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The west coast of Africa does not have a quick reaction force to respond to crisis. This paper focuses on a future state of the African continent in 2035 – 2040. The reader will understand the problem and see a solid solution by reading the most likely future projected state of Africa 2035-2040, the current issues in Nigeria, the literature review of the current logistical issues in Africa, the current state of African logistics research paper, and the creation of a pre-staged logistics base on Ascension Island in order for the joint force commander to be responsive, flexible, and provide sustainment for crisis in West Africa.

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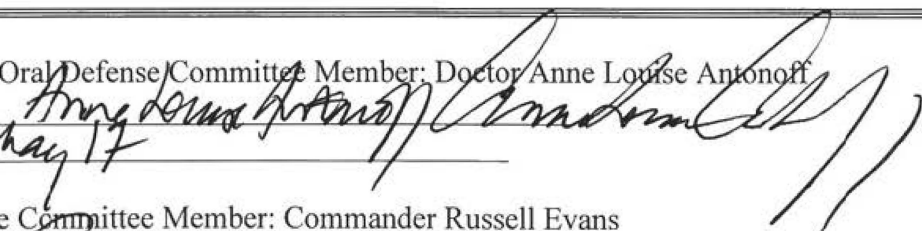
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Preface

The Advanced Study Program (ASP) for Marine Corps Command and Staff College focused on “places without bases”. Five of the students in the ASP researched West Africa and concluded that it was the most likely place the joint force would conduct future military operations with the full range of military operations (ROMO) in 2035-2040. This led to the each student researching how the United States military could conduct operations in West Africa, a place without a base.

The “Africa Group” consisted of Majors Jane Oren, William Oren, Jason Laird, Timothy Barcus, and Ashley Lish. The Africa Group shared ideas of their part of the solution to see how it would affect the overall Africa solution. The group received guidance and assistance from Dr. Anne Louise Antonoff and Commander Russell Evans through the academic year and were instrumental in the overall completion of the project.

Executive Summary

Title: Mid-Atlantic Logistical Island (MALI)

Author: Major Ashley Lish

Thesis: If the United States desires the West Coast of Africa to remain stable and limit the challenges to sovereignty to the West Coast African nations, the United States must pre-stage military equipment on or near the West Coast of Africa in order to enable the joint military force to respond in a timely manner.

Problem Statement: The United States Armed Forces are limited in ability to execute tasking across the range of military operations (ROMO) in the African continent due to failed government engagement for access, failing or lack of infrastructure, regional instability, increase in non-state actors with increased A2AD technology, lack of available equipment and forces, and competing interests from legitimate 3rd party foreign nations. The wide array of climates, physical and political geographic features, combined with different cultures and governments in close proximity to each other provide a challenging operating environment for U.S. forces.

This research project is a group of short papers that point out the current issues in Africa, give an idea of what future Africa looks like, and proposes a solution to the problem. The continent has degraded infrastructure to support operations which reduces the capabilities of the combatant commander to respond to crisis. The east coast and north coast of Africa are currently covered by a Combined Joint Task Force (CJTF), Special Purpose Marine Air Ground Task Force (SP-MAGTF), and the Marine Expeditionary Unit (MEU). The west coast of Africa does not have a quick reaction force to respond to crisis. This paper focuses on a future state of the African continent in 2035 – 2040. The reader will understand the problem and see a solid solution by reading the future projected state of Africa 2035-2040, the current issues in Nigeria, the literature review of the current logistical issues in Africa, the current state of African logistics research paper, and the creation of a pre-staged logistics base on Ascension Island in order in order for the joint force commander to be responsive, flexible, and provide sustainment for crisis in West Africa.

Africa's Future Operating Environment

The future operating environment (2035 and beyond) in Africa will be riddled with strife and will require American intervention and leadership to stabilize the continent. What does the future Africa look like and how will it affect the advanced logistical base established in or close to Africa? The African continent of the future will not have a united federal government leaving the 54 nations to be overpopulated and resource lacking. Overpopulation that does not have adequate resources to sustain basic needs will lead to the overthrow of legitimate state governments, human rights atrocities (to include genocides), a population that is ripe for disease, and provide Violent Extremist Organizations (VEOs) a place to train and call home.

