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Afloat Depots for the African Standby Force

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Abstract

Challenges to peace and security continue to abound on the African continent and the African Union is developing the capabilty to respond to these challenges in the form of the African Standby Force (ASF). This paper argues that the G8 nations could operationalize their stated intent to assist the ASF by supporting an Afloat Depot capability for operational level logistic support. The Afloat Depot concept is proposed in lieu of the currently proposed land-based system of regional depots. Through their inherent characteristic of mobility, Afloat Depots offer the ASF a number of operational advantages. Mobility offers relative freedom from Host Nation political constraints, greater force protection, increased speed of deployment of the force, a transportation asset that may be flexibly employed, and greater opportunities to train with different countries. From a G8 standpoint, the Aflloat Depot concept comes with a financial premium but offers an accountable and transparent method of providing operational level logistic support to the ASF. This is important in terms of being able to demonstrate to the G8 publics that the funds expended have been put to good use rather than being misappropriated by corrupt bureaucracies. Though not heretofore a leader in Afloat Depots, Canada could choose to be helpful, perhaps in concert with an African partner or partners, in leveraging CF expertise in a number of areas related to expeditionary logistics.

Sustaining the combined and joint force is among the key elements of success at the operational level of conflict. Indeed the conventional wisdom is that amateurs study tactics whilst professionals study logistics. The freedom of action of any force will be constrained if it is not properly sustained and this, in turn, will impact on mission success. In warfare, the cases of Rommel in North Africa (1942) and Napoleon in Russia (1812) are rather well known but sustainment problems can also hinder Peace Support Operations. For example, the operational effectiveness of the current African Mission in Sudan (AMIS) has suffered from numerous and widely reported deficiencies in sustainment.[1] With the prospect of continued unrest and the need for continued stability forces around Africa, the material demands of sustaining such forces are significant and growing.

To address the need for increased stability forces, the African Union (AU) has developed the concept of an African Standby Force (ASF) to leverage the military capabilities of the regional organizations on the continent. The current ASF concept is, for the moment, land-centric because of the nature of the conflicts and because few sub-Saharan African countries outside South Africa have significant naval or air forces. The question is how can the combined and (albeit limited) joint ASF be best sustained? This paper's thesis is that a number of

[1]Human Rights Watch, *AMIS II-E Performance Assessment,* available from http://hrw.org/reports/2006/sudan0106/7.htm; Internet; accessed 16 October 2006.

Afloat Depots are a better way to support the ASF than the currently planned system of regional land-based depots.

Logistically, the AU concept is that the ASF is to be supported by a system of land-based depots, with a central AU-level depot and a regional depot in support of each of the five brigades. The main problem with such a land-based approach is that the depots may be vulnerable to a number of risks such as political instability and conflict and this uncertainty could inhibit the effective sustainment of ASF components. By contrast, Afloat Depots offer a partial solution to the uncertainty of the land-based system and offer several key operational advantages. The concept of Afloat Depots revolves around the notion of time-chartering suitable commercial cargo vessels using the financial resources of G8 countries.[2] It will be shown through an analysis of the African transportation infrastructure and the availability of commercial shipping that the concept is technically viable. As these depots would contain a limited amount of equipment and mostly sustainment material to support ASF Brigades, the Afloat Depot concept differs significantly from the US Army and Marine Corps afloat pre-positioning practices. The concept is certainly not even close to the ambitious US concept of sea basing.

[2] A time charter is a type of shipping contract where a vessel is hired for a specified period of time (usually months or years). Within that time, it is under the control of the chartering party to perform any reasonable task given to it. This is different from a voyage charter where a vessel remains under the control of the owners and provides transportation between specified points within a window of time. (E.g. Montreal to Dakar).

As will be shown, the Afloat Depot concept offers the AU significant operational advantages in movement and storage, particularly if a Theatre Activation package is embarked. [3] Afloat Depots provide greater flexibility in terms of freedom from political constraints, increased speed of deployment, and increased training opportunities. They also provide superior force protection for the stores and once emptied, can be used for supplementary re-supply or to assist with rotations and follow-on deployments. These advantages mean that Afloat Depots meet the AU logistic system aims of supporting rapid and effective deployment and sustainment.

An additional AU aim is to secure the financial assistance of outside partners for establishing a sustainment capability. The G8 generally has been sympathetic to this initiative because it would reduce the demand for their military forces to become involved in conflict resolution in Africa. From a G8 perspective, this option is desirable because it would be difficult to generate the requisite number of troops and because many G8 nations often carry significant political baggage as a holdover from the colonial and Cold War periods. Aside from humanitarian concerns, conflicts in Africa are often held not to be in the vital national interests of Western states, and it is therefore difficult to sustain Western public opinion behind such interventions. The relatively higher costs of

[3] Canada. Department of National Defence. "Theatre Activation/Close-out". Chapter 7. Section III from Canadian Forces Operations. B-GJ-005-300/FP-000. (Ottawa, ON; Department of National Defence, 2005), 7-9-7-10. In Canadian doctrine, for example, a Theatre Activation Team is responsible to establish support arrangements, plan, and design and begin implementation of force bed down, establishing the communications links and setting up the framework for the Reception, Staging and Onward Integration (RSOI) of the Task Force.

chartering ships in comparison to renting buildings means that G8 governments will need to justify the financial premium to be paid for the Afloat Depot capability. However, compared to land-based depots, the financial underwriters in the G8 countries ought to be attracted to the relative transparency, accountability and limited political and physical risk to the assets that they will largely be asked to pay for.

