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# African Adventure?

Assessing the European Union's Military Intervention  
in Chad and the Central African Republic

by Bjoern H. Seibert

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## **African Adventure?**

### **Assessing the European Union's Military Intervention in Chad and the Central African Republic**

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The Security Studies Program at MIT is a graduate-level research and educational program based at the Center for International Studies at MIT. The senior research and teaching staff includes social scientists and policy analysts. A special feature of the program is the integration of technical and political analysis of national and international security problems. Security Studies is a recognized field of study in the MIT Political Science Department. Courses emphasize grand strategy, the causes and prevention of conflict, military operations and technology, and defense policy.

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Map 1  
Area of Operations



Source: Modified Version: UN Peacekeeping Operations, Cartographic section (January 2004)



Map 3  
Central African Republic



Source: UN Peacekeeping Operations, Cartographic Section (January 2007)



## INTRODUCTION

The European Union (EU) is on the verge of launching its largest military mission in Africa.<sup>1</sup> On October 16, 2007 the Council of the European Union gave its final approval to conduct a military operation in Chad and Central African Republic (CAR), based on UN Security Council Resolution 1778 (2007).<sup>2</sup> The mission will be conducted in the institutional framework of the European Security and Defense Policy (ESDP), as the military component of the UN Mission to the Central African Republic and Chad (MINURCAT).<sup>3</sup> The force – called EUFOR Tchad/RCA – is presently envisioned to comprise of 3,700 troops.<sup>4</sup> Joined by a small number of UN personnel and local police, EUFOR Tchad/RCA has the mission of protecting the civilians in danger, particularly refugees and internally displaced persons (IDPs), protecting UN personnel and equipment, and facilitating the delivery of humanitarian aid in eastern Chad and northeastern CAR.<sup>5</sup> The mission is conceived as a bridging operation, to be replaced by a UN follow-on-force within one year.<sup>6</sup>

While the proposed EU mission in Chad and CAR has received considerable media attention, it is remarkable how little critical analysis it has engendered.<sup>7</sup> This paper seeks

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1. The largest EU mission in Africa to date was the EU military operation in the Democratic Republic of Congo (Operation Artemis) launched in 2003. It included approximately 2,000 troops. The largest EU mission thus far was the EU Military Operation in Bosnia and Herzegovina (EUFOR Althea) launched in December 2004. It initially included a total of 6,270 troops (which were reduced to 2,500 troops in February 2007). See Stockholm International Peace Research Institute, *SIPRI Yearbook 2006: Armaments, Disarmaments and International Security* (Oxford: Oxford University Press, 2006): 175; EU Council Secretariat, “EU Military Operation in Bosnia and Herzegovina”, *Factsheet ATH/08*, February 28, 2007.

2. According to the Chairman of the EU Military Committee (EUMC) General Henri Bentegéat, the size of EUFOR Tchad/RCA will be around 4,300 troops. Out of these 3,700 troops will be deployed in the area of operations, and a strategic reserve of 600 troops will be stationed in Europe. See Brooks Tigner, “EU identifies capability gaps for Chad, CAR”, *International Defence Review*, November 16, 2007. See Council of the European Union, General Affairs and External Relations, 2824<sup>th</sup> Council Meeting, Luxembourg, October 15-16, 2007.

3. European Union, “EU Military Operation in Eastern Chad and North Eastern Central African Republic (EUFOR TCHAD/RCA)”, *Background*, October 15, 2007. An open question remains why the European Battlegroups, created for such operations in Africa, will not be deployed. See Bjoern H. Seibert, “We are not the Afrikakorps: Case Study of a Hypothetical Humanitarian Intervention of the EU Battlegroup in Chad”, May 21, 2007 (*unpublished manuscript*).

4. This number has however not yet been reached. At present the force will receive the following contributions: France: 1,400 troops; Poland: 400 troops; Ireland: 350 troops; Sweden: 200 troops; Romania: 200; Austria: 160 troops; Finland: 40 troops; Dutch: number of troops “most likely in tens”; Slovenia: medical unit; Hungary: 2 troops; Spain and Greece: transportation aircraft; Belgium and Luxembourg: yet unknown; Turkey and Macedonia: possible logistical contributions; Germany and the U.K.: no troop contributions. A question that remains unanswered is whether the French forces stationed in Chad as part of Opération Epervier - currently about 1,100 troops with airlift capacity, as well as a squadron of Mirage fighters – will be integrated into EUFOR or remain separated and thus be in addition to the 3,700 troops.

5. United Nations Security Council, Resolution 1778 (2007), S/RES/1778, September 25, 2007.

6. See Javier Solana, Address of the EU High Representative for the CFSP to the European Parliament Committee on Foreign Relations, Brussels, October 3, 2007.

7. A notable exception is Richard Reeve. See Richard Reeve, “Lines in the Sand – Containing the Greater Darfur Conflict”, *Jane’s Intelligence Review*, January 01, 2007.



to fill this gap in the existing literature. It provides a rough net assessment of the projected EU mission in Chad and CAR – given the information presently available – and endeavors to shed light on some of the most important challenges this operation could face.

To do so, the first section of the paper presents a brief overview of the history and parties to the conflict. The second section describes the mission as outlined in UN Security Council Resolution 1778. The third section offers an estimate of deployment possibilities and challenges. The fourth section evaluates the prospects of accomplishment of the objectives of the mission, and the fifth assesses the probability of handing over the mission to a follow-on-force within one year. The final section summarizes the key findings and offers thoughts on their possible implications.

The paper concludes that, as currently conceived, the prospects of success of the mission as defined by the UN mandate are uncertain. Unless European countries are willing to commit more troops and resources, EUFOR Tchad/RCA will face serious difficulties achieving the ambitious objectives of the mission.

## BACKGROUND

The historical origins of the conflicts in Sudan, Chad and Central African Republic have been described elsewhere.<sup>8</sup> Without reiterating these detailed historical accounts, it is useful to begin with a brief overview of the current crisis in eastern Chad and northeastern CAR.

Since 2006, armed activity in eastern Chad and northeastern Central African Republic has steadily intensified.<sup>9</sup> Rebel attacks, incursions and counter-insurgency retaliation have since caused widespread destruction in frontier areas of eastern Chad and northeastern CAR, which led to mass population displacement.<sup>10</sup> This also led to worsening conditions for the approximately 230,000 Sudanese refugees in eastern Chad, which have been sys-

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8. See for example: Alex de Waal (ed.), *War in Darfur and the Search for Peace*, (Cambridge, MA: Harvard University Press, 2007); J. Millard Burr / Robert O. Collins, *Darfur: The Long Road to Disaster*, (Princeton: 2006); Roland Marchal, “Chad/Darfur: How Two Crises Merge”, *Review of African Political Economy*, Vol. 33, No. 109 (September 2006): 467; Gérard Prunier, *Darfur: The Ambiguous Genocide*, (Ithaca: Cornell University Press, 2007). Virginia Thompson, Richard Adloff, *Conflict in Chad*, Research Series No. 45, Institute of International Studies (University of California, Berkeley: 1981); Alex de Waal, “Chad in the Firing Line”, *Index on Censorship*, Volume 35, Issue 1 (February 2006): 58 – 65.

9. International Institute for Strategic Studies, *Strategic Survey* (London: Routledge, 2007): 266 – 67.

10. According to a report from the Internal Displacement Monitoring Centre, the internal conflict may not be the major direct cause of displacement. Rather, the report argues that of greater consequence is the government’s decision to withdraw the *Armée Nationale du Tchad* from the southeast to concentrate only on strategic centers, in response to the increasing attacks from rebel movements elsewhere in Chad. This, the report concludes, has left the area along the eastern border with Darfur devoid of security. See Internal Displacement Monitoring Centre, *Internally Displaced in Chad: Trapped Between Civil Conflict and Sudan’s Darfur Crisis*, (July 2007): 10. This is despite the fact that 15,000 troops out of a total of some 25,000 troops of the *Armée Nationale du Tchad* are reportedly deployed in eastern Chad. See UN Security Council, “Report of the Secretary-General on Chad and the Central African Republic”, S/2006/1019 (December 22, 2006): 3.

temic targets of cross-border attacks from both rebel and militia groups.<sup>11</sup>

The causes of the current conflict are complex. Often it is portrayed as a simple spill-over of the crisis in Darfur.<sup>12</sup> It is, in fact, rather caused by a combination of both domestic and regional factors.

### **Domestic Factors**

Both Chad and Central African Republic are notoriously fragmented countries, in which several ethnic groups and tribes compete for power since their independence from France.<sup>13</sup>

In Chad, the current government led by General Idriss Déby, a member of the Zaghawa tribe, came to power in 1990 after overthrowing the government of President Hissène Habré.<sup>14</sup> Since then, Déby has sought to consolidate power by placing loyalists in key positions in both government and army.<sup>15</sup> Despite these efforts, Déby's government remains relatively weak, lacking the ability to establish effective control of the entire Chadian territory. Several ethnic/tribal groups, including his own tribe, have contested his power.<sup>16</sup> As a result, Déby's government has been fighting off several rebellions.<sup>17</sup> The most recent attack on Déby's government, which almost led to his overthrow, took place in April 2006, as anti-Déby rebels, supported by Khartoum, launched an attack on N'djamena from western Sudan and northeastern CAR.<sup>18</sup> Only the logistical and intelligence support of the French military enabled Déby to stop the rebels' march on the outskirts of N'djamena.<sup>19</sup>

In the case of Central African Republic, the current government of General François Bozizé also came to power after a military coup against President Ange-Félix Patassé, in

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11. Human Rights Watch, "Darfur Bleeds: Recent Cross-Border Violence in Chad", *Background No. 2*, (February 2006): 5.

12. There have been a number of critical voices that have not accepted the "spill-over theory". See for example: Roland Marchal, "Chad/Darfur: How Two Crises Merge", *Review of African Political Economy*, Vol. 33, No. 109 (September 2006): 467-482; Roland Marchal, "The Unseen Regional Implications of the Crisis in Darfur", in: Alex de Waal (ed.), *War in Darfur and the Search for Peace*, (Cambridge, MA: Harvard University Press, 2007): 172; Gérard Prunier, "Chad, the CAR and Darfur: Dynamics of Conflict", *Opendemocracy*, April 17, 2007.

13. Virginia Thompson, Richard Adloff, *Conflict in Chad*, Research Series No. 45, Institute of International Studies (University of California, Berkeley: 1981).

14. See Gérard Prunier, "Chad's tragedy", *Opendemocracy*, September 7, 2007.

15. According to Roland Marchal, around 80 percent of the high officials in the military and security apparatus are members of the Zaghawa tribe. See Roland Marchal, "The Unseen Regional Implications of the Crisis in Darfur", in: Alex de Waal (ed.), *War in Darfur and the Search for Peace*, (Cambridge, MA: Harvard University Press, 2007): 185.

16. One of the most potent anti-Déby rebel groups, the *Rassemblement des Forces pour le Changement* (RFC) is led by Déby's nephew, Timane Erdimi, who is also a member of the Zaghawa clan. See Simon Massey, Roy May, "The Crisis in Chad", *African Affairs*, Vol. 105 (July 2006): 444. For a good overview of the most recent Chadian history see Bernard Lanne, "Recent History of Chad", in: Iain Frame (ed.), *Africa South of the Sahara 2006*, 35<sup>th</sup> edition (London: Routledge, 2006): 244-253.

17. Bernard Lanne, "Recent History of Chad", in: Iain Frame (ed.) *Africa South of the Sahara 2006*, 35<sup>th</sup> edition (London: Routledge, 2006): 244-253.

18. *Africa Confidential*, "Déby hangs on", Volume 47, Number 9, (April 28, 2006): 4-5.

19. *Ibid.*; Roland Marchal, "Creeping Conflict", *World Today* (April 2007): 21.

March 2003.<sup>20</sup> Despite being reaffirmed by an election in 2005, his claim to power has been contested by a variety of ethnic/tribal groups.<sup>21</sup> As in the case of Chad, his efforts to consolidate his power by placing loyalists in both government and army have not enabled him to establish effective control of the territory, which leaves large parts of CAR as ungoverned space.<sup>22</sup> Like Déby, General Bozizé has been warding off several rebellions over the past years. Fighting escalated when, in late 2006, rebel groups, possibly with Sudanese support, occupied key northeastern towns for several weeks before being driven out.<sup>23</sup>

### **Regional Dimension**

In both domestic conflicts, the regional dimension features prominently. In the case of Chad, which borders Sudan's Darfur region, the regional dimension has played a central role. After initially cooperating with Khartoum over the Darfur conflict, Chad's President Idriss Déby's support waned, as it threatened to destabilize him domestically.<sup>24</sup> As a result, Khartoum faulted Déby for cooperating with the Darfurian rebels – of whom his own clan, the Zaghawa, forms the military backbone – by letting them operate from Chadian territory.<sup>25</sup> The result has been a proxy war between Chad and Sudan.<sup>26</sup>

Khartoum started arming and supporting Chadian anti-Déby rebels based in Darfur, in order to overthrow Déby's government, while pro-government Sudanese militia groups started aiding Chadian anti-Déby rebels against the Chadian government forces.<sup>27</sup> Janjaweed militias, for example, attacked various parts in southeastern Chad, which drew Chadian government forces away from key points, creating local security vacuums that

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20. *Africa Confidential*, "Enter Bozizé", Volume 44, Number 6, (March 21, 2003): 8.