Research studies suggest that by 2050 Africa will have 25% of the world population.¹ There is no federal government to establish rules, regulations, and education to the African populace to regulate human population (see China's birth control as an example), or to regulate the existing resources (specifically water) to support the whole continent. It will be a 54 nation resource grab for resources that will be the initial spark to the conflicts between each African State.

State government will not be able to uphold the responsibilities to provide essential goods and services to the local population without infringing on other African nations resources. The governments will choose to fight for resources or they will be overthrown by someone who is willing to fight for resources to support the populace or themselves. This will lead to wars over resources that will include genocide of tribes or nations to achieve the mission. These atrocities will also include slavery (and all the human rights violations associated with this) and increased human trafficking. This will lead to displaced tribes with no land to call their own. These displaced tribes/nations will not have the food, water, and shelter to survive and will leave them

vulnerable to be hunted by stronger nations. Lack of proper infrastructure and resources (for proper hygiene, medical care capabilities, etc...) will lead to break outs of disease such as Ebola, Zika Virus, and flu epidemics.

Lack of any federal regulations (no federal government and the African Union is too weak) will allow the VEOs to establish training camps and could establish an actual state for the Islamic State. These VEOs would encourage violence throughout the continent to ensure that their organization is not overly highlighted for response by other nations. These VEOs will train fighters to fight proxy wars and will indoctrinate them with extremist ideology and play on their lack of education.

Africa is a large continent but AFRICOM does have portions of it covered with a reaction force. The east coast of Africa is covered by the CJTF Djibouti. The northern coast is covered by the MEU and the SP-MAGTF Africa located in Spain. That leaves the west coast uncovered. That is the weak spot and requires attention before conflict or crisis occurs and the United States delays its response due to unavailable equipment and forces close enough to respond.

All these issues lead to an unstable continent that requires outside attention and will ensure that the requirement exists for the joint services to operate in Africa. More than one crises or operation is highly likely across the range of military operations. The environment is plagued by eroding and lacking infrastructure. The African continent/operating environment will require a pre-staged logistics base that can support multiple crises/operations. Having this capability will reduce reaction time for the joint force to initiate operations.

Nigerian Stability

The future Africa looks very threatening to most people but very inviting to terrorist groups. The Nigerian stability case study represents what could happen anywhere in West Africa if the United States does not invest with a regional response capability. Nigeria is a country in West Africa nested in the Gulf of Guinea and is roughly one third the size of Texas. Nigeria established independence from the United Kingdom in 1960 and has a Federal Presidential Government. Nigeria has an oil based economy with \$1.1 trillion gross domestic product.² Nigeria is one of the most stable countries in Africa. However a faction group called Boko Haram was created in 2002 and has grown into a legitimate terrorist organization in Nigeria.³ The rise of Boko Haram and their desire to establish an Islamic State in Nigeria challenges the stability of the Nigerian Government. How can the United States military aid the Nigerian Government in stopping the spread of terrorism and confronting their challenge to stability? Without the aid of the United States, Nigerian stability will be challenged and an increase in violence will likely escalate due to radicalized movement by Boko Haram and their desired establishment of the Islamic State. The United States military can aid the Nigerian Government in maintaining stability by conducting the five security force assistance (SFA) tasks: organize, train, equip, rebuild and build, and advise and assist.⁴

Before exploring how the United States can help Nigeria, background information on the terrorist group is required. Boko Haram started in the northeast region of Nigeria. This region is largely Muslim populated and has continued to radicalize since its founding. One of the root causes for its founding was the thought that the government was not spreading the wealth equally through the nation that they received from exporting oil.⁵ They complained that the lack of infrastructure in the northeast region was dilapidated and was one of the main causes for lack of

jobs and opportunity. Boko Haram conducts terrorist acts such as kidnappings, conducts attacks on soft targets, stealing oil, suicide bombings of police buildings and the United Nations building.⁶ These acts are their main source of funding to continue their existence. In 2009, Boko Haram launched operations to establish an Islamic State and issued a caliphate in 2014.⁷ The United States designated them as a legitimate terrorist organization in 2013.⁸ This essentially puts Boko Haram on the United States target list and is now targeted by the Global War on Terror. Currently the United States has committed to sending special operations advisors to Nigeria to advise and assist the Nigerian forces in the fight against Boko Haram.⁹

Once the United States commits security force assistance to assist in eliminating Boko Haram to the Nigerian government, the military will task its forces to provide security force assistance to the Nigerian armed forces. The security force assistance team will observe how the Nigerian security forces are organized. This task will assist the Nigerian forces in improving their organizational structure. The organizational restructure will center on four key warfighting functions. They are command, intelligence, logistics, and operations.¹⁰ The aim is to make the Nigerian security forces more efficient with what they have available to them for support. Once they are organized appropriately and efficiently to conduct and sustain their security operations, the SFA Team will begin to train the Nigerian forces.