African Standby Force Concept

The AU is the successor to the Organization of African Unity (OAU). Article Four of the Constitutive Act of the AU establishes a number of principles relative to the peace and security sphere: a common defence policy; peaceful conflict resolution; the right of a Member State to request the AU to intervene to restore peace and security; and the right of the AU to intervene in a member state to prevent war crimes, genocide and crimes against humanity.[4] The AU vision is "… that of an Africa Integrated, Prosperous and Peaceful, an Africa Driven by its own Citizens, a Dynamic Force in the Global arena."[5] One of the seven missions of the AU is to play a leadership role in promoting peace, human security and good governance in the continent.[6] In that regard, the AU has

[4] African Union. *The Constitutive Act*, (Lome, Togo, 11 July 2000), available from http://www.africa-union.org/root/au/AboutAu/Constitutive_Act_en.htm; Internet; accessed 10 October 2006.
[5] African Union. *Strategic Plan of the African Union Commission, Volume 1, Vision and Mission of the African Union.* (Addis Ababa, May 2004), 27, available from http://www.africa-union.org/root/au/AboutAu/Vision/Volume1.pdf; Internet; accessed 10 October 2006.
[6] Ibid, 37.

established a Peace and Security Council, a Military Chiefs of Staff Committee and several other peace and security related institutions

One of these institutions is the ASF, an initiative inherited from the OAU to create an African capability to generate stability forces. The AU plan is to create an ASF of some five light infantry brigades by leveraging the organizational capabilities of the five main RECs in the AU.[7] Generally, each region is to establish a permanent planning element, nominate an existing brigade headquarters from one of the nations as the foundation of the brigade, and then have various nations contribute the component units of the brigade according to their capacity. In effect, this structural concept is similar to the NATO notion of a 'framework nation' in which certain countries provide the critical mass of a capability, which is then augmented by other nations. Deployment of the brigades would be accomplished through a combination of indigenous African lift and assistance provided by external partners (i.e. NATO/EU/G8). Four of the five regions have taken concrete steps to establish a capability by summer of 2006.

[7] African Chiefs of Defense Staff. *Policy Framework For The Establishment Of The African Standby Force And The Military Staff Committee **(Part I)*** (Addis Ababa: adopted by the Third Meeting of 15-16 May 2003), 2, available from http://www.africa-union.org/root/au/AUC/Departments/PSC/Asf/doc/POLICY%20FRAMEWORK%20MAIN%20DOCUMENT%20(PART%20I).doc; Internet; accessed 12 September 2006.

Africa – Regional Economic Communities and Ports

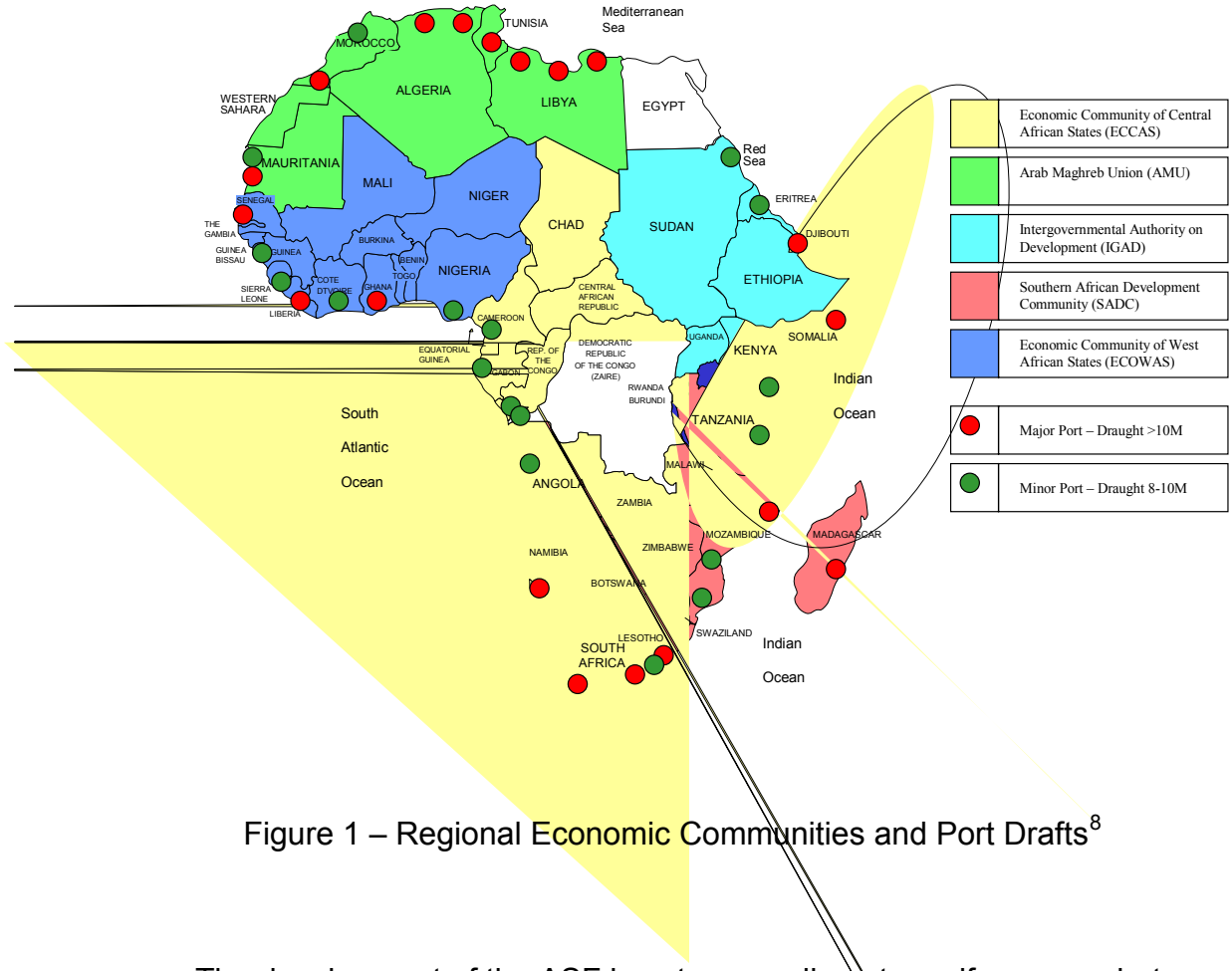

Figure 1 – Regional Economic Communities and Port Drafts[8]

The development of the ASF is not proceeding at a uniform pace but rather is progressing as the situation within each of the REC's permits. A general summary of the progress in each region is:

Eastern Africa. Under the auspices of the Intergovernmental Authority on Development, East African Ministers of Defence approved the legal framework for the East African Standby brigade (EASBRIG) in July 2005. It has a standing Brigade HQ framework and a logistic base in Addis Ababa,

[8] Clipart map from Bruce Jones Design Incorporated, World of Maps, Downloadable Clipart Maps, available from http://bjdesign.com/html/regions_samples.html; Internet, accessed 18 October 2006.