21. *Africa Confidential*, "A putschist's progress", Volume 46, Number 6, (March 18, 2005): 7.

22. *Jane's Foreign Report*, "Central Africa's weakest link", November 16, 2006. For example, in 2006 the *Forces Armées Centres Africaines* temporarily abandoned the three prefectures in the northeast Bamingui-Bangoran, Haute-Kotto and Vakaga. See UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2006/1019 (December 22, 2006): 5; See also James C. Swan, "Chad and the Central African Republic: The Regional Impact of the Darfur Crisis", *Testimony before the Senate Committee on Foreign Relations Subcommittee on Africa* (March 20, 2007): 3.

23. UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2006/1019 (December 22, 2006): 5; *Economist*, "Contaminating the neighbors", Volume 381, Issue 8503 (September 11, 2006): 54.

24. Roland Marchal, "The Unseen Regional Implications of the Crisis in Darfur", in: Alex de Waal (ed.), *War in Darfur and the Search for Peace*, (Cambridge, MA: Harvard University Press, 2007): 185; Gérard Prunier, "Chad, the CAR and Darfur: Dynamics of Conflict", *Open Democracy*, April 17, 2007; International Institute for Strategic Studies, *Strategic Survey* (London: Routledge, 2007): 266-67.

25. Roland Marchal, "Creeping Conflict", *World Today* (April 2007): 21.

26. *Ibid.*

27. *African Confidential*, "Wars across borders", Volume 47 Number 22 (November 3, 2006): 3-4; Darfur has, in the past, been an important sanctuary for Chadian dissidents. Both Chadian President Déby and his predecessor, Hissène Habré, assumed power through military campaigns based in Sudan. See James C. Swan, "Chad and the Central African Republic: The Regional Impact of the Darfur Crisis", *Testimony before the Senate Committee on Foreign Relations Subcommittee on Africa* (March 20, 2007): 2; John Prendergast, "Sudan, Chad, and the Central African Republic: The Regional Impact of the Darfur Crisis", *Testimony Before the Senate Committee on Foreign Relations Subcommittee on Africa* (March 20, 2007): 3.

allowed anti-Déby rebels to advance.<sup>28</sup> To counter this threat, Chadian government forces, aided by Darfur's rebel groups, engaged in a counter-insurgency campaign against the various anti-Déby rebels.<sup>29</sup>

In the case of Central African Republic, the regional dimension has been more indirect. For years, north and northeastern CAR has been a sanctuary for several regional rebel groups.<sup>30</sup> In the absence of CAR's ability to effectively control the area, the Chadian army has, since 2003, kept control of the most sensitive areas against Chadian armed opposition, CAR insurgents and highway bandits.<sup>31</sup> However, this control is eroding, as the Chadian army fights on its own territory and can no longer police outside its borders.<sup>32</sup> Fearing internal instability, the government of General Bozizé has been engaged in a counter-insurgency campaign in northeastern CAR in order to regain control of the territory against a numerically superior mix of various rebel groups and bandits.<sup>33</sup>

### ***Enemy Forces and Friendly Forces***

As the EU's presence is bound to create gainers and losers, the groups negatively affected could potentially become enemy forces to EUFOR Tchad/RCA. EUFOR may thus find itself embroiled, from the outset, into this complex web of conflicts. The next section will outline potential enemy and friendly forces, should such a situation materialize.

### ***Potential Enemy Forces***

#### ***Militias***

At present it is unclear whether Janjaweed militias would continue their attacks in eastern Chad in spite of EUFOR's presence. It is not unlikely that the groups that the Sudanese

28. Ibid.; James C. Swan, "Chad and the Central African Republic: The Regional Impact of the Darfur Crisis", *Testimony before the Senate Committee on Foreign Relations Subcommittee on Africa* (March 20, 2007): 3. The security vacuums led in turn to increased internal displacement. See Internal Displacement Monitoring Centre, *Internally Displaced in Chad: Trapped Between Civil Conflict and Sudan's Darfur Crisis*, (July 2007): 10.

29. The *Justice and Equality Movement* (JEM) has repeatedly supported Déby in his fight against opposing rebel groups. See James C. Swan, "Chad and the Central African Republic: The Regional Impact of the Darfur Crisis", *Testimony before the Senate Committee on Foreign Relations Subcommittee on Africa* (March 20, 2007): 2; *Africa Confidential* reported that during the April 2006 attack on N'djamena, the French air force airlifted JEM fighters from their rear bases in eastern Chad to secure the main southern city of Sahr. See *Africa Confidential*, "Déby hangs on", Volume 47, Number 9, (April 28, 2006): 4-6.

30. UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2006/1019 (December 22, 2006): 5; James C. Swan, "Chad and the Central African Republic: The Regional Impact of the Darfur Crisis", *Testimony before the Senate Committee on Foreign Relations Subcommittee on Africa* (March 20, 2007): 3.

31. Roland Marchal, "The Unseen Regional Implications of the Crisis in Darfur", in: Alex de Waal (ed.), *War in Darfur and the Search for Peace*, (Cambridge, MA: Harvard University Press, 2007): 196.

32. Ibid.

33. *Jane's Sentinel Country Risk Assessments*, electronic database entry for "Country Profile Central African Republic", January 19, 2007. This, however, happened only after Bamingui-Bangoran, Haute-Kotto and Vakaga had been temporarily abandoned by the *Forces Armées Centres Africaines*. See UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2006/1019 (December 22, 2006): 5.

government still has control of will avoid confrontation with EUFOR, as Khartoum has an interest in avoiding escalating tensions with the European Union. This could however change if Darfur's rebel groups continue to enjoy sanctuary in eastern Chad and are able to continue to mount cross-border attacks into Darfur, despite the presence of EUFOR.

The Janjaweed are a loose collection of fighters of Arab background, which are not organized in one single coherent structure.<sup>34</sup> Mainly based in Western Sudan, many of the Janjaweed militias have received training and equipment from the Sudanese Armed Forces.<sup>35</sup> According to most estimates, the numerical strength of the Janjaweed is approximately 20,000 fighters.<sup>36</sup> Information on their weapon capabilities is limited.

### *Rebel groups*

In late October 2007, the Chadian government signed a peace agreement with major rebel groups.<sup>37</sup> However, doubts remain as to how solid this agreement is.<sup>38</sup> Tensions between EUFOR and the anti-Déby rebel groups could thus arise, should President Déby seek to exploit the strategic pause provided by EUFOR on the eastern border, to attempt eradicating these rebel groups. Such tensions could especially materialize if EUFOR provides Déby with valuable intelligence on the rebels' activities and location. This possibility should not be ruled out – despite European assurances that the force will be a neutral actor in the conflict – given the strong French contribution to the force, and France's previous record in providing military support to both Presidents Déby's and Bozizé's governments.<sup>39</sup>

34. According to Ali Haggag, there are six groups of pro-government armed groups in Darfur that are associated with the Janjaweed: the "Peace Force" (*Quwat al Salaam*), the nomad protection force, the Um Bakha irregular forces, the Um Kwak attacker force, the Popular Defense Force (*Difaa al Sha'abi*) and the Popular Police Force (*Shorta al Sha'abi*). See Ali Haggag, "The Origins and Organization of the Janjawiid in Darfur", in: Alex de Waal (ed.), *War in Darfur and the Search for Peace*, (Cambridge, MA: Harvard University Press, 2007): 113. Arab in this context refers to Arabic-speaking groups of nomadic and semi-nomadic African people living in both Chad and Sudan. See ICG Africa Report, No. 76 (March 2004): 16. The clans and tribes frequently reported as the main suppliers for the militias are the Irayqat and Ouled Zed sub-clans of the camel herding northern Rezeigat, the Mahariya and the Beni Hussein. See Usman Tar, "The Perverse Manifestations of Civil Militia in Unstable States: Evidence from Western Sudan", *Peace, Conflict and Development: An Interdisciplinary Journal*, Vol. 7 (July 2005): 160-166.

35. Ali Haggag, "The Origins and Organization of the Janjawiid in Darfur", in: Alex de Waal (ed.), *War in Darfur and the Search for Peace*, (Cambridge, MA: Harvard University Press, 2007): 113-139.

36. The strength of approximately 20,000 has been widely circulated and seems to stem from various western NGO estimates. However, hard evidence of the real numbers of Janjaweed fighters is difficult to find. The number should therefore be treated with caution. International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 432.

37. Betel Miarom, "Chad says signed definitive peace with rebel groups", *Reuters*, October 25, 2007.

38. See for example Omar Ismail, John Prendergast, "A Race Against Time in Eastern Chad, *Enough Strategic Briefing #7* (November 2007): 1.

39. One important anti-Déby rebel group, the RFC (*Rassemblement des Forces pour le Changement*), has already warned EUFOR not to obstruct their struggle to topple President Déby, otherwise the group threatened to fight against EUFOR. See Reuters, "Chad rebels warn EU force against blocking them", September 14, 2007; *Africa Research Bulletin: Political, Social and Cultural Series*, "Chad: Rebel Warning", Volume 44, Issue 9 (October 2007): 17235C-17136B. This however seems hardly possible, given France's prior involvement in support of General Déby. As a result, France's preeminent role in EUFOR (which not only provides the bulk of the force, but also the force commander – Brigadier General Jean-Philippe Ganascia) has been severely criticized by aid groups. See for example Brooks Tigner, "Aid groups in Chad highlight need for EU mission neutrality", *Jane's Defence Weekly*, October 17, 2007. Others, such as Alex de Waal, have however argued that



Several Chadian anti-Déby rebel groups are active in the area of operations. The composition and alliances between these groups is extremely fluid as they are plagued by divisions and rivalries, which lead to frequent splits. At present, the most important rebel groups appear to be a group known by its French acronym UFDD (*Union des Forces pour la Démocratie et le Développement*), led by Mahamat Nouri, who served as defense minister before defecting in May 2006.<sup>40</sup> UFDD's activity is mainly concentrated in the area south of Abéché.<sup>41</sup> In late 2006, UFDD – which includes several rebel groups – briefly seized the towns of Goz Beida, Am Timan and the regional center of Abéché, and in January 2007, the border cities of Adé and Adré.<sup>42</sup> UFDD forces are also accused of conducting operations alongside the Janjaweed and attacking refugee camps in eastern Chad.<sup>43</sup> As UFDD is dominated by Arab tribes, it is believed to be directly supported by Khartoum, which might see it as a potential replacement for General Déby's government.<sup>44</sup>

The other important rebel group is known as RFC (*Rassemblement des Forces pour le Changement*)<sup>45</sup> led by Timane Erdimi, a Zaghawa, who served as General Déby's *chef de cabinet* before defecting in 2005.<sup>46</sup> Its fighters are Zaghawa defectors, principally from Chad's Republican Guard, and the rebel group is mainly active in the area north of Abéché.<sup>47</sup> RFC forces have long been associated with another anti-Déby rebel group known as CNT (*Concorde Nationale Tchadienne*), which is led by Colonel Hassan Saleh al-Djinedi.<sup>48</sup> Both RFC and CNT have repeatedly clashed with Chadian government forces in eastern

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the French presence gives the EUFOR the much-needed military muscle to prevent the kind of defeat suffered by African Union troops in Darfur last month, when suspected rebels overran one of their camps. See Pascal Fletcher, "Analysis - Political, ethnic imbroglio awaits EU Chad force", *Reuters*, October 17, 2007.

40. UFDD became the most potent rebel group in early 2007, as the leader of the *Front Uni pour le Changement* (United Front for Change), Mahamat Nour, signed a deal with President Déby and became Chad's defense minister. *Economist Intelligence Unit* electronic database entry for "Country Profile Chad: Main Report" (August 2007): 14. However, Nour's former rebel forces failed to disarm, which led to ongoing clashes with the Chadian armed forces. At present, it seems most likely that these forces will join other anti-Déby rebel groups. According to Omar Ismail and John Prendergast, these forces are currently a major threat to security in eastern Chad. See Omar Ismail, John Prendergast, "A Race Against Time in Eastern Chad", *Enough Strategy Briefing* #7 (November 2007): 2.

41. Richard Reeve, "Lines in the Sand – Containing the Greater Darfur Conflict", *Jane's Intelligence Review*, January 01, 2007. According to Reeve, the UFDD (and the *Rassemblement des forces pour le changement*) have concentrated on raiding towns within 200 km of their Darfur bases rather than attempting to cross Chad to take the capital and depose Déby so as not to overextend their supply lines from Darfur. See Richard Reeve, "Lines in the Sand – Containing the Greater Darfur Conflict", *Jane's Intelligence Review*, January 01, 2007.

42. UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2007/97, (February 23, 2007): 2.

43. Simon Massey, Roy May, "The Crisis in Chad", *African Affairs*, Vol. 105 (July 2006): 444.

44. *African Confidential*, "Wars across borders", Volume 47 Number 22 (November 3, 2006): 3-4.

45. The movement was formerly known as *Rassemblement des Forces Démocratiques* (RAFD). *Economist Intelligence Unit* electronic database entry for "Country Profile Chad: Main Report" (August 2007): 14.

46. *Economist Intelligence Unit* electronic database entry for "Country Profile Chad: Main Report" (August 2007): 14.

47. Simon Massey, Roy May, "The Crisis in Chad", *African Affairs*, Vol. 105 (July 2006): 444; Richard Reeve, "Lines in the Sand – Containing the Greater Darfur Conflict", *Jane's Intelligence Review*, January 01, 2007.

48. *Economist Intelligence Unit* electronic database entry for "Country Profile Chad: Main Report" (August 2007): 14.

Chad over the last two years.<sup>49</sup> The level of Sudanese support is unclear, as Khartoum is wary of supporting any movement involving the Zaghawa tribe who, on the Darfur side of the border, are among its most effective opponents.<sup>50</sup>

### *Bandits*

Several well-armed bandits operating in the border region between Chad and CAR will be negatively affected by the EU's presence in the area. The largest group is the Zatanuina, a group of well-armed robbers composed of Chadians and Central Africans operating mainly in the northern parts of Central African Republic.<sup>51</sup> They are well known for their attacks on traders along the northern routes between the Chadian border and Bangui.<sup>52</sup>

Despite limited available information, Table 1 summarizes the militias', rebels' and bandits' size, and capabilities.

**Table 1**  
Estimates on Numerical Size and Equipment of Possible Enemy Force

<i>Group</i>	<i>Type</i>	<i>Numerical strength</i>
Janjaweed militia	Militia	~20,000
Union des Forces pour la Démocratie et le Développement (UFDD)	Rebels	Several thousand
Rassemblement des Forces pour le Changement (RFC)	Rebels	~1,000
Concorde Nationale Tchadienne (CNT)	Rebels	Several thousand
Zatanuina	Bandits	Several thousand
<i>Combined equipment</i>		
<i>Weapons</i>	<i>Type</i>	<i>Quantity</i>
Bladed Weapons	Knives	Unknown, but widely acknowledged
	Machetes	Unknown, but widely acknowledged
Light Weapons	AK47s/G3	Unknown, but widely acknowledged
	Heavy machine-guns	Unknown, but widely acknowledged
	Antitank rocket launchers	Unknown, but widely acknowledged
	Surface-to air missiles	Unknown, but widely acknowledged

**Source:** *IISS Armed Conflict Database* electronic database entry for Chad and Central African Republic; International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 429; *Jane's Sentinel Country Risk Assessments* electronic database entry for "Country Profile Chad: Non-state Armed Groups", January 22, 2007; *Jane's Sentinel Country Risk Assessments* electronic database entry for "Country Profile Central African Republic: Non-state Armed Groups", January 19, 2007; Simon Massey, Roy May, "The Crisis in Chad", *African Affairs*, Vol. 105 (July 2006): 444-45.

49. Ibid.

50. *African Confidential*, "Wars across borders", Volume 47 Number 22 (November 3, 2006): 3-4.

51. *Jane's Sentinel Country Risk Assessments* electronic database entry for "Country Profile Central African Republic: Non-state Armed Groups", January 19, 2007.

52. Ibid.



*The Friendly Forces*

Both the Chadian and CAR national armies can be counted as friendly forces to EUFOR Tchad/RCA. They are, however, both relatively weak forces.

The Chadian national army, the *Armée Nationale Tchadienne* (ANT), has an estimated size of 25,000 troops (Army: 17,000–20,000; Republican Guard: 5,000; Air Force: 350).<sup>53</sup> The army has been re-organized in 1991, but remains under-trained and clearly short of money.<sup>54</sup> Its equipment is sparse, old and barely serviceable, it is also deployed around the country and thus very hard to mobilize.<sup>55</sup> Overall, the effectiveness of the force as a coherent fighting unit is questionable.<sup>56</sup>

Central African Republic’s national army, the *Forces Armées Centre Africaines* (FACA), has an estimated size of only 3,150 troops (Army: 2,000, Gendarmerie: 1,000; Air Force: 150).<sup>57</sup> The forces have extremely limited capabilities, even for internal security duties, and have no ability to enforce the national security of the country.<sup>58</sup> With no artillery pieces larger than mortars, no serviceable tanks, and no air cover, the *Forces Armées Centre Africaines* are an extremely weak force.<sup>59</sup> Table 2 summarizes Chad’s and CAR’s forces’ size and capabilities.

**Table 2**  
**Estimates on Numerical Size and Equipment of Friendly Forces**

<i>Chad</i>	
Active troops / Reserves	33,000 / no reserve
<b>Equipment</b>	
Main Battle Tank	60 T-55
Reconnaissance vehicles	50+ AML-60/AML-90; 100 BRDM-2; 20EE-9 Cas-cavel; 4 ERC-90F Sagaie
Armored personnel carriers	20 BTR-60, 9 LAV-150 Commando
Artillery	105 mm M2
Surface-to-air missiles	SA-7: 8; 23 mm ZU-23-2: 20
Combat Aircrafts	2 PC-7 Turbo Trainer; 2 SF-260M Warrior
Troop transport	1 An-24; 2 C-130 Hercules; 2 PC-9
Helicopters	2 Mi-24; 2 MI-17 Hip-H; 2 SA-316

53. International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 267-68.

54. *Jane’s Sentinel Country Risk Assessments* electronic database entry for “Country Profile Chad: Army”, October 15, 2007.

55. *Ibid.*

56. *Ibid.*

57. International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 267. According to the United Nations, out of the entire FACA, only 1,200 troops are considered to be operational. UN Security Council, “Report of the Secretary-General on Chad and the Central African Republic”, S/2006/1019 (December 22, 2006): 5.

58. *Jane’s Sentinel Country Risk Assessments* electronic database entry for “Country Profile Central African Republic: Armed Forces”, August 23, 2007.

59. *Ibid.*

*Central African Republic*

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Active troops/Reserves		3,250 / no reserves
	<i>Equipment</i>	
Main Battle Tank		3 T-55
Reconnaissance vehicles		8 Ferret
Armored personnel carriers		4 BTR-152; 20 ACMAT, 8 VAB
Artillery		15 120mm M1943
Surface-to-air missiles		none serviceable
Combat Aircrafts		none serviceable
Troop transport		1 C-130H; 2 BNG BN2A Islanders
Helicopters		1 AS 350B Ecureuil

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**Source:** International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 267-268; *Jane's Sentinel Country Risk Assessments* electronic database entry for "Country Profile Chad: Army", October 15, 2007; *Jane's Sentinel Country Risk Assessments* electronic database entry for "Country Profile Central African Republic: Army", August 23, 2007.

**THE MANDATE**

On September 25, 2007 the UN Security Council unanimously adopted Resolution 1778. In the Resolution, the UN Security Council authorizes the European Union to deploy a force of up to 4,000 troops for a period of one year, with the following mandate<sup>60</sup>:

- (1) Protect civilians in danger, particularly refugees and displaced persons;
- (2) Facilitate the delivery of humanitarian aid and the free movement of humanitarian personnel by helping to improve security in the area of operations;
- (3) Protect United Nations personnel, facilities, installations and equipment and ensure the security and freedom of movement of its staff and associated personnel.

The UN Security Council authorized the European Union, pursuant to Chapter VII of the UN Charter, to take all necessary measures to fulfill these functions within the area of operations in eastern Chad and northeastern Central African Republic. The report of the UN Secretary-General on Chad and the Central African Republic further specifies the area of operations as the Ennedi Est department and the Wadi Fira, Ouaddai and Salamat regions in eastern Chad, and the Vakaga prefecture and the northeastern part of Haute-Kotto prefecture in northeastern Central African Republic.<sup>61</sup> Additionally, the report stated that "there would be no direct border involvement of the multidimensional presence in the bor-

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60. UN Security Council, Resolution 1778 (2007), S/RES/1778 (September 25, 2007).

61. UN Security Council, Report of the Secretary-General on Chad and the Central African Republic, S/2007/488, (August 10, 2007): 7.

der area.”<sup>62</sup> However, no further details were given as to what constitutes the border area. Furthermore, according to a French official, EUFOR is not permitted to be deployed inside the refugee/IDP camps.<sup>63</sup>

### IMPLEMENTING THE MISSION

The mission can be conceived in three phases, each with its own sets of challenges. In the first phase, EUFOR would need to be deployed to Chad and the Central African Republic and establish force-headquarters in Abéché and N’djamená.<sup>64</sup> In a second phase, EUFOR would have to fulfill the mission’s objectives, and in a third and final phase, EUFOR would have to hand-over the mission to a UN follow-on-force within one year, and withdraw its forces. Overall success in the mission would entail accomplishing all three stages of the operation. The following part will thus evaluate the prospects of successful implementation of the three phases.

#### Phase I: Getting There

The first phase will consist in deploying EUFOR to the area of operations. Deployment will be especially challenging, as the area of operations is one of the furthest African points from the sea. It is approximately 1,600 km from the Red Sea, 1,900 km from the Atlantic and 2,000 km from the Mediterranean.<sup>65</sup> It is thereby two to three times further from the African coastline than Afghanistan is from the Arabian Sea, which already poses significant logistical challenges to NATO forces today.<sup>66</sup>

Moreover, both Chad and CAR are designated as least developed countries, with particularly underdeveloped transportation infrastructures.<sup>67</sup> Both have only a few hundred kilometers of paved roads and neither has railroads or usable waterways.<sup>68</sup> The area of

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62. Ibid.

63. According to the French Representative to the United Nations, Ambassador Jean-Maurice Ripert, one of the preconditions for General Déby’s acceptance of a European Force was that only Chadian gendarmes are allowed inside the refugee/IDP camps. See Bjoern H. Seibert and Omar Dia, “France on the Global Stage: Interview with Ambassador Jean-Maurice Ripert”, *Fletcher Forum of World Affairs*, Volume 31 Issue 2 (Winter 2007) (forthcoming).

64. The bulk of the force will be stationed in Abéché. See Europa Press, “Solana anuncia que la UE comenzará a desplegar su misión militar en Chad a finales de este mes”, November 8, 2007.

65. See Richard Reeve, “Lines in the Sand – Containing the Greater Darfur Conflict”, *Jane’s Intelligence Review*, January 01, 2007. Reeve uses these figures for Darfur, but they also apply to the area of operations in eastern Chad and CAR.

66. Ibid.

67. See *Economist Intelligence Unit* electronic database entry for “Country Report Chad: Infrastructure” (September 2007): 22; *Jane’s Sentinel Security Assessment* electronic database entry for “Infrastructure Chad”, November 22, 2006; *Economist Intelligence Unit* electronic database entry “Country Report Central African Republic: Infrastructure”, September 2007: 21-22; *Jane’s Sentinel Security Assessment* electronic database entry “Infrastructure Central African Republic”, September 6, 2007.

68. According to *Jane’s Sentinel Security Assessment*, Chad only has 380 km and Central African Republic 458 km of surfaced road. See *Jane’s Sentinel Security Assessment* electronic database entry for “Infrastructure Chad”, November 22, 2006; *Jane’s Sentinel Security Assessment* electronic database entry “Infrastructure Central African Republic”, September 6, 2007.

operations covers approximately 200,000 km<sup>2</sup> and is criss-crossed by riverbeds that, while dry for much of the year, can flood in minutes during the rainy season (May – October).<sup>69</sup> Most roads are sand or dirt tracks that become impassable during this period, resulting in the cutting off of large sections of territory for long periods of time.<sup>70</sup>

Given the considerable distances that need to be bridged and the challenging environment, it bears asking how, how fast and at what cost, EUFOR can be deployed in the area of operations. The following section will outline the deployment options, and consider the most likely deployment pattern. To do so, it will evaluate both the air- and sea-land routes, and then compare these deployment options in terms of availability, time and cost.

### ***Option I: Air Route***

The first deployment option for EUFOR into the area of operations is via airlift.<sup>71</sup>

#### *Deployment Route*

In principle, two routes are available for airlift: first, the direct route from Europe via Algeria and Niger, and second, the alternative route, known as the Libyan corridor (Benghazi Port/El-Khufra/Abéché) via Libya. While the Libyan corridor is currently used for humanitarian aid operations, it seems unlikely that it will be used as a deployment route for EUFOR.<sup>72</sup> The Libyan corridor will therefore not be included in the following analysis. The analysis will rather focus on the direct route.<sup>73</sup>

The only suitable airport – with a paved runway – in the area of operations is Abéché Airport.<sup>74</sup> The nearest other large airports to Abéché are Faya-Largeau (500 km northwest), Moundou (700 km southwest), N'djamena (750 km west) and Bangui (750 km southwest).<sup>75</sup>

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69. See UN Security Council, “Report of the Secretary-General on Chad and the Central African Republic”, S/2007/97, (February 2007): 6. A French official was quoted by *Jane’s* saying that the area of operations would perhaps be as large as France (about 545,630 km<sup>2</sup>). See Brooks Tiger, “EU struggles to firm up planes for central African deployment”, *Jane’s International Defense Review*, October 2, 2007. This number, however, appears to be too high, as the entire size of Chad is only 1,259,200 km<sup>2</sup>.