The first part of training is to observe the Nigerian forces to see what capabilities currently exist in their units. Once an evaluation is conducted and the training requirements are established, the SFA Team will develop a program and design a training environment to train and educate the Nigerian security forces where they are lacking.¹¹ Formal classroom training should be first conducted in a professional classroom environment. The training is then continued at the unit and individual levels. The training conducted will be based on the evaluation

and can include security force actions and responsiveness, issues with civilian oversight, and mitigation of incidental harm caused during security operations.¹² Once the training is completed and the Nigerian forces are capable of conducting the tasks associated with security, it is imperative to institute a permanent Nigerian training institution to enable their forces in the long run.

In order to be an effective security force, the Nigerian forces need to be properly equipped to perform their missions. The SFA Team will assess the required equipment that should be issued to the Nigerian forces. The logistics element of the SFA Team will assist the Nigerian logisticians in the procurement process. The equipment must fit the operational environment of the Nigerian forces.¹³ The SFA logistician will also train the Nigerian logisticians on fielding of equipment and sustaining the equipment. Every effort must be made to ensure the Nigerian logisticians can manage logistics from cradle to grave. This will ensure that they are capable of sustaining their forces long after the United States SFA Team leaves Nigeria. Proper storage and issue facilities for supplies will be a necessity to support the Nigerian security forces. It is a key task of the host nation and the SFA Team Logistician to assess the current storage facilities and ensure they are suitable for the task at hand. There has to be a funding stream to make this work. Since 2010, the Nigerian government has only spent less than 1% of their GDP on their military as a whole.¹⁴ The Nigerian government must invest in its security forces if it wants to remain the sovereign entity and not rely on others to sustain their security efforts.

Infrastructure is in poor condition in Nigeria. It is one of the root causes of the creation of Boko Haram in 2002. Rebuilding and build are SFA key tasks. The SFA Team will assess the current conditions of the infrastructure and compare the assessment with the capabilities and

capacities of the Nigerian security forces.¹⁵ A wide ranging assessment for the actual required structures to support the host nation and its security forces will be made. The SFA Team in conjunction with the Nigerian security forces will then prioritize the rebuild and build list. The SFA Team will have resident engineers that can actually conduct the rebuilds and builds that they are task with. The SFA Team logistician will work with the Nigerian force and host nation logisticians to procure the required supplies to conduct the rebuilds and builds. Some of the infrastructure may require host nation to contract the work. Examples of contract work may include paving roads and building major buildings and bridges. Infrastructure is critical in building a lasting and capable Nigerian security force. It will also support the local populace and reduce the tensions of Boko Haram by addressing one of their root causes for existing. The infrastructures rebuild and build may also bring about new opportunities and jobs for Nigerians that would help the local and national economy.

Once the organizational design of the Nigerian security forces has been implemented, the forces have been trained, the equipment has been procured and issued, and the infrastructure is in a state to support operations, the SFA Team will be ready to advise and assist the Nigerian security forces. The SFA Team will work with the Nigerian forces to increase their capability and capacity. By advising the Nigerian forces, a personal and professional relationship will be established between the forces that will enable a building of trust and confidence in each other's forces. The SFA Team will assist the Nigerian forces by helping them successfully meet their objectives.¹⁶ The level of the advice and assist mission will be determined by the situation on the ground and the recommendation of the SFA Team and Department of Defense's restrictions on what is allowed by the SFA Team. The assist mission could be a full range of military operations, but if current operations in Syria, Iraq, and Afghanistan are any indicators, they will

be limited to Forward Air Controllers (FAC) or less. Regardless if the assist mission is allowed, the important issue is that the Nigerian security forces are fully capable of conducting security missions after the SFA Team leaves Nigeria.

