Slovakia

With a helicopter fleet size similar to their Baltic counterparts, the *Vzdušné sily ozbrojených síl Slovenskej republiky* (Slovak Air Force) has a modest-sized medium lift helicopter fleet comprising

around 15 Mi-8 and Mi-17 aircraft.⁴⁷ Following the end of Slovakia's 2007–2008 operational deployment of Mi-17 helicopters in Kosovo (NATO KFOR), it no longer has any helicopters deployed in support of international operations. The country is estimated to maintain up to five machines in support of domestic commitments. The Slovakian air force could make around eleven machines available to support U.N. operations, which would allow the country to perform a rotating deployment of up to four aircraft.

7.18 Slovenia

The *Slovenska vojska* (Slovenian Air Force) maintains a small force of around four AS-532AL aircraft. The country is not thought to have any of these aircraft deployed on international operations, and is estimated to have at least one helicopter supporting national commitments. This could allow the air force to provide up to three aircraft to reinforce U.N. operations, which would allow the country to maintain a rolling commitment of one aircraft.

7.19 Spain

The Spanish armed forces have a combined medium lift helicopter fleet of just over 50 aircraft spread across the *Ejército del Aire* (Spanish Air Force) and the *Fuerzas Aeromóviles del Ejército de*

Tierra (Spanish Army Airmobile Force).⁴⁸ The country operates SA-300J/L, AS-332B/B1/UL, CH-47D and AS-532UL helicopters and has at least two aircraft reportedly deployed with the U.N. in support of the UNIFIL mission, requiring at least six helicopters to be available, plus a further two machines supporting ISAF commitments requiring six aircraft to be available.⁴⁹ In addition to this, the country is estimated to have around 14 machines earmarked for national commitments. This could mean that Madrid has up to 18 aircraft to support U.N. operations, which could allow the country to maintain a rolling commitment of around six aircraft.

7.20 Turkey

The Turkish armed forces have one of NATO's largest helicopter fleets. The country has around 120 medium lift aircraft spread across the *Türk Hava Kuvvetleri* (Turkish Air Force) and *Türk Kara Kuvvetleri* (Turkish Army).⁵⁰ The country's helicopter fleet includes AS-532UL and Sikorsky S-70A aircraft. The country maintains international deployments to the UNIFIL operation in Lebanon, reportedly deploying around three aircraft.⁵¹ It also has domestic commitments which may absorb around 30 machines, plus deployments of aircraft to Northern Cyprus. In addition, the Turkish armed forces also deploy

machines to support the ISAF mission in Afghanistan and a significant proportion of aircraft are also being utilised for ongoing offensive operations in Iraq. Because of these factors, it is estimated that the Turkish armed forces might be able to make up to six machines available to support U.N. peacekeeping operations, which could allow for two aircraft to be utilised on a rolling deployment.

7.21 Ukraine

Between them, the *Povitryani Syly Ukrayiny* (Ukrainian Air Force), *Sukhoputni Viys'ka ZSU* (Ukrainian Army) and the *Viys'kovo-Mors'ki Syly Ukrayiny* (Ukrainian Navy) operate around 116 Mil Mi-8 aircraft.⁵² Of those aircraft, an estimated 35 helicopters are fulfilling domestic commitments. In addition, Ukraine deploys around 13 aircraft to assist U.N. operations worldwide⁵³, which requires an estimated supporting force of around forty aircraft. Therefore, Ukraine may have up to 42 surplus aircraft which could support U.N. operations in Darfur. This could allow for a rolling deployment of around 14 aircraft.

7.22 United Kingdom

Like France, the UK has a particularly heavy international commitment of medium lift helicopters. On paper, the strength of the Royal Air Force fleet is placed at around ninety aircraft which

includes AW-101, Eurocopter Puma HC1 and Boeing Chinook HC2 machines.⁵⁴ However, many of these helicopters are deployed to Afghanistan, Brunei, the Falkland Islands and Iraq which it is estimated requires around 80 aircraft to be available. In addition, surplus aircraft may be based at home for domestic commitments. The UK medium lift fleet is particularly taxed at present and there is a recognised need for extra helicopters to support operations in Afghanistan.⁵⁵ Because of this demand, any spare capacity will almost certainly go to support this existing UK commitment.

7.23 United States of America

The U.S. armed forces have NATO's the biggest medium lift helicopter fleet with over 2,100 Boeing CH-46E, CH-53D/E, Bell-Boeing CV-22, CH-47D and Sikorsky UH-60A/L/M aircraft spread across the Air Force, Army and Marine Corps.⁵⁶ That said, the U.S. has by far the largest number of international commitments of any of the Alliance members. Up to 1,170 aircraft may be required to support the continued deployment in Iraq, with over 200 machines supporting the deployment to Afghanistan. Furthermore, the country is estimated to have over 640 aircraft maintaining crew proficiency, training, MRO and upgrade and retrofit requirements. This could allow the country to earmark just over 100 aircraft to

support U.N. operations, which would enable around 30 aircraft with rolling deployment.