70. Ibid.

71. The methodology used builds on Alan Vick et al.’s study at RAND on the deployment options for the Stryker Brigade Combat Team. It will cover all major aspects of deployment, including the number and types of aircrafts allocated to the forces’ deployment, deployment distance, airfield-throughput constraints, aircraft payloads and aircrafts speed. Alan Vick et al., “The Stryker Brigade Combat Team - Rethinking Strategic Responsiveness and Assessing Deployment Options”, Santa Monica, CA: Rand, 1998.

72. Libya has thus far objected to the idea of a UN or European intervention in Chad and CAR. It therefore seems unlikely that Libya would grant passage to the EUFOR Tchad/RCA. See International Institute for Strategic Studies, *Strategic Survey* (London: Routledge, 2007): 267.

73. This assumes that both Algeria and Niger grant the European Union over-flight rights.

74. According to *Jane’s Sentinel Security Assessment*, Abéché Airport has a 2,800m long paved runway and Faya-Largeau Airport a 2,300m long paved runway. *Jane’s Sentinel Security Assessment* electronic database entry for “Infrastructure Chad”, November 22, 2006.

75. See Richard Reeve, “Lines in the Sand – Containing the Greater Darfur Conflict”, *Jane’s Intelligence Review*, January 01, 2007.

Given that N'djamena Airport, which also hosts the French Airbase Hadji Kossei, is the most capable of these airports, it appears most likely that N'djamena will be utilized for strategic lift, followed by tactical airlift to Abéché Airport.<sup>76</sup>

### *Weight Estimate*

To estimate the necessary airlift, the overall size of the unit needs to be determined. While uncertainties still exist regarding the composition of EUFOR Tchad/RCA, sufficient information is available to roughly estimate the deployment requirements. EUFOR is to be made up of 3,700 troops.<sup>77</sup> The approximate weight of this force – based on previous interventions – will likely be at least 8,000 metric tons.<sup>78</sup> In addition to the forces and equipment, sustainment for EUFOR must also be deployed and estimated.<sup>79</sup> Usually, water and fuel are the two heaviest and most difficult sustainment items to deploy.<sup>80</sup> Past operations in Chad – especially Operation Manta – have highlighted that the host-nation Chad is unable to provide fuel or sufficient water.<sup>81</sup> The same will also be assumed for Central African Republic. This analysis, therefore, assumes that EUFOR will need to provide its own water and fuel, thereby greatly increasing the burden for deployment, as well as the lift required for sustainment.<sup>82</sup> Table 3 presents the estimate of the personnel and equipment weight required for deployment plus 30-day sustainment.

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76. N'djamena airport, which was opened in 1967, is Chad's most capable airport. It underwent a repair program in 1987 and also serves as the base for French Air Forces in Central Africa. See *Jane's Sentinel Security Assessment* electronic database entry for "Infrastructure Chad", November 22, 2006.

77. There are still uncertainties over the size and make-up of EUFOR Tchad/RCA. For the current contributions see footnote 4.

78. According to the French Ministry of Defense in Operation Artemis, the 1,500 troop strong force weighed 2,410 m/tons. Since EUFOR is envisioned to comprise 3,700 troops and likely entail heavier equipment, a reasonable, if optimistic estimate for EUFOR is 8,000 m/tons. See Mika Kertunen et al, "EU-Battlegroups", Department of Strategic and Defense Studies, *Research Reports*, No. 30 (April 2005): 42; Philippe Wodka-Gallien, "The Tricolor Aloft: French Air Force Operations in 2003", *Journal of Electronic Defense* (March 2004): 57.

79. Sustainment covers all of the supplies required to conduct combat operations and provide food, water and shelter for the forces. See Alan Vick et al, "The Stryker Brigade Combat Team - Rethinking Strategic Responsiveness and Assessing Deployment Options", Santa Monica, CA: Rand, 1998: 135.

80. *Ibid.*

81. Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985): 56-69. In the initial deployment phase, while French forces gathered the necessary trucks for transport on the Douala Corridor, fuel had to be airlifted to N'djamena. The operation cost 17 million francs in the first month, of which 11 million were spent on transportation alone. It took another month for the fuel reserve at N'djamena airport to reach a satisfactory level. Additionally, water also had to be transported to the area of operations all the way from France. Food was no more abundant in Chad than fuel and water, and the quasi-totality of food consumed by the troops in Manta also had to be imported: fruits and vegetables came from Cameroon, dairy, frozen products and cooked meats came from France, and meats from CAR and France. All food products were airlifted.

82. The requirement of water alone would make the deployment significantly more difficult. As a rough guide, one can assume that an average of 25kg of water per person per day in arid areas is required. For the given mission, this would mean the weight of water for a 30-day sustainment alone would be 2,775 m/tons.

**Table 3**  
**Weight Estimate of the EUFOR plus 30-day Sustainment**

<i>Unit Element</i>	<i>Weight (m/tons)</i>
Force	8,000
30-day sustainment (including fuel and water)	6,000
<b>Total</b>	<b>14,000</b>

### *Airlift Fleet*

European countries have significant shortfalls in strategic airlift.<sup>83</sup> While most European countries have tactical airlift capabilities, aside from the United Kingdom, none has strategic airlift capabilities.<sup>84</sup> Medium-sized aircraft (mainly C-160 Transall and C-130 Hercules) are – given their limited range, speed and payload – unsuited for strategic airlift.<sup>85</sup> In past operations, European countries have covered their strategic airlift needs through a combination of chartered commercial and leased foreign military aircraft.<sup>86</sup> Both seem likely scenarios in the given mission. Commercial leasing could include An-124-100, leased under the SALIS-Agreement,<sup>87</sup> while foreign military aircraft could include U.S. C-17 Globemaster III, leased under the Berlin-Plus arrangements.<sup>88</sup> Table 4 outlines the relevant aircraft data.

83. See for example Michèle A. Flournoy, Julianne Smith, *European Defense Integration: Bridging the Gap between Strategy and Capabilities* (Washington, D.C.: CSIS Press, 2005). The shortfall will likely be significantly reduced by 2018, when a total of 170 A400M are expected to be made available to European countries. See *Jane's All The World's Aircraft* electronic database entry for "A400M", April 10, 2007. The limited payload of the A400M – currently envisioned at 30 m/tons – will however make it more of a long-range than a strategic airlifter. To overcome the shortfall, the EU would need to acquire a truly strategic airlifter, such as the projected military version of the A380, currently known as A380 MRTB (multirole transport/bomber) which has an envisioned payload of 150 m/tons. See *Jane's All The World's Aircraft*, electronic database entry for "A380", June 18, 2007.

84. Assembly of the Western European Union – The Interim European Security and Defense Assembly, "European Strategic lift capabilities – reply to the annual report of the Council, Report submitted by the Defense Committee (Brussels 2001); International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 93 – 186.

85. They were, however, used for strategic airlift in Operation Manta, where they proved to be inefficient given the number of stops they had to make on the way. Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985): 52-53.

86. For example, in Operation Artemis, the European Union leased multiple An-124-100 and A310 for the strategic lift. See Stale Ulriksen et al, "Operation Artemis: The Shape of Things to Come?", *International Peacekeeping*, Vol.11, No. 3 (Autumn 2004): 516.

87. Under the SALIS agreement, up to six An-124-100 are available (two within 72 hours, two within six days, and two within nine days). Jochen Both, "NATO and EU: Strategic Airlift initiative successfully concluded under German leadership", *Military Technology*, 6/2006: 185-186. It will however be assumed that sufficient time before the deployment would be available to give notice to Volga Dnepr, so that on deployment day, all six An-124-100 are available.

88. Although it seems currently unlikely that the United States could provide the EU with either C-17 or C-5, due to the current overstretch of the U.S. Transport command, both will be included in the analysis to provide a broader picture.

**Table 4**  
**Airlift Data**

<i>Aircraft</i>	<i>Cruising Speed (km/h)</i>	<i>Given Distance (km)</i>	<i>Active route flying time<sup>‡</sup></i>	<i>Active route ground time</i>	<i>Time to arrival</i>	<i>Cycle time</i>	<i>Cargo</i>	
							<i>ACL (m/tons)</i>	<i>Planning (m/tons)</i>
<b>Strategic Lift</b>								
C-130	590	4,300	8h 03m	2h 15m	10h 18m	20h 36m	17	12
C-17	914	4,300	5h 03m	3h 15m	8h 18m	16h 36m	79	69
A300-600	895	4,300	5h 33m	3h 30m	9h 03m	18h 06m	71,6	62,6
An-124-100	700	4,300	6h 29m	4h 30m	10h 59m	21h 58m	120	80
<b>Tactical Lift</b>								
C-160	580	750	1h 38m	2h 15m	3h 53m	7h 46m	16	11
C-130	590	750	1h 36m	2h 15m	3h 51m	7h 42m	17	12

**Source:** For data on aircrafts see: *Jane's All The World's Aircraft* electronic database entry for "C-17A Globemaster III", July 24, 2007; *Jane's All The World's Aircraft* electronic database entry for "A300-600", October 8, 2007; *Jane's All The World's Aircraft* electronic database entry for "An-124", December 19, 2005; *Jane's All The World's Aircraft 1985-1986*, entry for "C-160", p.128-129. For planning factors for C-130, C-17 and A300-600 see USAF, "Air Mobility Planning Factors", *Air Force Pamphlet 10-1403*, February 2003, <http://www.e-publishing.af.mil> (accessed May 12, 2007). For planning data on An-124-100 see Ahmed Ghanmi, *Modeling deployment lift of Operation ATHENA*, Center for Operational Research and Analysis, Department of National Defense, 2004. ‡ France will be retained as a starting point for all distance calculations as it represents on the one hand a median point for other European countries, and will be providing the bulk of the intervening force. † Time includes 20 minutes airborne delay for departure, approach, and landing. The C-130 is listed for strategic lift, despite its limitations, since it has been used for strategic airlift in various European operations.

### *Airfield Infrastructure*

A critical factor to take into account in evaluating airlift possibilities is the airfield infrastructure – i.e. the number, quality and lengths of runways and taxiways; the quality and size of ramp space; and the availability of refueling facilities and unloading equipment. This infrastructure determines how fast airlifters can land, upload, be serviced, and take off. In the given scenario, the aerial ports of embarkation (APOE) and the aerial port of disembarkation (APOD) differ greatly. The APOEs – located in Europe – will certainly be highly capable bases, while the en route airport (N'djamena) and the APOD (Abéché Airport) – are less developed airports. Both airports have only a limited capacity (maximum-on-the-ground or MOG which means number of aircraft that can be serviced and unloaded at one time) to handle air delivery.<sup>89</sup> Despite limited available information on Chad's airports, it will be assumed that N'djamena Airport has a MOG of 3 (of which 2 would be used for the

89. Maximum-on-the-ground is a measure of air-base capacity defined as the number of a particular aircraft type that can be simultaneously handled within a planned ground time. Here, it is measured relative to the C-17. In this case, the relatively low MOG will likely be due to the fuel MOG. However, parking MOG (number of aircraft that can fit, or be parked, on the ground) and working MOG (number of parked aircraft that can be worked based on available personnel, materials handling equipment (MHE), and ramp space) would also limit the capacity of the airfields.



strategic lift and 1 for the tactical lift) and Abéché Airport has a MOG of 1.<sup>90</sup> Table 5 shows the impact the low MOG and operational hours will have on the airlift.

**Table 5**  
**MOG for Strategic Lift (N’djamen Airport) and Tactical Lift (Abéché Airport)**

<i>Airport</i>	<i>Maximum-on-the ground (MOG)</i>	<i>Cargo† (m/tons) at 10 hour Operations</i>	<i>Cargo† (m/tons) at 16 hour Operations</i>	<i>Cargo† (m/tons) at 24 hour Operations</i>
N’djamen Airport	2	214	343	515
Abéché Airport	1	107	172	257

**Source:** Own calculations based on USAF, “Air Mobility Planning Factors“, *Air Force Pamphlet 10-1403*, February 2003.  
† Cargo throughputs based on C-17 equivalents (average payload is 41 m/tons, ground time 3+15. Also, queuing efficiency of 85% is applied.

Table 5 highlights that N’djamen Airport will likely only be able to accommodate between 214 – 515 m/tons per day for the strategic airlift and Abéché Airport between 107 – 257 m/tons per day for the tactical lift. It also highlights that the operational hours of both airports will be a crucial factor. Despite limited information, it seems at present unlikely that either N’djamen or Abéché Airport could have 24-hour operational hours since, as in previous African missions, at least several hours per day might need to be devoted to airfield repairs.<sup>91</sup> Therefore a more reasonable estimate would be an average of 16 hours operations per day for both N’djamen Airport and Abéché Airport.