Ethiopia. It also has a staff planning element based in Nairobi, Kenya.[9] The framework nation in EASBRIG is clearly Ethiopia, though Kenya is also keen to play a role. From a security perspective, East Africa is troubled by conflict between Ethiopia and Eritrea, civil strife in Ethiopia, Kenya, Sudan and Uganda and no effective government in Somalia. Additionally, some of the civil strife, for instance between Ethiopia and Somalia and in the Kenya\Uganda\Sudan border areas, has cross-border overtones. The remaining country, Djibouti, hosts a long-standing French military presence and a more recent American one.

Western Africa. The Economic Community of Western African States (ECOWAS) had previously made some progress in establishing a multinational military force in the form of the ECOWAS Monitoring Group (ECOMOG).[10] Nigeria provides the brigade headquarters structure and much of the manpower. ECOMOG consists on paper of a 6,500 man brigade and a 10 man Mission Planning and Management Cell.[11] Due to the previous experience of ECOMOG in peacekeeping operations, the ECOWAS Standby Brigade is the most developmentally advanced. However, ECOWAS suffers from a political rift between its Anglophone and Francophone members that has resulted in ECOMOG being largely staffed by the Anglophone countries. There is also civil

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[9] African Union. Experts' Meeting on the Relationship between the AU and the Regional Mechanisms for Conflict Prevention, Management and Resolution. *Roadmap for the Operationalization of the African Standby Force* (Addis Ababa, 22 – 23 March 2005), 2. Available from http://www.africa-union.org/root/au/AUC/Departments/PSC/Asf/doc/ASF%20roadmap.doc: Internet; accessed 14 September 2006.

[10] The Anglophone members of ECOWAS established ECOMOG in 1990 and the force has intervened in West African conflicts in Sierra Leone, Liberia, and Guinea-Bissau. The bulk of the force is based on a Nigerian Brigade, with sub-battalion elements contributed by other nations. Available at http://www.answers.com/topic/ecomog; Internet; accessed 14 September 2006.

[11] African Union. *Roadmap for the Operationalization of the African Standby Force*, p. 3.

unrest or conflict in Liberia, Cote d'Ivoire and Sierra Leone, as well as the Delta region of Nigeria and the Casamance region of Senegal. Agreeing on a politically stable basing location for a land-based supply depot may be tricky.

Southern Africa. The South African Development Community (SADC) has established a technical team to plan the establishment of the SADC Standby Force and is studying the establishment of a permanent planning element.[12] Given its relative military and economic strength, South Africa is likely to be the framework nation for the SADC Standby Force. Southern Africa is arguably the most stable of the regions from a security point of view. There are no interstate armed standoffs and civil strife in Angola and Mozambique is over. This relative peace may explain the somewhat leisurely pace of the Standby Force development. From a basing point of view, South Africa would clearly be the most advantageous location for a land-based regional depot, but there may be political pressure to 'share the wealth' by establishing the supply depot in another nation.

Central Africa. The Economic Community of Central African States has established a structure for a regional headquarters, a structure and Table of Organization and Equipment for a 2,177 man brigade, and an action plan for implementation.[13] That said, Central Africa is troubled by several challenges to peace and security. The Democratic Republic of Congo suffers from an anaemic government and its Eastern provinces now host a UN force that is trying to restore peace and security after more than a decade of instability, foreign

[12] Ibid.
[13] African Union. *Roadmap for the Operationalization of the African Standby Force*, 4.

intervention and insurrection. Both Chad and the Central African Republic face serious civil strife and the peace process in Burundi is still in a fragile state. Given the security situation and the relative political and military weakness of the member states, there is no obvious framework nation and it seems reasonable to expect that anything more than token progress may be some years off.

Northern Africa. The AU has designated the Arab Maghreb Union (AMU) as the REC but the AMU has been effectively moribund since shortly after its launch in 1989 and there seems to be little interest amongst the member states in reviving the organization. Algeria faces an Islamist insurgency at home and a dispute over Western Sahara with its neighbour Morocco. Little to no progress has been made in this region due to political differences amongst the states and overlapping membership in regional organizations.[14] Without significant political progress, the formation of an ASF Standby Brigade in North Africa seems to be on hold.

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[14] Jakkie Cilliers and Mark Malan, "Progress With the African Standby Force". *Institute for Strategic Studies.* (Occasional Paper 98, May 2005) available from **http://www.iss.co.za/index.php?link_id=3&slink_id=465&link_type=12&slink_type=12&tmpl_id=3:** Internet; accessed 18 September 2006.The situation in the North African region and the planning for the creation of a standby force remain unknown to most African security analysts, as well as officials within the AU itself. The AMU (Arab Maghreb Union) should arguably be taking the lead, but the organisation overlaps with the Community of Sahelian-Saharan states. Three of these states would see their primary responsibility as contributing towards the ECOWAS Standby Force.

Notwithstanding the uneven progress on the ground, the overall concept is that each of the regional ASF brigades is expected to generate forces for six different scenarios:[15]

Scenario	Description	Size of force	Able to deploy in
1	AU/Regional Military advice to a Political mission.	Staff Officers	30 days
2	AU/Regional observer mission co-deployed with UN mission	Bde HQ (-)	30 days
3	Stand alone AU/Regional observer mission	Bde HQ (-)	30 days
4	AU/Regional peacekeeping force (PKF) for Chapter VI and preventive deployment missions.	Bde task	30 days
5	AU PKF for complex multidimensional PK mission with low level spoilers (a feature of many current conflicts).	Bde task	30 days (military component)

[15] Policy Framework for the Establishment of the African Standby Force and the Military Staff Committee **(Part I)**, pp 3-7. A sixth scenario, for rapid intervention to prevent genocide, was also elaborated but was deemed to require a capable lead nation with standing high-readiness forces capable of opposed entry. "As a long term goal, the ASF should be capable of conducting such interventions without reliance on lead nations. This would require a standing AU multinational military HQ at above brigade level, plus the capability to assemble and deploy rapidly well prepared and capable military contingents."