However, the Department of Defense has already warned that it might not have the aircraft capacity to assist U.N. operations in Darfur. When asked about spare helicopters, Defense Secretary Robert

Gates said that the current fleet was already “pretty pushed” in terms of commitments to Iraq and Afghanistan. In fact, the depth of these commitments is such that the U.S. is applying pressure to other NATO members to supply helicopters to support operations in Afghanistan where the need for such aircraft is particularly acute.

8.0 Conclusions

Based on the analysis above, NATO and the leading U.N. aircraft contributing nations might have circa 140 aircraft which could be available to the U.N. for rolling deployments to peacekeeping operations.

This figure does not take into account all of the medium lift helicopters which are supporting NATO commitments in the former Yugoslavia and also European Force obligations. NATO members may also have international commitments for their medium lift aircraft which have not been publically reported and for which the figures are unknown. However, despite these limitations, the relatively small number of helicopters involved in these missions means they will not significantly affect the conclusions of this report.

Based on the analysis above, those countries best placed to provide helicopters to UNAMID are:

1. India
2. Ukraine
3. Czech Republic
4. Italy
5. Romania
6. Spain

Between them, these countries would be able to provide an estimated helicopter fleet of seventy helicopters. That is four times the number required by UNAMID.

The aircraft surveyed for this report have the U.N.’s stipulated range and lift requirements; it is possible that some of them may need modifications to their subsystems in order to comply fully with the U.N. requirements for the Darfur

theatre. These costs – which can be considerable – could be met by the countries themselves or by the U.N.

The figures set out above are necessarily estimates given the reluctance of governments to publicly make such data available.

9.0 Appendix: NATO medium lift helicopter capabilities

Helicopter	Range	Payload	Accommodation	Operator countries
AgustaWestland AW-101	1,389 km (750 nm)	15,500-kg (34,171-lb) MTOW	Up to 45 personnel	Denmark, Portugal, United Kingdom
Boeing CH-46E	383 km (206 nm)	11,000-kg (24,250-lb) MTOW	Up to 25 personnel	United States
Boeing CH-47C/D	741 km (400 nm)	22,280-kg (49,118-lb)	Up to 33 personnel	Greece, Italy, Netherlands, Spain, United Kingdom
Eurocopter SA-330Ba/J/L	572 km (308 nm)	7,400-kg (16,314-lb) MTOW	Up to 20 personnel	France, Spain, United Kingdom
Eurocopter AS-332B1/L1/C/C1	830 km (448 nm)	8,600-kg (18,959-lb)	Up to 20 personnel	France, Greece, Spain, United Kingdom
Eurocopter AS-532AL/UL/U2	1,215 km (656 nm)	9000-kg (19841-lb) MTOW	Up to 21 personnel	Bulgaria, France, Germany, Netherlands, Slovenia, Spain, Turkey, United Kingdom
Eurocopter NH-90	1,203 km (649 nm)	23,370-kg (51,522-lb) MTOW	Up to 20 personnel	Germany
ICA-Brasov IAR-330L	572 km (308 nm)	7,400-kg (16,314-lb) MTOW	Up to 17 personnel	Romania
Mil Mi-17/1Sh	950 km (512 nm)	13,000-kg (28,660-lb) MTOW	Up to 32 personnel	Bulgaria, Czech Republic, Hungary, Poland, Slovakia

Helicopter	Range	Payload	Accommodation	Operator countries
Mil Mi-8/P/S/T/R/L	460 km (248 nm)	11,000 kg (24,250-lb) MTOW	Up to 24 personnel	Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia
Sikorsky CH-53D/G/E	1,000 km (539 nm)	Up to 19,100 kg (42,108-lb) MTOW	Up to 37 personnel	Germany, U.S.
Sikorsky UH-60/S-70	592 km (319 nm)	Up to 11,113 kg (24,499-lb)	Up to 14 personnel	Turkey, U.S..

Sources: Endres, G, Gething, M, *Jane's Aircraft Recognition Guide*, Jane's Information, Group, Coulsdon, 2002; Donald, D, *The Pocket Guide to Military Aircraft*, Bounty Books, London 2001; <http://www.airforce-technology.com/projects>

10.0 Appendix: Summary of Available Helicopters by Country

Country	Estimated Available Helicopters	Category
Bulgaria	6	NATO
Czech Republic	9	NATO
Denmark	2	NATO
France	3	NATO
Greece	1	NATO
Hungary	5	NATO
Italy	13	NATO
Latvia	1	NATO
Lithuania	2	NATO
Netherlands	4	NATO
Poland	3	NATO
Portugal	3	NATO
Romania	9	NATO
Slovakia	4	NATO
Slovenia	1	NATO
Spain	6	NATO
Turkey	2	NATO
USA	30	NATO
India	20	Traditional UN Contributor
Pakistan	3	Traditional UN Contributor
Ukraine	14	Traditional UN Contributor