#### *Estimating Air-Route Time Requirement*

As in previous African missions, the airfields will most probably be a major constraint on air deliveries.<sup>92</sup> Assuming a MOG of 2 and 16 hours of operations per day, the strategic airlift to N’djamen airport would require a minimum of 41 days for the delivery of 14,000 m/tons. The tactical airlift will be even more affected by the restraints imposed by Abéché Airport’s capacity. Assuming a MOG of 1 and 16 hours of operations per day, the capacity of the airfield would require a minimum of 70 days for the delivery of 14,000 m/tons.

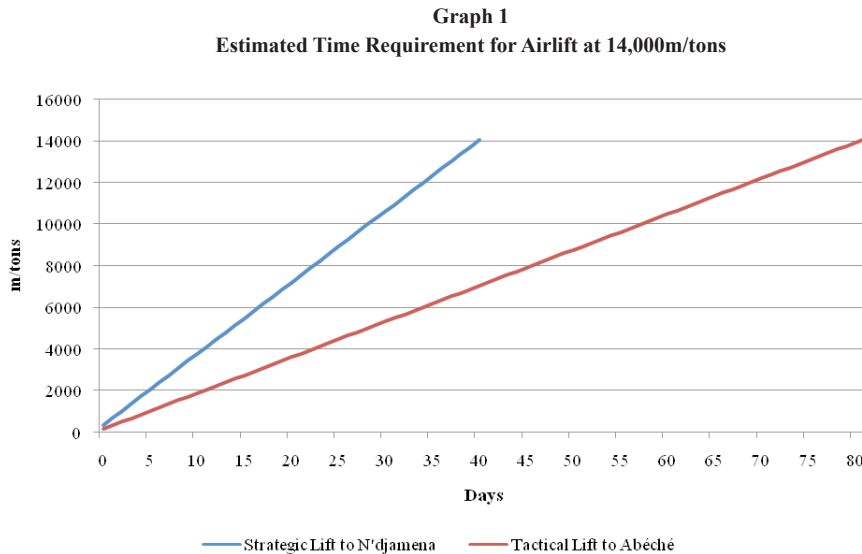
90. The actual MOG of both airports could potentially be higher. However, previous operations have shown that only part of the MOG will be made available for military operations. For example, during the deployment of the U.S. Task Force Hawk to Rinas in Tiranë, Albania, which had an overall MOG of 4, the U.S. military received only half, i.e. a MOG of 2. See Alan Vick et al, “The Stryker Brigade Combat Team - Rethinking Strategic Responsiveness and Assessing Deployment Options”, (Santa Monica, CA: Rand, 1998): 26; To compare, during Operation Restore Hope, the U.S. used 4 different airfields with the following MOG: Mogadishu (MOG: 3 C-141); Baledogle (MOG: 1 C-141); Kismaayo (MOG: 3 C-141); Baidoa (MOG: 1 C-130). However, the two most capable airfields (Mogadishu/ Kismaayo) were located in close proximity to the Indian Ocean, which made fuel supply easier. See David Kassing, *Transporting the Army to Operation Restore Hope* (Santa Barbara: RAND, 1994): 23-29.

91. This was also the case in Operation Manta. See Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985): 97.

92. David Kassing, *Transporting the Army to Operation Restore Hope* (Santa Barbara: RAND, 1994): 23-30.

Accordingly, it is very unlikely that the entire force plus sustainment will be airlifted. More likely, only about 20 percent of the deployment will be done through airlift, in which case the deployment would take approximately 17 days, depending on the operational hours of the APOD.<sup>93</sup>

Graph 1 illustrates the constraints N’ djamena and Abéché Airports’ throughput limits will impose on the airlift.



Source: Own calculations.

In this mission, the major constraint on air delivery will thus be imposed by the airfields, rather than the lack of strategic airlift capacity – which can be surmounted through leasing agreements.<sup>94</sup>

#### Cost Estimate

The approximate cost for the initial airlift will depend on the type of aircraft used. It is likely that the operation will make extensive use of the leased An-124-100. The cost of chartering the An-124-100 under the SALIS agreement are between \$24,000 - \$44,000 per flying hour.<sup>95</sup> Building on prior estimates of flying hours required, the cost per sortie would be between \$264,000 – \$484,000. This compares to approximate \$300,000 per sortie for

93. Alternatively, the European Union could only use strategic lift to the more capable N’ djamena Airport and use overland transport for the remaining distance to the area of operations. The airlift to N’ djamena would then require 9 days.

94. For example, should EUFOR only use the six An-124-100 for the strategic airlift, unconstrained by airport throughput, it would only take 13 days at 24-hour operations (instead of the 41 days estimated above) to transport 14,000 m/tons to N’ djamena.

95. See Katia Vlachos-Dengler, “Carry That Weight: Improving European Strategic Airlift Capabilities” Pardee RAND Graduate School Dissertation (March 2007): 111.

leased C-17 Globemaster III.<sup>96</sup>

In the given mission, it is, as pointed out above, not unlikely that one fifth of the deployment would be done through the air-route. Should the European Union rely on a mix of An-124-100s and C-17s, the approximate cost of airlifting one fifth of the cargo of the deployment alone would be between \$9.2 – 16.9 million.<sup>97</sup>

## Option II: Sea-Land Route

The second option the European Union has to deploy EUFOR is the sea-land route.

### *Deployment Route*

The most likely sea-land route for EUFOR will be the Douala Corridor (Cameroon).<sup>98</sup> The seaport of embarkation (SPOE) will be considered as Brest,<sup>99</sup> and the seaport of debarcation (SPOD) will be Douala (Cameroon), at a distance of approximately 4,150 nautical miles (7,686 km). From Douala to Abéché a substantial overland transport would be required – approximately 2,345 km. As in past French operations, overcoming this distance will likely be accomplished through a combination of rail and motor transport.<sup>100</sup> Rail transport is available from Douala Port to the northeastern Cameroonian city of Ngaoundéré – an estimated 845 km.<sup>101</sup> From Ngaoundéré to Abéché – an estimated 1,500 km – motor transport would be necessary.

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96. According to Katia Vlachos-Dengler, the average charter rate for the C-17 is \$18,300. See Katia Vlachos-Dengler, “Carry That Weight: Improving European Strategic Airlift Capabilities” Pardee RAND Graduate School Dissertation (March 2007): 98.

97. This number is not unrealistic. In 2002 alone, Volga-Dnepr, the largest An-124-100 operator, conducted charter flights that were worth over \$100 million to support military operations by European nations, including 260 flights to Afghanistan. Germany alone chartered 100 An-124-100 sorties between early January and the end of March 2002 to transport military equipment at a total cost of \$21,800,000. See Henry Ivanov, “Antonov’s An-124-300 Targets NATO Needs”, *Jane’s Defense Weekly*, July 16, 2003; Katia Vlachos-Dengler, “Carry That Weight: Improving European Strategic Airlift Capabilities” Pardee RAND Graduate School Dissertation (March 2007): 19.

98. Cameroon has been an important asset for France during the various Chadian crises. Without it, the operations would have been much more difficult, if not impossible, and certainly more costly. In fact, Cameroon is the necessary supply route for heavy equipment and non-urgent equipment to Chad. The transport is inefficient in terms of time and damage, but it is the only route available apart from airlift. The transportation from France to N’jamena takes about one-and-a-half to two months. See Alain Rouvez, *Disconsolate Empires: French, British and Belgian Military Involvement in Post-Colonial Sub-Saharan Africa* (London: University Press of America, Inc., 1994): 131. The Douala Corridor is also heavily utilized by humanitarian aid agencies, such as the United Nations World Food Program (WFP). Phone interview with logistical planning staff at WFP Chad Office, May 17, 2007.

99. France is used again as an approximate median point for calculations. See *supra*, explanation at Table 4 ‡.

100. This is mainly because of the reportedly very poor road infrastructure from Douala Port. See for example *Africa Research Bulletin: Economic, Financial & Technical Series*, “Roads and Railways Cameroon” 12/16/2004, Vol. 41 Issue 12, 16373-16374.

101. See Alain Rouvez, *Disconsolate Empires: French, British and Belgian Military Involvement in Post-Colonial Sub-Saharan Africa* (London: University Press of America, Inc., 1994): 131; *Logistique Conseil* electronic database entry for “Camrail”, March 2007.

### Sealift

The first phase of this option would be the sealift from Brest to Douala (Cameroon) at a distance of approximately 4,150 nautical miles (7,686km).

#### *Sealift Fleet*

As the majority of forces will be French, France will likely largely provide for sealift. France currently owns two Mistral-class and two Foudre-class amphibious transport dock (LDP) vessels.<sup>102</sup> Additionally, France could – as a member of the Movement Coordination Center Europe (MCCE) – make use of up to six 2700-class Roll on-Roll off (Ro/Ro) vessels.<sup>103</sup> It is likely that multiple vessels will be required to transport EUFOR. Table 6 lists the physical characteristics of these vessel.

**Table 6**  
Physical Characteristics of Available Vessels

<i>Ship Characteristics</i>	<i>Mistral class LDP</i>	<i>Foudre class LDP</i>	<i>2700 class RoRo</i>
Speed (kt)	19	21	21.6
Displacement (m/tons)	21,600	12,400	23,320
Length (m)	199	168	193
Beam (m)	32	22	N/A
Military Lift	450 troops and 60 armored vehicles; approx. 1,200 m/tons load	470 troops plus 150 vehicles; approx. 1,880 m/tons load	130 armored vehicles plus 60 trucks and ammunition

**Source:** On Mistral class data: *Jane's Fighting Ships*, electronic database entry for “Mistral class”, July 3, 2007; Ministère de la Défense, “Présentation du BPC Mistral, April 5, 2007, <http://bpcmistral.fr/index.php/2007/04/05/20-presentation-du-bpc-mistral> (accessed May 12, 2007) and Hartmut Manseck, “BPC “Mistral” Class”, *Naval Forces*, 1/2007, 91. The Mistral class allows deployment in different versions. In its mixed version, it can carry 60 vehicles/6 helicopters. Were it to deploy in its transport version, it could carry more than 230 vehicles (by utilizing the top deck to increase the vehicle carriage). On data for Foudre see: *Jane's Fighting Ships* electronic database entry for “Foudre class”, May 13, 2007; For data on the 2700 class RoRo see: Flensburger Schiffbau-Gesellschaft, “Data Sheet RO-RO 2700 Military”.

#### *Port Infrastructure*

The time to load and unload depends largely on the port infrastructure. In this mission, the SPOD is a relatively capable port. Douala Port, one of Africa’s busiest ports, is equipped with two gantry cranes with 40 m/tons capacity and has a total covered storage

102. International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 112. Assembly of the Western European Union – The Interim European Security and Defense Assembly, “European Strategic lift capabilities – reply to the annual report of the Council, Report submitted by the Defense Committee (Brussels 2001): 17; Katia Vlachos-Dengler, “Getting There: Building Strategic Mobility into ESDP”, No.97 (Paris: EUISS, November 2002): 43.

103. The Sealift Coordination Center (SCC) and the European Airlift Centre (EAC) merged on July 1<sup>st</sup>, 2007 into a new organization named Movement Coordination Centre Europe (MCCE). The tasks and responsibilities of the new organization are still the same, namely coordination of all modes of transport between participating nations. These are part of the Sealift Capability Package (SCP) of Assured Access Roll-on-Roll-off (Ro-Ro) shipping.

area of 61,000 m<sup>2</sup>.<sup>104</sup> Should the Mistral or Foudre class vessels be used, which are amphibious transport dock (LDP) vessels, EUFOR would even be far less dependent on port facilities.

### *Estimating Sealift Time*

To calculate the sealift deployment time (port-to-port), three functions are required: load, sail and unload. For simplification purposes, it will be assumed that the time prior to deployment was sufficient to prepare the vessels for operational status, which would allow deployment within two days. As for airlift, the time to load and unload largely depends on port infrastructure – in this case, both are capable ports. It will be assumed that loading and discharge will each take one day.<sup>105</sup> Since, however, factors other than loading and discharge affect the total port time of a vessel, one day will be added to the total loading time.<sup>106</sup> Additionally, it will be assumed that one day for assembling the cargo will be required. Table 7 summarizes the estimated sealift time.

**Table 7**  
**Estimate Sealift Time**

<i>Activity</i>	<i>Time required (days)</i>
Load ships	2
Steam	8 - 9
Unload ship	1
Assemble	1
<b>Total</b>	<b>12 - 13</b>

**Source:** Data: see Table 6. As a rule of thumb, bad weather would likely slow down all ships to about 15kt. See Alan Vick et al, *The Stryker Brigade Combat Team - Rethinking Strategic Responsiveness and Assessing Deployment Options* (Santa Monica, CA: Rand, 1998): 30.