The AU assessment is that, though resource constraints are a key factor, the further development of the ASF should concentrate on Scenario 5 and that "the building block of this capability is robust coherence at brigade group level."[16] The AU is cognizant of the myriad challenges involved in creating such a capacity and has therefore recommended a phased developmental approach. During Phase One (up to 30 June 2006), the AU's objective is to establish a strategic level management capacity for the management of scenarios 1-2 missions, while RECs will complement the AU by establishing regional standby forces up to a brigade size to achieve up to Scenario 4. [17] In Phase Two (1 July 2005 to 30 June 2010), the AU will develop the capacity to manage complex peacekeeping operations, while the RECs/Regions will continue to develop the capacity to deploy a Mission Headquarters (HQ) for Scenario 4, involving AU/Regional peacekeeping forces.[18] The logistics depot structure will be expected to support the range of possible missions. From a sustainment perspective, the timelines for developing the force are less important than the level of ambition of the readiness goals. The 30-day response time can be considered a high-readiness posture, and readiness is expensive. To meet this timeline, the AU will need to consider how to expedite theatre activation and ensure a timely flow of sustainment to deploying forces. It will require

[16] Ibid, 7.
[17] African Union. *A Vision for the African Stand-by Force? A Draft Document for Discussion. Second Draft for Bereng Mtimkulu.* (Addis Ababa 23 September 2005) 3. available at http://www.africa-union.org/root/au/AUC/Departments/PSC/Asf/doc/ASF%20vision-Second%20Draft%20Vision.doc. Internet; accessed 12 September 2006. Although Phase One was to have occurred by 30 June 2005, it was subsequently delayed until 2006.
[18] Ibid.

sustainment stocks that are well-maintained and prepared for transport and a theatre activation capability with a response time of just a few days.

The ASF concept of logistics support for this relatively ambitious military effort is not yet well developed. The notion is that forces deployed for scenarios 1-3 will self-sustain for 30 days while the brigades deploying for scenarios 4 and 5 will have 90 days of self-sustainment. However, after 30 days of a mission, the REC will either assume responsibility for sustainment or reimburse the Troop Contributing Nations for doing so. [19] The premise would seem to be that nations are responsible for the first 30 days of sustainment while the following 60 days (less purely national items) would largely be expected to come from the regional depots. The notion of reimbursing nations rather than providing the capacity for sustainment would likely lead to a very uneven sustainment posture across the force, as not all nations possess the same capacity. Such an uneven sustainment posture could be a brake on operational effectiveness. Another difficulty with this premise is that the emphasis is on flowing in the 30 days of sustainment materiel along with the deploying forces in the initial deployment phase; thereby creating a demand for precious airlift that is likely to be in limited supply from foreign partners.

Of course, providing the capacity for sustainment implies some sort of logistics structure. The AU has assigned itself the Phase Two task of "Co-ordination of efforts to establish a logistical infrastructure consisting of a central

[19] Roadmap for the Operationalization of the African Standby Force, 10.

and regional MLDs [Military Logistics Depots], as well as efforts to mobilise external assistance towards the establishment and stocking of the MLDs."[20] No doubt there is some notion of a maintenance capability at these depots so that equipment and materiel held at them can be maintained in a state of readiness. The two-fold aim of such a logistics support system would be to support rapid and effective deployment and mission sustainability.[21] For land-based depots to support rapid deployability and effective sustainment, they will need to be situated close to air and sea ports so that they can be quickly out-loaded and easily replenished. Essentially, the AU will negotiate the locations of the six depots with prospective host nations and negotiate with external partners to help build, fill and maintain them. It is somewhat likely that such a construction program of permanent infrastructure will be viewed by local politicians as a great patronage opportunity and that the resulting depots will be sub-optimal from a military efficiency point of view. The numerous Canadian and United States examples of the distorting influence of "pork-barrel" politics are not encouraging when one considers how this process might work out in far less transparent African polities. Moreover, the degree of political and social instability present in African nations could result in the depots being inaccessible or physically threatened. While this type of risk exists for all elements of a Standby Brigade, it is far graver with respect to sustainment stocks because these are relatively scarce; there may be plenty of light infantry battalions but relatively little in the way of sustainment capability in most African militaries.

[20] Ibid, 23.
[21] Ibid, 32.

G8 Support

Given that most AU member states face significant fiscal challenges that are unlikely to be resolved before 2010, external assistance for logistic support of the ASF military logistics depots is crucial. The AU expects external partners to provide assistance with establishing and stocking the depots, as well as providing the lift to move the stocks in time of crisis.[22] The expectation of external assistance follows the pattern established by the AMIS mission whereby various G8 and NATO partners provided financing, life support, vehicles, fuel, and transportation services. The G8 group of nations has expressed continued support for the idea of building the capacity of the ASF.[23] The implicit idea in this partnership is that the AU will develop 'African solutions for Africa' and the Western countries will write the checks to cover the development costs as a means of avoiding direct Western military involvement. Indeed, several G8 nations have undertaken significant unilateral initiatives to improve African capacity to undertake Peace Support Operations. For instance, France trains and equips African armies under its Reinforcement of African Peacekeeping

[22] Roadmap for the Operationalization of the African Standby Force, 12.
[23] St. Petersburg G8 Summit Documents, "Update on Africa" available at http://en.g8russia.ru/docs/13.html; accessed 12 September 2006. "We have increased our support for African efforts to build a peaceful and stable Africa, including support for setting up the African Standby Force and technical, logistical and financial assistance on policy development to strengthen the overall capacity of African organizations to deal with conflicts on the continent."

Capabilities (RECAMP) program.[24] The United States is also extensively involved in training and equipping African forces through its African Contingency Operations Training Assistance program.[25] There is an understandable reticence amongst donor nations to simply 'writing a blank check' to the AU.[26] In fact, the willingness of G8 nations to contribute financially to supporting the ASF may be less than firm if they cannot convince their publics that the funds have been well spent and have resulted in some measurable improvements in ASF capability. Logistics support structures that can demonstrate a degree of transparency and accountability, therefore, ought to be attractive to Western governments.