Nigeria is one of the most stable countries in Africa. However, Boko Haram has gained much traction and is considered an international terrorist organization with capacity and capability to conduct terrorist actions in Nigeria at their will. The rise of Boko Haram and their desire to establish an Islamic State in Nigeria challenges the stability of the Nigerian Government. How can the United States military aid the Nigerian Government in stopping the spread of terrorism and confronting their challenge to stability? Without the aid of the United States, Nigerian stability will be challenged and an increase in violence will likely escalate due to radicalized movement by Boko Haram and their desired establishment of the Islamic State. The United States military can aid the Nigerian Government in maintaining stability by conducting the five security force assistance (SFA) tasks: organize, train, equip, rebuild and build, and advise and assist.¹⁷

What are some of the outcomes/suggested implications?

1. If the Nigerian Government does not invest (greater than the 1% they have been investing) in its security, this problem will only be prolonged and not eradicated.
2. If the Nigerian security forces are not capable of the mission, Boko Haram will continue to grow and increase the instability.
3. If the SFA mission does not succeed, the United States will have to consider other military options to deal with Boko Haram in order to create stability in West Africa.

Africa Logistics Literature Review

Africa is one of the most politically unstable continents in the world today and is a primed for conflict or crises. Africa has experienced fourteen irregular changes of government since AFRICOM was established in 2008. This trend combined with the spread of terrorist organizations into the continent ensures that operations will likely increase for the United States joint forces in the United States African Command (AFRICOM) Area of Responsibility (AOR). How can the joint force respond and sustain operations in AFRICOM that has an area of operations over 11 million square miles with severely degraded or no infrastructure? In the current condition of the African continent and the available resources to the joint forces, sustained operations in the AFRICOM AOR (especially the west coast of Africa) will not achieve these key joint logistics principals of responsiveness, flexibility, and sustainability.

Article 1. Major General James Vechery, Advancing Africa Through Logistics, <http://www.africom.mil/media-room/article/26736/opinion-advancing-africa-through-logistics>, Nov 25, 2015.

Major General (MGen) Vechery is the senior logistician in AFRICOM and wrote this article after having a year on the job. He admitted to his limited knowledge about Africa before being assigned to AFRICOM. This article highlights how large the area of operations is (three and a half times as big as the United States) and how limited the logistics infrastructure is. The articles points out that by 2050, Africa will host 25% of the world's population and their need for stable governments to provide essential services to their people. One of the reasons that the joint force will be required to operate in Africa is due to the Violent Extremist Organizations (VEOs) recruiting, training, and exporting Africans as fighters. MGen Vechery hosted an Africa Logistics Forum and thirty eight African countries participated. In the three day conference the

forum identified three priority logistics areas of concern in Africa: strategic lift, continental logistics base, and contingent owned equipment.

Article 2. Major Jeffrey Krulick, Airlift in Africa: Building Operational Logistics Capability for the African Standby Force, http://www.alu.army.mil/alog/pdf/janfeb2013/airlift_africa.pdf, Feb 2013.

Maj Krulick is a strategic airlift pilot for the United States Air Force. His article focuses on the United States partnering efforts with the African Union (AU) and the challenges that are faced in helping the AU create an operational African Standby Force (ASF). Many of the African countries have trust issues based on their colonial experiences and the fact that the United States seemed to disappear from Africa after the Cold War ended. Many of these nations only believe that the United States is there now because China has shown interest on the continent. The article describes the reason for the creating of the ASF was to respond to humanitarian crises on the continent by sending in 1000 men within fourteen days. So far the ASF has not accomplished this feat because they do not have strategic airlift or the ability to sustain the ASF during operations. AFRICOM is forced to respond due to the lack of ability of the AU and ASF. The article discusses the lack of infrastructure to include roads and runways to support dispersed operations. Major Krulick recommends a joint solution to this problem to include training and dedicated resources. He also recommends that the funding and resourcing must be a long term program of record to solve the operational reach of the massive AOR.

Article 3. African Defense Forum, Getting There is Half the Battle, http://www.defenceweb.co.za/index.php?option=com_content&view=article&id=44721:getting-there-is-half-the-battle&catid=47:Logistics&Itemid=110, 17 August 2016.

This article discusses the reason the African Union established the African Standby Force (ASF). It was to respond to crisis on the African continent and to prevent future atrocities. It has yet to prove it can respond to crisis. The article announced the idea of establishing a Continental

Logistics Base (CLB) in Cameroon to provide the logistics required for an ASF mission.