### *Cost Estimate*

The costs of sealift are largely determined by fuel-consumption, in addition to port fees. For example, fuel consumption for a RoRo 2700-class is 85m/tons per day at a speed

104. Douala Port handles 95 percent of Cameroon’s exports and also serves its two landlocked neighbors, Chad and the Central African Republic. For further information on the port see *Economist Intelligence Unit*, electronic database entry for “Country Profile Cameroon: Main Report August 2007: Resources and Infrastructure: Transport, Communications and the Internet”, August 2007; *Jane’s Sentinel Security Assessment*, electronic database entry for “Infrastructure Cameroon”, September 22, 2006.

105. For the Mistral-class vessels, according to the French Navy, wartime unloading time for 60 vehicles is approximately 2 hours. Assuming the use of one vessel carrying about 230 vehicles, the loading period would be of at least 8 hours. As planning data on loading times are not publicly available, it will be assumed that it will take longer than unloading – probably at least 10 hours. This estimate is likely even too optimistic as the vehicles transported on the top-deck need to be transported into the rear decks via heavy-lift elevator. For more details on the ship, see Nick Brown, “French Navy’s first Mistral assault ship takes to the water”, *Jane’s Navy International*, November 01, 2004; Présentation du BPC Mistral, April 5, 2007, <http://bpcmistral.fr/index.php/2007/04/05/20-presentation-du-bpc-mistral> (accessed May 12, 2007).

106. These factors include piloting and docking, tides and weather, bunkering, receiving ships’ stores, and castoff.

of 21.6 knots. Therefore, a total of approximately 680 – 765 m/tons of fuel would be required for each 2700-class RoRo to steam from France to Cameroon. Assuming that at least 2 – 3 vessels are required for the initial deployment, the total fuel consumption would be between 1,360 – 2,295 m/tons.

### Rail transport

The cargo arriving at Douala Port can easily be transferred by train, as rail links are available from the port to the rest of the rail system.

#### Rail Fleet

EUFOR will likely – as French military and humanitarian aid agencies have in the past – rely on Cameroon Railways (Camrail), the centerpiece of Cameroon’s transport system.<sup>107</sup> The operating fleet consists of 67 diesel locomotives and 1,410 freight wagons.<sup>108</sup>

#### Rail Infrastructure

Camrail operates a network totaling just under 1,000 km – consisting of only two lines, the shorter West line and the Transcam line.<sup>109</sup> The Port of Douala is connected to Ngaoundéré through the Transcam line. The Transcam line consists of a non-electrified single track.<sup>110</sup> The rail tracks are – despite several upgrades – reported to be in poor condition.<sup>111</sup>

### Estimating Rail Transport Time

To calculate the rail transport time, three functions are required: load, transport and unload. Assuming priority handling, the time required for transportation – based on U.S. general planning figures – will approximately be between 3 – 4 days for each trainload.<sup>112</sup> It will be assumed that loading and unloading will require 1 day each. The total time required would therefore likely be at least 5 – 6 days per trainload, assuming priority handling.<sup>113</sup>

Map 4  
Cameroon Rail Network



Source: Jane’s Defense

107. *Jane’s Sentinel Security Assessment* electronic database entry for “Infrastructure Cameroon”, September 22, 2006.

108. *Jane’s, World Railways 2006-2007*, (London: Jane’s Information Group: Surrey 2006) p. 84-85. Camrail opened in 1962 and was privatized in 1998. Saga, a subsidiary of the French Bollore group, currently holds the concession, while Comazar of South Africa operates the system. In 2004, Camrail transported 1,825,000 m/tons of cargo, mainly on the Transcam line. See *Jane’s Sentinel Security Assessment*, electronic database entry for “Infrastructure Cameroon”, September 22, 2006.

109. *Jane’s, World Railways 2006-2007* (London: Jane’s Information Group: Surrey 2006): 84-85.

110. *Ibid.*

111. *Ibid.* According to the *Economist Intelligence Unit*, transportation security is not very high on Camrail’s network, with especially frequent derailments on the route to and from Ngaoundéré. See *Economist Intelligence Unit*, electronic database entry for “Country Profile Cameroon: Main Report”, September 2007. This is despite the fact that the French government has invested several million dollars over the past years to upgrade the Cameroonian rail system. See *Railway Gazette International*, Intelligence, Vol. 158, Issue 1 (November 2002).

112. See Department of the Army, US Army Field Manual 55-15, chapter 4 (Washington, DC, October 1997): 4-8. This assumes the following: average speed for single track: 9.6-12.9 km/h; conditions of the track between “poor” and “fair and poor”; given distance: 845 km; operational day: 20 hours.

113. Priority treatment would be important, as the *Deutsche Logistik-Zeitung* reported major delays in August 2007 at

### *Motor Transport*

From Ngaoundéré, overland transport to Abéché, via the capital N'djamena, will be required.<sup>114</sup>

#### *Motor Fleet*

In order to transport EUFOR, a significant number of vehicles with sufficient payload would be required. As in previous operations, these could either be rented or purchased locally.

#### *Road Infrastructure*

According to most accounts, the road from Ngaoundéré to N'djamena is fairly well maintained. The road from N'djamena to Abéché, however, is mostly unpaved and poorly maintained.<sup>115</sup>

#### *Estimated Motor Transport Time Requirement*

On the basis of U.S. transportation planning factors, the approximate time required from Ngaoundéré to Abéché would be of 10 days minimum.<sup>116</sup> This estimate is however likely too optimistic, as it is based on the assumption that sufficient trucks would be instantly available in Ngaoundéré to transport the force to Abéché. Previous experience however shows that gathering the necessary number of trucks is no easy task and could take several weeks.<sup>117</sup>

#### *Estimated Sea-Land Route Time*

Based on the above analysis, the EUFOR would, in a best-case scenario start arriving in Abéché at (D+34), and likely later – as transportation models are notoriously optimistic. Table 8 summarizes the time requirement.

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Transcam line due to the large quantities of arriving food aid for Chad. See *Deutsche Logistik-Zeitung*, “Kamerun/Tschad: Hilfsgüter stauen sich im Hafen Douala”, August 15, 2007.

114. For example in Operation Manta. See Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985): 57–58.

115. Phone interview with logistical planning staff at WFP Chad Office, May 17, 2007.

116. This assumes the rate of march during the day will be 30 km/h if traveling over good roads, and 10 km/h for bad roads; an operational day of 12 hours, and one day of rest and maintenance for every 1,000 km. See Department of the Army, US Army Field Manual 55-15, Chapter 3 (Washington, DC, October 1997): 3-12; United States Marine Corps, “MAGTF Planner’s Reference Manual”, *MSTP Pamphlet 5-0.3* (Quantico, VA, April 2001): 115-116. Information on road conditions: Phone interview with logistical planning staff at WFP Chad Office, May 17, 2007.

117. Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985): 57–58. At the same time, numerous humanitarian organizations are using trucks to ship cargo to both eastern Chad and western Darfur. The World Food Program alone is operating 8,000 trucks. See World Food Program, “WFP in urgent need of US\$81 million to feed 380,000 displaced in Eastern Chad”, Press Release, September 6, 2007. Finding sufficient trucks for EUFOR might therefore prove to be yet another challenge.



**Table 8**  
**Estimated Time for Sealift**

<i>Departure</i>	<i>Destination</i>	<i>Mode of transportation</i>	<i>Distance (in km)</i>	<i>Infrastructure conditions</i>	<i>Time required (in days)</i>
Brest	Douala Port	Sea	8,520	-	15
Douala Port	Ngaoundéré	Rail	845	poor - fair	9 - 12
Ngaoundéré	Abéché	Road	1,500	poor – very poor	10
			<b>10,865</b>		<b>34-37</b>

**Source:** For data on marching time: Department of the Army, US Army Field Manual 55-15, Chapter 3 (Washington, DC, October 1997): 3-12; United States Marine Corps, “MAGTF Planner’s Reference Manual”, *MSTP Pamphlet 5-0.3* (Quantico, VA, April 2001): 115-116. Information on road conditions: Phone interview with logistical planning staff at WFP Chad Office, May 17, 2007.

### *Cost Estimate*

The overland transport will likely be outsourced, as happened during Operation Manta.<sup>118</sup> The costs of the private market for transporting cargo from Douala to N’djamen are among the highest per kilometer in the world.<sup>119</sup> According to a UN study, transporting a 40-foot container (maximum payload 28m/tons) from Douala to N’djamen cost, in 2003, a total of \$8,000 (that is \$4.21per km).<sup>120</sup> Assuming that the same rate remains applicable to the road from N’djamen to Abéché, the overall cost of transporting a 40-foot container from Douala to Abéché would be approximately \$11,560. Therefore, should the European Union choose to transport 80 percent of the deployment cargo over the sea-land route and outsource the overland transport, the cost of transport alone would likely be as much as \$5.2 million.<sup>121</sup>

### *Findings Phase I*

The previous analysis highlights that the deployment of EUFOR into Chad and CAR will be both very challenging and costly. While the air-route presents challenges due to the absence of strategic airlift as well as airport constraints in the area of operations, the sea-land route poses problems due to the significant overland transport required and the poor rail and road conditions. Assuming that the European Union decides, as the French did in

118. See Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985).

119. See Jean-François Arvis et al, *Connecting to Compete: Trade Logistics in the Global Economy*, (Washington: The World Bank, 2007); UN Conference on Trade and Development, “Development of Multimodal Transport and Logistic Services”, *Report by the UNCTAD Secretariat*, TD/B/COM.3/EM.20/2 (July 15, 2003): 7.

120. Compare to an average of \$1.10 in United States mainland, and of \$1.65 per km in the European Union. See United Nations Conference on Trade and Development, “Development of Multimodal Transport and Logistic Services”, *Report by the UNCTAD Secretariat*, TD/B/COM.3/EM.20/2, July 15, 2003, p.7.

121. This assumes on average 25 m/tons per 40-foot container and a weight of 11,200 m/tons (80% of the cargo of deployment) to be transported over the sea-land route.

Operation Manta,<sup>122</sup> to transport a significant amount of the cargo via the sea-land route, the bulk of the forces would, in a best-case scenario, start arriving in Abéché at (D+34). This even seems too optimistic when compared with Operation Manta, where French forces required between 30-50 days from France to N'djamena through the Douala Corridor.<sup>123</sup> Additionally, the costs of deployment will be very high, even if airlift is only used to transport a small fraction of the cargo for the deployment.

## Phase II: Getting the Job Done

Once deployment is completed, the second phase of the operation would entail fulfilling the mission's objectives. These are defined by UN Security Council Resolution as protecting the local population and particularly the refugees/IDPs, protecting the UN personnel and equipment, and facilitating humanitarian aid delivery. The following discussion assesses whether EUFOR can accomplish these objectives.

### Military Strategy

In general, humanitarian interventions can have four different sets of objectives: (a) to assist aid delivery, (b) to protect aid operations, (c) to save the victim population and (d) to defeat the perpetrators. The military strategy required, depends on which of these objectives is sought.<sup>124</sup>

As described earlier, EUFOR's mission objectives are protecting aid operations and saving the victim population. The two objectives differ in both the causes they address and their focus: the first addresses deprivation and focuses on the perpetrators, while the latter addresses violence and focuses on the victims. Accordingly, different military strategies are required to realize each objective. To protect the aid operations, a strategy of deterrence is required.<sup>125</sup> Should deterrence fail, the intervener has to fight defensively.<sup>126</sup> To protect the victim population, on the other hand, a combination of deterrence, defense and compellence is required.<sup>127</sup>

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122. During Operation Manta in 1983 – which involved approximately 3,000 French troops and about 700 vehicles – the sea-land route was heavily used. The air-route was primarily used to deploy a small amount of troops with very light equipment and fuel for the first two months, until sufficient trucks were available to transport the fuel from Nigeria to Chad. See Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985).

123. Colonel Spartacus, *Opération Manta: les documents secrets* (Paris: Plon, 1985): 50. According to the Chad office of the World Food Program (WFP), the time required for WFP road transport from Douala to Abéché is 3 weeks. Phone interview with logistical planning staff at WFP Chad Office, May 17, 2007.

124. Taylor B. Seybolt, *Humanitarian Military Intervention: The Conditions for Success and Failure*, (Oxford: Oxford University Press, 2007): 39.

125. Deterrence is the use of force as a punishment if an opponent takes a specific action he has not yet undertaken. Ibid., 41.