Geographical and Technical Context

An obvious question is whether the geographical and technical contexts of conducting operations in Africa are consistent with the Afloat Depot concept. Forty of the continent's fifty-five countries have coastlines and are accessible by sea.[27] Though Africa is the only continent where more of the population lives in the interior than along the coasts, the relatively poor continental transportation

[24] David White; "France strives to recast its role in Africa as the past comes calling" *Financial Times;* (London (UK); Dec 2, 2005) 11. http://proquest.umi.com; Internet; accessed 27 September 2006.
[25] Russel J. Handy; "Africa Contingency Operations Training Assistance: Developing training partnerships for the future of Africa" *Air and Space Power Journal*, Fall 2003; Vol 17; Iss 3; 57. Available at http://proquest.umi.com; Internet; accessed 27 September 2006.
[26] African Union. *Policy Framework for the Establishment of the African Standby Force and the Military Staff Committee (Part Ii – Annexes)* B-7. (Addis-Ababa 16 May 2003) available at http://www.africa-union.org/root/au/AUC/Departments/PSC/Asf/doc/POLICY%20FRAMEWORK%20FINAL%20ANNEXES%20(PART%20II).doc; Internet; accessed 12 September 2006; "While there is clear support for African goals, the international community must have confidence that support provided is used in the most effective and efficient manner."
[27] University of Pennsylvania. http://www.africa.upenn.edu/Home_Page/Country.html; Internet; accessed 26 September 2006.

system in the interior means that access from the coasts is still the cheapest and easiest method. The North African Region, because of the Sahara Desert, is most densely populated in the littoral. Population distribution in the Central African nations, on the other hand, is mostly inland. The other regions lie somewhere in-between.

The transportation infrastructure in Sub-Saharan Africa is a potential limiting factor in operational planning considerations for any military force. The continent is under-developed in terms of transportation infrastructure, even when compared to other developing regions.[28] There are for instance, no transcontinental road or rail structures that would facilitate force deployment and sustainment. Though the SADC region has the best-developed road and rail systems, other regions tend to have transportation infrastructure that radiates from ports to specific hinterlands but which rarely connect together.[29] Even though a limited rail network exists in East Africa, it is a different gauge than that used in the SADC.[30] This sort of transportation infrastructure situation suggests

[28] Andrea Goldstein and Celine Kauffman; "Is More Money Enough to Fix Africa's Transport Infrastructure?" *Policy Insights*, Number 21, (May 2006) available at www.oecd.org/dev/insights; Internet; accessed 18 September 2006.
[29] Dr. Andrew Shaw; "The influence of changing patterns of trade and shipping in ports in Sub-Saharan Africa" The Development Bank of Southern Africa; 4th Intermodal Africa Conference, (Swakopmund Namibia, February 2006) available at http://tem.msomail.co.uk/assets/AndrewShaw.pdf#search=%22African%20Port%20Data%2C%20Shaw%22; Internet; accessed 26 September 2006.
[30] John Mbwana, "Transport Infrastructure in sub-Saharan Africa" *Africa Notes* (November 1997) Available at http://www.einaudi.cornell.edu/africa/outreach/pdf/Transport_infrastrucuture.pdf#search=%22Transport%20Infrastructure%20in%20sub-Saharan%20Africa%2C%20Mbwana%22; Internet; accessed 26 September 2006.

that the movement of goods by sea around the littoral may well be more practicable than trying to move them overland.

Air transport is an obvious alternative but the infrastructure to support it is also most limited in most African countries. Air transport generally has a limited capacity compared with surface movement and is much more expensive. For these reasons, air transport is usually considered a premium form of transportation compared to land and sea. Logisticians will try to use it for moving high-priority items while trying to move the bulk of sustainment items by surface.

Seaports in Africa also face certain challenges. Like the rest of the transportation infrastructure, they suffer from under-investment and lack of modern capability.[31] The important question is whether sufficient African ports with the capacity to handle Afloat Depot vessels exist. The majority of sub-Saharan ports can accommodate vessels with a draft (the depth to which a vessel is immersed when fully loaded) of 10M or less. This capability generally corresponds to the draft required for first and second generation container ships, which in turn indicates a capacity of somewhere between 500-2,500 containers. Furthermore, first and second generation container ships represent about 30-40% of the world's container vessels.[32] Consequently, there is a relatively large

[31] Andrea Goldstein and Celine Kauffman, 14-18.

[32] Dr. Andrew Shaw, *The influence of changing patterns of trade and shipping in ports in Sub-Saharan Africa*, The Development Bank of Southern Africa; 4th Intermodal Africa Conference, (Swakopmund Namibia, February 2006), p15, available at http://tem.msomail.co.uk/assets/AndrewShaw.pdf#search=%22African%20Port%20Data%2C%20Shaw%22; Internet; accessed 26 September 2006.

pool of suitable vessels available from which time-chartered Afloat Depot vessels might be sourced.

Though the detailed logistical study by African operational planners has not yet been done to determine just how many containers of sustainment materiel a Light Infantry Brigade might require, a possible point of comparison is the deployment of the UK Task Force to recapture the Falkland Islands in 1982. That light infantry brigade Task Force deployed with a war maintenance reserve (30 days stocks) totalling some 9000 tons.[33] Though a number of differences exist between the UK Task Force and the proposed ASF brigades, including the level of intensity of combat anticipated, a simple doubling of the UK stocks (to represent 60 days) would result in a requirement of 18,000 tons. Another rough order of magnitude calculation, based on the fact that a typical twenty foot shipping container (TEU) holds 17 tonnes of material, results in an approximate 1,058 TEU requirement for an ASF Brigade's sixty days of sustainment stocks. This number of containers fits well within a typical ship size that would be appropriate to the majority of African commercial ports.

Pre-positioning and Sea-Basing

The proposed Afloat Depots for the ASF brigades should be distinguished from pre-positioning and sea basing concepts, both of which are promoted or

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[33] Major General Julian Thompson*; The Lifeblood of War: Logistics in Armed Conflict*: (Brassey's (UK); London; 1991); .252.

practised to the greatest extent by the United States. The Afloat Depot concept could assist in speeding deployment by reducing the demand on premium transport during the deployment phase. If a theatre activation package were embarked, it would also speed the deployment of the main force by effectively pre-positioning the materiel required and potentially providing life support for the theatre activation troops. In these ways, it is similar to the afloat pre-positioning concept employed by the Americans. Another key feature of the Afloat Depots is that they reduce the political and security risks associated with land-based depots, and in that sense also, they share a feature of the American sea-basing concept.