NATO Countries without Suitable, Available Helicopters

Belgium
Canada
Estonia
Iceland

Luxembourg
Norway
Germany
United Kingdom

Notes

- ¹ 2008 Aviation Source Book, Aviation Week and Space Technology, McGraw Hill, 2008
- ² France: Jane's Sentinel Security Assessments, Jane's Information Group, Coulsdon 2008
- ³ Germany: Jane's Sentinel Security Assessments, Jane's Information Group, Coulsdon 2008
- ⁴ Tsiliopoulous, 'Military copter shortage affects Greek readiness' @ <http://www.speroforum.com/site/article.asp?idarticle=14925>
- ⁵ Italy: Jane's Sentinel Security Assessments, Jane's Information Group, Coulsdon 2008
- ⁶ Netherlands: Jane's Sentinel Security Assessments, Jane's Information Group, Coulsdon 2008
- ⁷ Annual Review of Global Peace Operations 2008, Centre on International Cooperation/Lynne Reiner, Boulder, 2008
- ⁸ Glowacki, B, 'Poland to send upgraded Mi-17 transport helicopters to Afghanistan', Flight International, 25th March 2008
- ⁹ Spain: Jane's Sentinel Security Assessments, Jane's Information Group, Coulsdon 2008
- ¹⁰ Turkey: Jane's Sentinel Security Assessments, Jane's Information Group, Coulsdon 2008
- ¹¹ United Kingdom: Jane's Sentinel Security Assessments, Jane's Information Group, Coulsdon 2008
- ¹² The Military Balance 2008, International Institute of Strategic Studies, Routledge, London, 2008
- ¹³ Conversation with senior NATO media liaison official, 25th June 2008.

¹⁴ Conversation with EU press representative, 26th June 2008.

¹⁵ Des Browne, Secretary of State, Ministry of Defence, Written Ministerial Statement, Hansard, 20th May 2008.

¹⁶ Conversation with senior NATO media liaison official

¹⁷ Marcus, J, 'Helicopter shortage in overseas mission' @www.bbc.co.uk/news 11th January 2008

¹⁸ Donald, D, The Pocket Guide to Military Aircraft, Bounty Books, London 2001 and 'CH-47E/F/MH-47E Chinook Heavy Lift Helicopter' @<http://www.airforce-technology.com/projects/chinook/specs.html>

¹⁹ 'Getting boots off the ground', The Economist, 24th January 2008

²⁰ The Military Balance 2008

²¹ John, M, 'Analysis – Helicopter crunch hobbles peace missions', Reuters, 27 November 2007

²² ibid

²³ 'NATO About to Lease Troops Helis for Afghanistan?', Defense Industry Daily, 8th November 2007

²⁴ 2008 Aviation Source Book, Aviation Week and Space Technology, McGraw Hill, 2008

²⁵ ibid

²⁶ Lok, JJ, 'Mi-17 Upgrade Aims to Fill NATO Helo Gap', Aviation Week and Space Technology, 27th May 2008

²⁷ 2008 Aviation Source Book

²⁸ ibid

²⁹ France: Jane's Sentinel Security Assessments

³⁰ 2008 Aviation Source Book

³¹ Germany: Jane's Sentinel Security Assessments

³² 2008 Aviation Source Book

³³ *ibid*

³⁴ *ibid*

³⁵ Annual Review of Global Peace Operations 2008

³⁶ 2008 Aviation Source Book

³⁷ *ibid*

³⁸ *ibid*

³⁹ *ibid*

⁴⁰ Netherlands: Jane's Sentinel Security Assessments

⁴¹ 2008 Aviation Source Book

⁴² Annual Review of Global Peace Operations 2008

⁴³ 2008 Aviation Source Book

⁴⁴ Glowacki, B, 'Poland to send upgraded Mi-17 transport helicopters to Afghanistan', Flight International, 25th March 2008

⁴⁵ 2008 Aviation Source Book

⁴⁶ *ibid*

⁴⁷ ibid

⁴⁸ ibid

⁴⁹ Annual Review of Global Peace Operations 2008

⁵⁰ 2008 Aviation Source Book

⁵¹ Turkey: Jane's Sentinel Security Assessments and Annual Review of Global Peace Operations 2008

⁵² 2008 Aviation Source Book

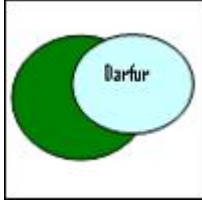
⁵³ Annual Review of Global Peace Operations 2008

⁵⁴ 2008 Aviation Source Book

⁵⁵ Harrell, E, 'Helicopter crisis hits battle with Taliban', The Scotsman, 16th June 2007

⁵⁶ 2008 Aviation Source Book





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