126. Defense is the use of force to protect something or somebody from actions that an opponent is taking. Ibid., 41.

127. Compellence is the use of force to induce an opponent to take a specific action. Ibid., 42.

A common misperception when seeking to protect civilians in humanitarian interventions is that the very presence of the intervening force on the ground is sufficient to prevent violence from occurring and to deter the perpetrators from acting.<sup>128</sup> Strategies of deterrence and defense are therefore often thought to be adequate for the protection of civilian populations.<sup>129</sup> Such an assumption has however previously proven to be flawed, and has led to failure. In fact, in cases where perpetrators have already initiated their attacks on the civilian population – such as currently in eastern Chad and northeastern CAR – deterrence may not be sufficient.<sup>130</sup> Rather, EUFOR will likely need to adopt – or be ready to adopt – a strategy of compellence, which would reverse the ongoing actions of the militias/rebels and prevent them from continuing their attacks, should deterrence not be sufficient. Compellence is considered to be harder to achieve than deterrence, as it requires both the willingness and ability to use considerable force against the perpetrators.<sup>131</sup> Such difficulty is considerably increased in this mission given the large area of operations, the mobility of both militia/rebels, and the existence of a de facto “safe haven” for militias/rebels in neighboring Darfur. The force required in this mission is therefore likely to be substantial as large scale policing would be required. The following section will analyze what force size would be required to achieve the mission objectives identified above.

### Force Requirement

There is no simple answer to the question of how many troops would be required for any sort of military operation.<sup>132</sup> Although there are several published metrics on how to size an intervention force, and numerous historical examples to rely on, consensus on how to best size the required force remains elusive.<sup>133</sup>

To assess the force requirement, this paper will build on historical ratios in similar missions and discuss those against factors that could affect the size of the required force for this mission.

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128. Ibid., 180.

129. Ibid. It appears that such a view is held by top EU military officials for this mission. For example, asked whether he thought the troop level was sufficient to deal with such a large area of operations, General Bentegéat, Chairman of the EU Military Committee, responded that “[...] [the EU’s assessment] now is that with three battalions, we have enough troops to cover all the space in our area of operations. Of course, if we don’t have enough helicopters to react quickly it could be a problem. But right now, if we can fulfill our status of requirements, I am absolutely sure that we can deal correctly with this area. I personally know this area very well, and I think that we cannot underestimate the deterrence effect of the deployment of a very robust European force.” See General Henri Bentegéat, EU Chiefs of Defense (ChoDs) Meeting: Press Briefing by Chairman of the EU Military Committee General Bentegéat (November 15, 2007).

130. Ibid.

131. See Barry R. Posen, “Military Responses to Refugee Disasters”, *International Security*, Vol. 21, Issue 1 (Summer 1996): 79-86.

132. See James T. Quinlivan, “Force Requirements in Stability Operations”, *Parameters*, (Winter 1995): 59-69.

133. Micah Zenko, “Saving Lives with Speed: Using Rapidly Deployable Forces for Genocide Prevention”, *Defense and Security Analysis*, Vol. 20, No. 1 (March 2004): 8.

### ***Historical Ratio***

The starting point to determine force sizing is a comparison with analogous situations that occurred in the past.<sup>134</sup> According to James Quinlivan, the historical ratio in stability operations has been between 4 – 10 troops per thousand of population.<sup>135</sup> Thus, given the approximate 1.25 million inhabitants in the area of operations (including both population and refugees/IDPs), this metric would call for between 5,000 – 12,500 troops.<sup>136</sup> However, the high volatility in the region and the porous borders have to be taken into account.

### ***Additional Factors in the Given Mission***

Several factors will affect the size of the required force within the range of historical ratios. Such factors include the size and shape of the area of operations, the size and arrangement of the groups that need protection and the armament and military competence of local fighters.<sup>137</sup>

*Size and shape of the area of operations:* The area of operations is very large, encompassing roughly 200,000 km<sup>2</sup>. Additionally, it is particularly challenging for military operations because of its underdeveloped transportation infrastructure.<sup>138</sup>

*Size of the groups that need protection:* As mentioned above, the total population size in the area of operations is 1.25 million people. A real, or perceived, increase in security and humanitarian aid, could however lead to a significant increase in population, as the recent experience of the African Union Mission in Sudan (AMIS) has shown.<sup>139</sup> Thus, the number of 1.25 million inhabitants in the area of operations should only be retained as a minimum, with a high probability of increase. The entire population in the area of operations does not face similar threat levels however. Currently, the most endangered part of the population – being systematically targeted – are the Sudanese refugees, and increasingly IDPs in eastern Chad and northeastern CAR. Taken together, they currently count approxi-

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134. Daniel Byman, Taylor Seybolt, “Humanitarian Intervention and Communal Civil War: Problems and Alternative Approaches”, *Security Studies*, Vol. 13, no. 1 (Autumn 2003): 44.

135. James T. Quinlivan, “Force Requirements in Stability Operations”, *Parameters*, (Winter 1995): 60. Because of the general problems distinguishing between combatants and noncombatants in civil wars, and a general focus in peace operations on the population rather than militias/rebels, the true size of a deployment depends in large part on the total size of a population, not on the total size of the militias/rebels. See Daniel Byman, Taylor Seybolt, “Humanitarian Intervention and Communal Civil War: Problems and Alternative Approaches”, *Security Studies*, Vol. 13, no. 1 (Autumn 2003): 44.

136. Population in the area of operations is based on own calculations.

137. See Barry R. Posen, “Military Responses to Refugee Disasters”, *International Security*, Vol. 21, Issue 1 (Summer 1996): 105; David Michael Green *et al* highlight the importance of geography for force sizing in peace operations. See Michael David Michael Green *et al*, “Predicting the Size of UN Peacekeeping Operations”, *Armed Forces and Society*, Vol. 24, Number 4 (Summer 1998): 489-490.

138. See *supra* Phase I: Getting There, page 17-18.

139. The sudden changes in population in the area of operations caused critical challenges to the AU’s mission in Sudan. See Seth Appiah-Mensah, “AU’s Critical Assignment in Darfur: Challenges and Constraints”, *African Security Review*, Vol. 14, Issue 2 (2005): 12.

mately 400,000 people (230,000 refugees and 170,000 IDPs).<sup>140</sup>

*Arrangement of the groups that need protection:* While both Sudanese refugees and IDPs are fairly concentrated in several camps in eastern Chad and northeastern CAR, it is conceivable that the focus of militia/rebel/bandit attacks shifts to the rest of the host population, which is larger and far more dispersed. This would make protection more difficult.

*Armament and military competence of potential spoiler groups:* The potential spoiler groups are Sudanese militias, various Chadian anti-Déby rebel groups and various bandit groups that profit from the lawlessness in the area of operations.<sup>141</sup> As described earlier, their armament is believed to be relatively light.<sup>142</sup> While they would be no match to well-trained and equipped European forces, they should not be completely discounted as previous clashes with Chadian government forces have proven the relative combat skills of these various groups. Also, almost all militias and anti-Déby rebel groups have received some sort of support from the Sudanese government, including training and armament.<sup>143</sup> In addition, the groups are very mobile, have a good understanding of the area of operations and enjoy a safe haven on the Sudanese side of the border.

### ***Force Size Estimate***

A key determinant of the EU mission's success is the ability of EUFOR to establish a credible security presence in the area of operations as required for both deterrence and compellence. Due to the large and challenging area of operations and the potential for increased size and dispersement of the population to be protected, it appears that the required force-size for this mission should likely be closer to the upper end of the Quinlivan metric, that is, closer to 12,500 than 5,000 troops. However, even if the force were to comprise 12,500 troops, the force-to-space ratio would – with only 0.06 troops per km<sup>2</sup> – still be very low compared to previous operations. Operation Turquoise in Rwanda for example, which largely failed due to an insufficiently large force, had a force-to-space ratio of 0.35 troops per km<sup>2</sup>.<sup>144</sup> Therefore, unless a substantially larger force is deployed, the force will be stretched thin by the sheer size of the area of operations – which would make compellence very difficult. Some of this can be offset by a “virtual presence” afforded by equipping the

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140. UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2007/488 (10 August 10, 2007): 3.

141. See supra, Potential Enemy Forces, pages 11-14.

142. See supra, Table 1, page 14.

143. See supra, Potential Enemy Forces, pages 11-14.

144. The Safe Humanitarian Zone (SHZ) in Rwanda encompassed 5,180 km<sup>2</sup> in which 1,800 French troops were deployed. See: Alan Kuperman, *Limits of Humanitarian Intervention: Genocide in Rwanda* (Washington, D.C.: Brookings Institution Press, 2006).

force with a substantial rotary-wing aviation capability that would give the impression of an omnipresent force.<sup>145</sup> Helicopters would in fact be a force multiplier, which would allow for a reduction of the number of troops required.<sup>146</sup>

Previous analyses by the UN Peacekeeping Department have echoed the above-mentioned estimates. In his February 2007 report to the Security Council, UN Secretary-General Ban Ki-moon proposed two different military options.<sup>147</sup> The first option (Option A) called for a brigade-size force of 6,000 troops supported by a larger helicopter fleet.<sup>148</sup> The second option (Option B) called for a division-size force of 10,900 troops supported by a smaller helicopter fleet.<sup>149</sup> Table 9 outlines the two options proposed by the UN's assessment team in detail.

**Table 9**  
**UN Proposal for Size of the Force**

	<i>Force Size</i>	<i>Aviation Capability attached to the force</i>	<i>Troops per 1000 of population</i> <sup>§</sup>	<i>Troops per km<sup>2</sup></i> <sup>‡</sup>
Option A	1 infantry brigade (6,000 troops) plus one battalion force reserve (850 troops)	18 utility helicopters; 2 armed observation helicopters, an UAV detachment and 1 fixed-wing observation aircraft <sup>‡</sup>	4.8	0.03
Option B	1 infantry division (10,900 troops) plus one battalion force reserve (850 troops)	9 utility helicopters, with 2 armed observation helicopters, UAV detachments and 2 fixed-wing observation aircraft.	8.7	0.06

**Source:** UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic pursuant to paragraphs 9 (d) and 13 of Security Council resolution 1706 (2006)", S/2006/1019 (December 22, 2006): 12-13; UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2007/97 (February 23, 2007): 13-14. <sup>‡</sup> Based on AO of 200,000 km<sup>2</sup>. <sup>§</sup> Based on population in the AO of 1,25 million. <sup>‡</sup>The report warns, that the failure to generate the aviation would render this option unfeasible.

While UN findings echo the previous estimates on troop requirements, their recommendations on rotary-wing aviation requirements for both options seem far too optimistic.

145. See Kelly M. Greenhill, "Mission Impossible: Preventing Deadly Conflict in the African Great Lakes Region", *Security Studies*, Vol. 11, No. 1 (Autumn 2001): 101.

146. A heavy reliance on helicopters is not unproblematic in the given mission. Firstly, U.S. experience in combat shows that helicopters are delicate instruments that require considerable maintenance and consume large amounts of spare parts and fuel. See David C. Gompert et al, "Learning from Darfur - Building a Net-Capable African Force to Stop Mass Killing", *Defense and Technology Paper*, Center for Technology and National Security Policy, National Defense University (July 2005): 31. Secondly, it would make the intervening force more vulnerable to portable surface-to-air missiles (SAM), which both Janjaweed and anti-Déby rebels are known to possess. In June 2006, Chadian rebel groups managed to shoot down one of the Chadian Armed Forces' C-130s with a surface-to-air missile near Abéché. See Abakar Saleh, "Five killed as military plane crashes in Chad", *IOL Online*, June 12, 2006.

147. The report was based on the findings of a UN assessment mission led by the Department of Peacekeeping Operations that visited Chad and the Central African Republic from January 21<sup>st</sup> to February 6<sup>th</sup>, 2007. See UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2007/97 (February 23, 2007): 1, 4-5.

148. UN Security Council, "Report of the Secretary-General on Chad and the Central African Republic", S/2007/97 (February 23, 2007): 13-14.

149. *Ibid.*



The required helicopter fleet will more likely be at least double as large as the UN proposed.<sup>150</sup>

### ***Findings Phase II***

The previous analysis highlights that the large area of operations will likely be a key factor in determining the required force size. On the basis of a crude estimate, it concludes that the required force for the mission will likely range between 5,000 – 12,500 troops, but more likely closer to the latter than the former. It also concludes that ultimately, the number will strongly depend on the rotary-wing aviation available to the force. The more helicopters available to the force, the smaller the required force can be. Consequently, this section finds that the currently envisioned size of EUFOR would be well below the considered minimum requirement for the mission – especially if compellence is needed.<sup>151</sup>

### **Phase III: Getting Out**

As highlighted at the beginning of this analysis, the third and final phase of the operation would entail EUFOR handing over the mission within one year to a UN follow-on-force.<sup>152</sup>

Given the complexity of the underlying causes of the refugee/IDP crisis in Chad and CAR,

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150. A recent study by the National Defense University (NDU) estimates that a 6,600-11,000 troops strong AU force for Darfur would, based on U.S. Army standards, require 3-4 command helicopters, 10-15 reconnaissance helicopters, 24-36 attack helicopters, 40-50 utility helicopters, and 15-25 heavy cargo helicopters. See David C. Gompert et al, “Learning from Darfur - Building a Net-Capable African Force to Stop Mass Killing”, *Defense and Technology Paper*, Center for Technology and National Security Policy, National Defense University (July 2005): 31. This number seems very high. Nonetheless as the size of the area of operations for the EU mission is roughly double the size of that of the AU mission, a conservative estimate would put the number of helicopters required closer to 40 plus helicopters, depending on the size of the force.