Pre-positioning, whether on land or afloat, is a method of speeding the deployment of forces into a theatre by reducing the demand on transport. The earliest US attempts involved placing the equipment of an infantry brigade aboard ships at Okinawa and having the troops fly in to marry up with the equipment. This method was first used in Vietnam and it was generally considered a success. The concept was shelved in the post-Vietnam environment and the US focused on land-based pre-positioning in the NATO theatre in the form of Pre-positioned equipment Configured to Unit Sets (POMCUS) depots in the BENELUX and other countries. Afloat pre-positioning was revived in the late 1970s as the United States began to grapple with the challenge of rapidly deploying forces to the Persian Gulf in the face of Soviet and

Soviet-sponsored state threats.[34] Since the 1970s, the afloat pre-positioning fleet has grown in scope to encompass all the US Services and the Defence Logistics Agency (DLA), in geographic reach to encompass assets in the Mediterranean and Pacific as well as the Indian Ocean, and in the number, size and capabilities of ships. The pre-positioned assets were employed in both Operation Desert Storm and Operation Iraqi Freedom.

The key feature of the Army and Marine Corps afloat pre-positioned assets is that they remain more or less true to the original concept; they contain the equipment of units that are flown in to meet them. In the US construct, the equipment on the pre-positioned ships is a duplicate set of the equipment that the unit has in garrison. There is a difference of approach between the Army and Marines as to how these ships are unloaded but at the end of the day, unit personnel are required to drive their equipment off the vessels.[35] The Air Force, Navy and DLA ships more closely resemble the Afloat Depot concept because they are filled with stocks rather than unit equipment sets and are designed to provide sustainment material so that the sustainment demands on strategic airlift early in the deployment can be reduced.[36] However, the United States' force structure calls for massive amounts of stocks and they operate a fleet of large,

[34] William G.T Tuttle Jr; Defense *Logistics for the 21st Century*; (Naval Institute Press; Annapolis, Maryland; 2005), 92
[35] The Marine Corps vessels carry their own lighterage whereas the Army relies on pre-positioned Port Opening Packages.
[36] James C. Bates; "What Army Logisticians Should Know About the Navy", Army *Logistician*; Vol 35; Iss 6 (Fort Lee; Nov/Dec 2003), 6.

deep-draught purpose-built vessels. The Afloat Depot concept is not as ambitious as either of the American afloat pre-positioning schemes.

Afloat Depots bear even less resemblance to the concept of Sea-Basing. Sea-basing is an evolution of the afloat pre-positioning concept, taken to the next logical level. Whereas the current afloat pre-positioning force is designed to be quickly available at ports in a theatre of operation, sea-basing ultimately aims at eliminating or drastically reducing the requirement for ports. This conceptual development has arisen because of two substantial US concerns; the effect of potential adversaries using an access denial strategy, and host nation sensitivities to allow deployment through the ports in a timely fashion, if at all. It allows the US to exercise greater control over the manner and timing of its deployment. The sea-basing concept envisions a constellation of sea-based platforms that enable the marrying-up of troops with their pre-positioned equipment at sea. It also envisions a selective off-load capability for these platforms to allow task tailoring of forces before they go ashore and the ability to sustain that force without the need of establishing traditional beachheads and logistic stockpiles ashore. Finally, the sea-basing concept envisions the recovery and reconstitution of the Joint Task Force at sea.[37] Proponents of the sea-basing concept envision an American ability to intervene at will in a theatre of operations without reliance on host nation support. The ability to deliver forces by air from a sea-based platform makes the ocean an area of manoeuvre and

[37] Art Corbett, Vince Goulding and Paul Nagy; "Sea Basing: What's New?" *United States Naval Institute. Proceedings*. Vol 128; Iss 11 (Annapolis; Nov 2002), 34.

effectively negates any access denial strategy by potential adversaries that is based on air and sea port denial. Though there might be some connection to a land base near the theatre of operations, this land base could be hundreds of nautical miles away, based on the range of tactical airlift and Theatre Support Vessels.[38] The Afloat Depots, in contrast, will require a port in or adjacent to and connected to the theatre of operations. The scenarios currently envisioned for the ASF simply do not require the level of ambition inherent in sea-basing.

The sea-basing concept is ambitious, and likely to be expensive. Among the key challenges to the concept is building new platforms that have a selective offload capability. Current pre-positioning and amphibious assets are rather tightly packed. Even though planned in advance and using sophisticated stores management systems aboard, attempting to do selective offload at sea with current systems would likely resemble the UK Falklands Task Force actions at Ascension Island in 1982.[39] Relatively calm sea states would be required to make it work. Another key challenge is that the effort to avoid logistic stockpiles ashore will require the development of new 'connector' technologies and platforms that will permit rapid off-loading from the sea-base and transport across the shoreline directly to the force being sustained. New technologies such as the Mobile Landing Platform are still likely to require additional air resources if the

[38] The UNITED STATES Army Theatre Support Vessel program envisions an operational radius of about 625NM. Available from http://www.globalsecurity.org/military/systems/ship/tsv.htm; Internet; accessed 12 October 2006.

[39] Thompson, pp 263-265. "All over the anchorage, floating 'parks' of vehicles and stores on Mexifloats[sic] could be seen, bobbing in the swell, while they waited their turn to come to the ship, or ships, to deliver their loads and take more." [Mexeflotes are essentially a modular raft system that can be put together to form a floating quay.]

supported unit is at any distance from the beach. A heavy reliance on scarce airlift seems to be an operational risk that will somehow have to be mitigated.[40] With enough time and resources, the US may be able to develop a viable sea-basing capability. However, given the AU decision to postpone consideration of a forced entry capability until sometime in the future, sea-basing would seem to be too much solution for the AU problem.

Afloat Depot Concept

The ASF could be supported by a central land-based depot and a number of Afloat Logistics Depots instead of the proposed regional land-based depots. A central land-based depot would be the main point of stock replenishment and reconditioning for the afloat depots. The Afloat Depots would consist of chartered commercial cargo vessels suitable for operations in African ports and would contain the supplies necessary to support a Brigade for 60 days (thus achieving the desired 90 days sufficiency after the initial 30 day period), and could possibly embark a Theatre Activation Package.[41] Afloat Depots offer a number of operational advantages over land-based depots and may provide external partners with a transparent and accountable instrument for increasing the capacity of the ASF.