Additionally there would be five regional logistics hubs to support operations. Lack of funding, interest, and communication seem to be three points of failure with the ASF and CLB. The article goes on to explain that the CLB and ASF would be up to African standards not American standards if and when the CLB is stood up and when the ASF actually become mission ready.

Article 4. Donna Miles, AFRICOM builds logistics capability in African partners, <https://www.army.mil/article/83228/169379>, July 8, 2012.

This article focuses on training African forces to support their own forces during peacekeeping deployments. It points out that AFRICOM is trying to help the Africans have African solutions to African problems. The article goes on to say that logistics can make or break the operational reach of the deployment. This article is almost like bumper sticker article. It speaks to training the African forces to support their own but does not talk about the lack of infrastructure or capability sets that would deliver the logistics. The article does not give any real solutions to the daunting task except for training. Training is important but logistics also requires infrastructure and delivery mechanisms for the logistics.

Article 5. Lieutenant Commander Akil King, Captain Zackary Moss and Lieutenant Afi Pittman, Overcoming Logistics Challenges in East Africa, https://www.army.mil/article/117849/Overcoming_logistics_challenges_in_East_Africa, January 13, 2014.

This article talks about the challenges and the success of Combined Joint Task Force (CJTF) Horn of Africa (HOA) that is located in Camp Lemonnier Djibouti. This CJTF is assigned to ten countries in East Africa that covers over 1,500 miles. Part of what makes this CJTF successful is that it is located on the coast and enjoys a deep water port that provides resupplies as needed. Distributing these supplies to the operations in East Africa is the difficult part. The article speaks to the lack of infrastructure and the poor conditions of the existing roads in these ten

countries. It also points out that each of these countries have different issues so a logistics plan for one country may not work in one of the other countries in the AOR. The article highlights some the existing issues with the logistics system that the joint forces deal with no matter where they are located. One of these issues is the supply system. If it is available in the supply system, the joint forces are required to order it from that. It does not matter if it takes up to six months to receive that part. The local vendors are not a readily available source of supply that can be purchased from. The article suggests updated supply and purchase policies that constrain the logistician's ability to support the warfighter.

Article 6. National Defense University, Africa Center for Strategic Studies "Africa Logistics Forum", <http://africacenter.org/wp-content/uploads/2016/02/ALF15-Program-Summary-final.pdf>, June 25, 2015.

This forum took place to examine logistics challenges that plague the responsiveness to crises' in Africa. Strategic airlift seems to be the critical vulnerability for logistics operations on the African continent. The Africans rely on external support for aircraft or resources required to contract aircraft. Another area the African Logistics Forum is investigating is establishing a logistics base with prepositioned logistics. This course of action is a great idea but has a large upfront cost and annual cost once established. The article also spoke to the AU response to the Ebola Virus Disease (EVD). They recognized the problem very early in the outbreak but it took 26 days to actually respond. The AU considers this a success but still had difficulties that include poor supply chain management and communications within the AU. National policies such as border closures also played a part in the slow reaction. It actually slowed the response of the doctors that needed to cross country borders to help.

7. Department of Defense, Joint Publication 4-0, Joint Logistics, http://www.dtic.mil/doctrine/new_pubs/jp4_0.pdf#search=logistics", 16 October 2013.

One main issue that is not said in the other literature is the actual responsibilities required by the Department of Defense in the Joint Publication 4-0 Logistics. The publication is based on principles of logistics and it allows commanders and staff to control the functions of logistics and manage capabilities to initiate and sustain joint operations. Three of these principles are responsiveness, flexibility, and sustainability. The other articles indicate that these three principles (especially responsiveness) are not attainable in West Africa by the joint forces due to the lack of forces and equipment in the area and the time and distance it would take to respond to crisis in West Africa.

These articles/publications all agree that Africa is a hot bed for conflict and will continue to need humanitarian assistance. Africa has 54 recognized countries in an area of over 11 million square miles that has limited infrastructure to support any operations that will arise. The literature indicated that the most vulnerable part of Africa is the west coast. One article discussed the AU attempting to establish a pre-staged logistics base in Cameroon (not up to the joint force standard) to support the ASF missions to alleviate the problems associated with responding to crisis but it is still an idea and not in work yet. The joint force will conduct operations in AFRICOM and must be able to solve the logistical problems that will emerge to support the joint forces. How will the joint force logisticians solve these issues with severely degraded or no infrastructure? In the current condition of the African continent and the available resources to the joint forces, long term operations in the AFRICOM AOR (especially the west coast of Africa) will not achieve these key joint logistics principals of responsiveness, flexibility, and sustainability unless there is a pre-staged logistics base/hub for the joint force to initiate and sustain operations.