151. This is especially problematic as first signs are not very encouraging concerning the availability of rotary-wing aviation to EUFOR. See Brooks Tigner, “EU identifies capability gaps for Chad, CAR”, *International Defence Review*, November 16, 2007. According to *Der Standard*, for example, the Austrian military initially considered providing its force of 160 troops with light-utility helicopters of the type SA-319 *Alouette III*, of which Austria operates a fleet of 24. However, it was later discovered that Austrian SA-319 lacked the necessary air filter required for desert operations. The same was, according to the same report, true of the 9 Austrian S-70A *Black Hawk*. As upgrade would take several months, it is presently unclear whether Austrian forces will be accompanied by rotary-wing aviation at all. See *Der Standard*, “Österreichische Tschad-Mission umgeplant”, November 6, 2007; *Wiener Zeitung*, “Das Bundesheer geht nach Afrika”, November 6, 2007. Sweden also seems to have difficulties providing helicopters. See *Dagens Nyheter*, “Trupp snart redo skickas ut i strid”, November 6, 2007. Additionally, shortages in rotary-wing aviation have repeatedly plagued operations of European states in the past, most recently in Afghanistan. For example, the U.K. was – due to a serious shortage of helicopters in Afghanistan – forced to rent Russian-made helicopters from private companies. See Thomas Harding, “Britain forced to use private helicopters in Afghanistan”, *Daily Telegraph*, October 12, 2006. At the same time, the cost of renting large helicopters is very high. At standard commercial rates, a Mi-17 – the civilian version of the widely used Russian workhorse capable of lifting four tons – could exceed \$100,000 a week. Paul Koring, “Beleaguered NATO set to charter helicopters”, *The Globe and Mail*, October 24, 2007.

152. The authorization of the European Council says, “the EU will conduct a bridging military operation (...) for the period of one year.” Council of the European Union, General Affairs and External Relations, 2824<sup>th</sup> Council Meeting, Luxembourg, October 15-16, 2007. The European Parliament made its approval of the mission conditional on EUFOR having “a clear exit strategy, which foresees its replacement by a UN, AU, or hybrid force”. See European Parliament, “EP sets out conditions for its support to the ESDP mission in Chad and the Central African Republic”, *Press Release*, September 27, 2007.



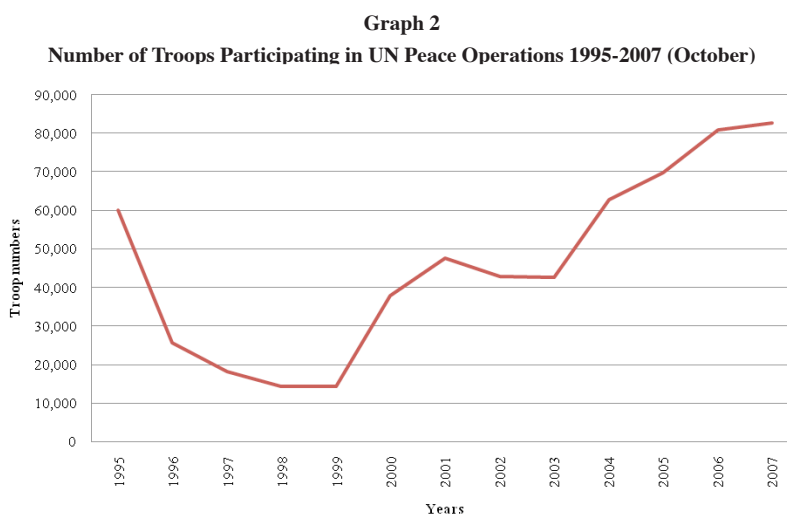
it seems highly improbable that the situation could improve, within one year, to the point where no follow-on-force would be required. In other words, unless EUFOR Tchad/RCA stays longer, a UN follow-on-force will be needed. The following discussion assesses whether the timely deployment of this follow-on-force is a realistic prospect.

**Restricting factors**

The probability that a UN follow-on-force could take over EUFOR’s mission within one year is restricted by four factors, outlined below.

*Factor 1: Limits in Projectable Forces*

The global community currently spends \$1.2 trillion a year on military forces, and keeps more than 20 million men under arms.<sup>153</sup> However, only a small portion of these forces can be projected over substantial distances and sustained over a longer period of time.<sup>154</sup> Aside from NATO countries, few other countries have the strategic lift capabilities, logistical assets that allow units to operate in foreign countries and large numbers of well-trained troops that can be deployed within months and sustained for an extended period of time.<sup>155</sup> Meanwhile, the demand for projectable forces for peace operations has been on the rise over the past several years. Currently, over 80,000 troops are participating in 21 UN peace operations alone.<sup>156</sup> Graph 2 illustrates the rising number of troops in UN peace missions around the world.



**Source:** UN Department of Peacekeeping Operations

153. International Institute for Strategic Studies, *The Military Balance* (London: Taylor and Francis, 2007): 441.

154. Michael O’Hanlon, Peter Warren Singer, “The Humanitarian Transformation: Expanding Global Intervention Capacity”, *Survival*, Volume 46, No. 1 (Spring 2004): 82.

155. Even within NATO, the United States is the only country that can deploy substantial numbers of troops within a short timeframe and sustain them for a longer period of time. *Ibid.*

156. UN Peacekeeping Department, “Troop Contributions October 2007”, October 2007.

As a result of the current demands for peacekeeping operations, projectable forces are already stretched thin and a donor fatigue is increasingly noticeable.<sup>157</sup> Especially African countries, which would appear as the most likely potential contributors for the mission in Chad and CAR, are unlikely to be able to contribute substantial numbers of troops in the near future.<sup>158</sup> As a result, it seems questionable that several thousand more projectable forces could be made available for a UN follow-on-force.

*Factor 2: Short Timeframe*

The United Nations would likely not only have difficulties generating sufficient contributions, it would also have to do so in a relatively short time. Unless the forces are committed by neighboring countries – which seems unlikely – the deployment will again have to use the sea-land route via the Douala Corridor. Based on the above-made calculations, the follow-on-force would require at least two months to deploy into the area of operations. Given that the rain season, which precludes deployment, starts in May and lasts until September, the deployment of the follow-on-force would have to start taking place at the latest in March. Both the deployment of EUFOR, which is planned to take place between the end of November and mid-January, and the massive humanitarian effort (the World Food Program alone operates 8,000 trucks to transport over 79,000 m/tons of cargo into Chad until the onset of the rain-season in May 2008),<sup>159</sup> will put serious strains on the already heavily used Douala Corridor.<sup>160</sup>

The UN follow-on-force would therefore only have an effective window of time to begin deployment between mid-January and mid-March 2008, in order to be able to replace EUFOR in late 2008. The United Nations would thus be required to have sufficient troop commitment by the end of 2007 at the latest, which presently seems unlikely.

*Factor 3: Logistical Challenge*

Assuming that, despite the current donor fatigue, countries would be willing to contribute troops to a follow-on-force, these forces would likely face even greater logistical challenges than the European Union. As the chances that the United States or Canada

157. See for example Marjorie Ann Browne, “United Nations Peacekeeping: Issues for Congress”, *Congressional Research Service Report for Congress* (August 2007): 11.

158. In 2001, Michael O’Hanlon estimated that African countries would possess an ability to deploy and sustain no more than some 10,000 forces in aggregate. Today, African countries are contributing 17,440 troops out of 82,701 troops currently deployed in UN peacekeeping missions. It thus appears unlikely that African countries could deploy and sustain much more forces for peace operations. See Michael O’Hanlon, “Saving Lives with Force: An Agenda for Expanding the ACRI”, *Testimony before the Subcommittee on Africa on the Committee on International Relations of the House of Representatives*, July 12, 2001; UN Peacekeeping Department, “Troop Contributions October 2007”, October 2007.

159. The WFP uses the Libyan Corridor in addition to the Douala Corridor. See World Food Program, “WFP in urgent need of US\$81 million to feed 380,000 displaced in Eastern Chad”, *Press Release*, September 6, 2007.

160. See *Economist*, “Trucking in Cameroon - The road to hell is unpaved”, December 19, 2002.

would provide forces for the UN follow-on-force are negligible, the most likely countries to contribute will be developing countries. These will probably be unable to decrease troop requirements through equipment that would allow greater mobility, such as helicopters.<sup>161</sup> The required force-size will therefore likely be well above 10,000 troops, which will impact both the challenges of deployment and sustainment. As outlined earlier, deployment is a difficult task, even for capable European forces with some power-projection capabilities. The same will be true for the sustainment of the force, which is especially difficult because of the limited host nation support ability. Therefore, for developing nations, the deployment and sustainment of a 10,000+ troops force will be a daunting logistical undertaking.

*Factor 4: Budgetary Restraints*

Finally, budgetary restrictions will likely cause hesitation or reluctance by most countries to provide forces for an expensive and potentially open-ended deployment in central Africa. According to unofficial estimates, the envisioned one year mission of the European Union will cost as much €500 million (\$705 million).<sup>162</sup> Even if the operational costs were lower, which seems unlikely due to the logistical requirements, it seems improbable that the UN could find sufficient countries that would be able and willing to carry such a monetary burden for a humanitarian operation.

*Findings Phase III*

The previous analysis highlights that, at present, it seems unlikely that the situation in the area of operations could improve, within one year, to the point where no follow-on-force would be required. At the same time, due to the number of globally deployable forces, the short timeframe, logistical challenges and costs of the operation, it also appears improbable that the United Nations will be able to assemble a follow-on-force to replace the EUFOR within the envisioned timeframe of one year.

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161. Shortages in helicopters already plague other peace operation, such as the current UN-African Union peacekeeping mission to Darfur. See *BBC News*, “Darfur mission ‘may fail’ says UN”, November 15, 2007.

162. See Brooks Tigner, “EU struggles to firm up plans for central African deployment”, *Jane’s International Defence Review*, November 1, 2007. Most likely, however, the costs of the mission will be even higher.

## **KEY FINDINGS AND IMPLICATIONS**

The paper started by noting the absence of a real assessment of the EU's upcoming mission in Chad and Central African Republic. It conducted an analysis of the mission, and identified the following key findings:

*First*, the European force can deploy into the area of operations within a reasonable timeframe. However, deployment will be logistically very challenging and very expensive.

*Second*, the force pledged to EUFOR, in its currently projected composition, seems to be well below the required force size for the mission. Unless it is supported by substantial rotary-wing aviation, some doubts remain as to whether the force can fulfill the objective of protecting the population.

*Third*, EUFOR is unlikely to be replaced by a UN follow-on-force and withdraw within one year.

On the basis of these key findings, the paper concludes with three main observations:

### ***The Logistical Challenge***

The logistical challenge of the intervention will be significant. As highlighted above, the deployment will, due to the remoteness of the area of operations, the poor local infrastructure, and the likely inability of the host nation to provide support, be very challenging. However, the logistical challenge does not stop there. Rather, the continued sustainment of the force will be an equally great challenge. Virtually anything the EUFOR needs, such as water, fuel, food, medical supplies, etc. will have to be brought into the area of operations over a distance far greater than any other current mission. It is worth remembering that in the previous French operation in Chad, Operation Manta, the logistical challenges of continued sustainment were one of the important factors undermining the achievement of the mission's objectives. Additionally, even if the mission only lasts for one year, it will likely be the most expensive mission ever undertaken by the European Union. Should it last longer, it seems probable the eventual termination of the mission will be due to fiscal concerns, more than anything else.

### ***Resources Determining Strategy***

The analysis finds that the proposed size of EUFOR appears to be well below the required force size for the mission – unless substantial rotary-wing aviation is made avail-

able to the force – which presently seems improbable. On the other hand, the analysis also reveals that deployment and sustainment of 3,700 troops will already pose a considerable logistical challenge to the European Union. A substantially larger force would magnify these challenges and likely exceed the European Union's member states current military capacity. The available resources thus seem to be a key determinant of the size of EUFOR, which in its turn might determine the military strategy to be adopted. Since the proposed size of the force appears to restrict the possibility of adopting a strategy of compellence, EUFOR might have to rely on deterrence. The problem is, however, that deterrence might not be sufficient to achieve the objective of protecting the population. The result could therefore be a mismatch between the military strategy and objectives of the mission. This prospect should be of concern, as the mismatch between objectives and military strategy has led to the failure of well-intended interventions in the past.

### ***Termination of the Intervention***

The European Union is unlikely to be able to hand over the mission to a UN follow-on-force within the envisioned timeframe of one year. In fact, questions remain as to whether a UN or any other follow-on-force is a realistic prospect at all. As the conflict has little chances of being resolved soon, it is possible that the European Union is actually committing itself to a long-term mission. However, as the mission endures, the European Union will have to face two additional problems. With the increasing costs of operation, public support for a protracted and expensive intervention is bound to decline. At the same time, the longer EUFOR stays in Chad and Central African Republic, the more likely it is to get entangled in the complex web of conflicts that has haunted the region for the past 20 years.



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