[40] Matt Hilburn, "The Floating Beach" Sea *Power*, Vol 49, Iss 6 (Washington; Jun 2006), 20. Available at http://proquest.umi.com/; Internet; accessed 27 September 2006.
[41] Roadmap for the Operationalization of the African Standby Force, 10.

One of the key operational advantages provided by Afloat Depots is flexibility. They share one of the characteristics of naval forces in that they have the ability to be moved to where they are needed. They can be positioned close to a crisis area unobtrusively and before deployment of the ground force is authorized. By not having the depot located on the ground in any particular country, the afloat concept also avoids the possibility that the mobilization of the force is restricted by the politics or political sensitivities of the host nation. It is precisely this type of consideration that has been a factor in the United States decision to establish its Afloat Pre-positioning forces: "…this is the less costly politically feasible way of meeting some contingency plan deployment requirements".[42] Thus, as a crisis develops and the REC considers a possible intervention, the planning element could direct the Afloat Depot to an offshore area near the crisis area. Then, once a decision had been made to intervene, the Afloat Depot would quickly arrive with a Theatre Activation Package and sustainment material; enabling rapid deployment of the force.

Afloat Depots also enable rapid deployment by reducing the requirement for securing lift. For a land-based depot, the ASF Brigade (or mission authority) would need to negotiate a source of transport using either integral or partner-supplied funding for charter or partner military transport assets. Following such agreement, additional time would be required to transit to the port serving the depot, to out-load the depot stocks, and to transit to the operational area. This process is likely to be measured in weeks, and although some of it could be

[42] Tuttle, 92-93.

concurrent activity, it represents considerable staff effort and introduces an unnecessary element of uncertainty into the operational planning process. The faster delivery of sustainment stocks means the faster achievement of sustainable combat power.[43]

A rapid build-up of combat power would also accrue from embarking a Theatre Activation Package on the Afloat Depots, which would greatly facilitate the rapid deployment of an ASF brigade. Such a package, consisting of vehicles, communications and life support could be in port or just offshore, waiting for the brigade advance/ theatre activation party personnel to fly in and link up with it. This capability would reduce the demand for scarce and expensive airlift in the early stages of a deployment. Depending on the type and size of ship, it might be possible for the ship itself to provide a limited degree of life support for a small advance element through the use of modular container accommodation either on-deck or downloaded to the pier. Alternatively, the Afloat Depot vessels could deliver the Theatre Activation Package, and then withdraw to the relative safety of the sea in order to protect the operational stocks.

Once the stocks on the Afloat Depots had been put ashore, the vessels could be used for supplementary or alternative purposes. For instance, if the stocks became seriously depleted, the remainder could be ground-loaded and the vessels could be used to conduct replenishment operations between the central depot and the deployed force. They could also be useful in facilitating

[43] Ibid, 94.

equipment rotations of the various national contingents. Finally, in certain scenarios, they might even be employed as a limited form of intra-theatre transport under the control of the operational commander. The notion of a time charter permits all of these activities which otherwise would have to be contracted or negotiated separately.

Afloat Depots offer a force protection advantage over land-based depots in an African context. Though land-based depots can ostensibly be guarded by host nation security forces, there is a reasonable likelihood that the host nation will itself be embroiled in conflict.[44] In contrast, the piracy risk to the Afloat Depots was assessed as significant only off the Somali and Nigerian coasts.[45] There is no doubt that any depot, land-based or afloat, can be attacked by some means by a determined enemy but the essential difference is that the Afloat Depots' mobility allows them to move out of harm's way. Even supposing that the Afloat Depots will spend a significant amount of time in the ports of member states, they could be positioned in only those states with a relatively more stable security situation. There might even be some collateral training opportunities with member states as a result. In fact, the inherent mobility also means that the stocks could be positioned to support training activities in different nations, rather than being tied to one host nation. At a more mundane level, the physical security of the assets against pilferage is inherently higher for items on a ship at

[44] For instance, a Sep 2006 survey of Travel Advisories on the Foreign Affairs and International Trade Canada (DFAIT) website for the member states of ECOWAS revealed that seven of the fifteen states suffered from some form of civil unrest.
[45] International Chamber of Commerce, "Live Piracy Map" available at http://www.icc-ccs.org/extra/display.php, Internet; accessed 18 September 2006.

sea rather than a land-based depot. An operational commander might wish to ground load only a portion of the operational stocks, keeping the rest nearby in the littoral. Additionally, the Afloat Depots could be provided with naval escort during portions of an operation if warranted by the situation.

Chartered civilian vessels rather than naval assets are preferred because the command and control, financial and crewing challenges of naval vessels outweigh the marginal benefits to security. Ownership, and command and control of Afloat Depots do not present a significantly greater challenge than their land-based counterparts. In fact, since the warehousing of material is afloat, the small planning elements of the ASF Brigades need only direct the movement of the ship rather than spending staff effort developing out-load plans for the land-based depots and contracting for lift in time of crisis. Presumably, African control of the operational stocks would, from the AU perspective, be desirable. It is conceivable that the G8 would be able to assist in the crafting of, and provide financing for, time-charter contracts for vessels that would give the RECs operational control. In terms of furthering the 'African face' of the capability, it ought not to be difficult to charter African flagged vessels for the requirement or even to require that vessels be re-flagged as part of the contract.[46]

Relative Costs

[46].PBS Frontline World, "Ruling the Lawless Sea – Hiding behind the Flag", available at http://www.pbs.org/frontlineworld/stories/spain/liberia.html; Internet; accessed 21 September 2006. About 1/3 of the world's merchant fleet flies the Liberian flag

The cost of maintaining an Afloat Depot capability needs to be assessed not only against its operational advantages, but against the cost of the land-based alternatives. Time-chartered vessels offer advantages over owned vessels because they avoid the question of who owns the vessel, and put the burdens of crewing and maintenance onto the ship provider. Renewal of the asset can be accomplished with no capital construction. The limiting of the time charter to a reasonable period, say a three year period, would offer the AU an opportunity to adjust the capacity of the vessels as need be. Though a chartered vessel does have chartering, operations, and maintenance costs, these costs need to be compared against the capital construction, ownership issues and operations and maintenance costs of land-based facilities. For instance, storage afloat for relatively long periods of time requires maintenance conditioning (particularly for vehicles) to guard against the effects of high humidity and salt. Such preservation levels are routinely maintained on US pre-positioning ships and there is undoubtedly a cost to do this. However, land-based depots close to the coast in littoral states would also need a similar level of conditioning or some degree of climate-controlled storage.[47] Trying to establish a precise figure for charter costs is difficult because it varies by type of vessel and is highly sensitive to prevailing market conditions. However, a very preliminary and rough order of magnitude (ROM) check indicates that a vessel of the necessary size might be chartered for approximately $ 6-10M USD per year.[48]

[47] ECOWAS for instance is examining Freetown, Sierra Leone as a depot location.
[48] Barry Rogliano-Salles, *The Containership Market in 2005*, available at http://www.informare.it/news/forum/2006/brs/container-auk.asp; Internet; accessed 26 September 2006.

To estimate the relative costs of a land-based depot, it is necessary to determine the size of the facility required. A land-based depot would likely not store everything in containers but a ROM estimate of the space required might be based on double-stacking of 20' sea containers (TEUs). A 30% 'broken stow' factor is assessed to allow for office space, lanes and consolidation areas. Based on the 1058 TEUs estimated as the requirement for 60 days of sustainment material, this would work out to a warehouse of some 110,000 square feet. Land-based depots are trickier to cost out because lease rates, particularly in Africa are hard to come by, but at Toronto prices (approximately $5.50/sq ft), the rough cost would be approximately $6M USD per year.[49]

In terms of up-front dollar costs, land-based depots would appear to have a modest cost advantage compared to the afloat alternative. Certainly a great deal more detailed analysis would need to be done to establish true costs and the final amount would undoubtedly need to take into account a great many variables. However, this initial ROM estimation confirms what seems intuitively obvious; a premium is to be paid for afloat storage versus a land-based option.[50] Nonetheless, whilst the AU would benefit from the greater operational flexibility afforded by Afloat Depots, the G8 countries may find the greater transparency

[49] Maura Webber Sadovi, *A Robust Canadian economy Fuels Toronto's Commercial Space*, available at http://www.realestatejournal.com/columnists_com/blueprint/20060518-blueprint.html; Internet; accessed on 26 September. Converted to USD using exchange rates as of 26 September 2006.
[50] Joseph E. Diana; "Improving Bare Base Agile Combat Support" Air *Force Journal of Logistics*; Vol 28; Iss 2, (Gunter AFS; Summer 2004), 16. A USAF Air Force Logistics Management Agency study into pre-positioning bare base assets concluded much the same thing.

and accountability offered by the time-charter contract and the greater security of the stores on the vessels more palatable.

Canadian Nexus

Canada will be expected to assist in the development of the ASF capability because it is a G8 member. African countries will look to it to provide resources and/or expertise and the other G8 nations will expect that Canada do its part to shoulder the burden. Canada could choose to offer assistance by promoting the development of the Afloat Depot concept. Though the CF has very little operational experience with Afloat Depots, it does have considerable expertise with expeditionary logistics, peace support operations, and chartering of commercial vessels. For instance, Canada could partner with a particular ASF "framework nation" or REC to assist with developing the specific logistic requirements for a particular Standby Brigade, providing expertise with respect to Theatre Activation capabilities and procedures and assisting with developing a contracting methodology and control mechanisms for the contracted vessels. Depending on the level of ambition, Canada might also be able to contribute to funding the acquisition of sustainment materiel or the vessel charter contract.

Conclusion

There will continue to be numerous challenges to peace and security on the African continent in the coming decades. The AU desire is to develop a

military intervention force that is capable of responding to these challenges so that Africans are able to resolve African problems. The West generally, and the G8 in particular support such an initiative and are willing to provide the financing and expertise to establish the enabling capabilities. Key amongst those capabilities is the sustainment of the ASF and the Afloat Depot concept offers a practical solution to a practical problem.

A number of Afloat Depots are a better way to support the ASF than the currently planned system of land-based depots. Though they are likely more expensive to operate than land-based depots, the Afloat Depots offer a combination of operational advantages and relative transparency, accountability and reduced risk which ought to make them attractive to both the AU and those G8 nations providing financial assistance. Though relatively simple when compared to the US Afloat Pre-positioning programs or sea-basing concepts, the Afloat Depots are perhaps better suited to the operating environment of the African continent. Certainly, there appears to be sufficient quantities of the right sort of ships available to operate in the majority of African commercial ports. The current African continental transportation infrastructure will not support overland movement in the necessary quantities or potential distances involved, so some sort of sea movement is inevitable even in the land-based depot concept. Operating with a time-chartered vessel also seems more in keeping with the staff horsepower and technical competencies of the small planning elements of the nascent ASF Brigades.

The Afloat Depot concept offers the AU significant operational advantages in terms of operational flexibility. The ability to 'steal a march' on a crisis by sailing the depot close to the area while the political decisions are being made is not insignificant. It would be further amplified if the ASF embarked Theatre Activation Packages on the vessels. Afloat Depots are also relatively immune to the political sensitivities of host nations in the way that land depots inherently are not because they are not based on a nation's sovereign territory, and they are easily moved out of harm's way in the case of civil disorder or conflict in a particular nation. Their mobility may also provide training opportunities both for naval escort duties and in terms of supporting training events in different nations with the embarked equipment or stores. An Afloat Depot system meets the AU logistic system aims of supporting rapid and effective deployment and sustainment.

In terms of operating cost comparison, the Afloat Depots will likely be more expensive than a land-based system. It is admittedly difficult to put a price tag on the value of operational advantages or the possible costs of renting transport in a crisis. Likewise it is difficult to quantify the risk mitigated by greater physical security, accountability and process transparency from an external financial backer point of view. Nonetheless, this paper has argued that Afloat Depots represent value for money and ought to be attractive to the user of the capability, and those who ask their taxpayers to fund it. For these reasons,

Afloat Depots deserve further consideration in solving the AU's complicated logistics challenges in supporting operations. By doing so, the AU forces will become a more credible and effective instrument for stability and peace support operations on the African continent.

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