Africa Logistics Research Project

Africa is one of the most politically unstable continents in the world today and is a primed for conflict or crises. Africa has experienced fourteen irregular changes of government since AFRICOM was established in 2008 and humanitarian crises' to include the Ebola Crises. This trend combined with the spread of terrorist organizations into the continent ensures that operations will likely increase for the United States joint forces in the United States African Command (AFRICOM) Area of Responsibility (AOR). How can the joint force sustain operations in AFRICOM that has an area of operations over 11 million square miles with severely degraded or no infrastructure? In the current condition of the African continent and the available resources to the joint forces, operations in the AFRICOM AOR (especially the west coast of Africa) will be limited because of the inability to achieve these key joint logistics principles of responsiveness, flexibility, and sustainability.

In future military operations across the globe, no service will operate alone. The operations of the future will most likely be joint operations. The United States joint force logisticians must know and understand the seven principles of joint logistics to enable sustainment of their operation. These seven joint logistics principles are: responsiveness, simplicity, flexibility, economy, attainability, sustainability, and survivability. This research paper will focus on three of these seven principles: responsiveness, flexibility, and sustainability. It is important to understand what these three principles mean.

Responsiveness is defined by as providing the right support when and where it is needed. Responsiveness is characterized by the reliability of support and the speed of response to the needs of the joint force. Clearly understood processes and well developed decision support tools are key elements enabling responsiveness to emerging requirements. By monitoring the battle rhythm, the joint logistician can anticipate logistic issues and adjust to support operational needs.

Flexibility is the ability to improvise and adapt logistic structures and procedures to situations, missions, and operational requirements. Flexibility is how well logistics responds in a dynamic environment. Where responsiveness is a commander's view of logistic support, flexibility is a logistician's view of being responsive. The logistician's ability to anticipate requirements in an operational environment allows for the development of viable options able to support operational needs.

Sustainability is the ability to maintain the necessary level and duration of logistics support to achieve military objectives. Sustainability is a function of providing for and maintaining those levels of ready forces, materiel, and consumables necessary to support military action. Sustainability is focused on the long-term objectives and requirements of the supported forces. Sustainability provides the JFC with the means to enable freedom of action and extend operational reach.¹⁸

Providing the right support at the right time is the key aspect of responsiveness. The continent of Africa is over 11 million square miles in size. That is over three and a half times the size of the United States. The reason that this is important is the ability to respond to crises would be very difficult if size was the only issue. The continent of Africa is surrounded by water allowing 32 of the 47 countries direct access to oceans and seas. That leaves 15 countries that are landlocked with no access except the existing infrastructure. Africa's lack of infrastructure creates one of the actual problems associated with a timely response to any crises. The lack of infrastructure will cripple and constrain operations on the continent. Studies suggest that lack of infrastructure is one of the main causes of instability and unrest because of lack of jobs and opportunity.¹⁹ The infrastructure that is being discussed is roads, airports (specifically the runways), seaports and storage facilities. There are other limiting infrastructure issues throughout the continent like power generation; however it should not cause operational issues that cannot be overcome. One study finds that on just about every measure of infrastructure coverage, African countries lag behind their peers in the developing world. The differences are particularly large for paved roads, telephone main lines, and power generation. For all three,

Africa has been expanding stocks much more slowly than other developing regions; so unless something changes, the gap will continue to widen.²⁰

Another key aspect of responsiveness is the ability of the joint logistician to anticipate and support operational needs. Logistics being defined as the six functional areas a logistician must be able to perform are: supply, maintenance, transportation, general engineering, health services, and other services.²¹ One way to achieve this joint logistics principle is to have readily available logistics to support with. The east coast is covered by CJTF Djibouti and northern Africa is covered by the MEU and SP-MAGTF Africa. The west coast does not have an immediate response force. A pre-staged equipment base located on or near enough to the continent of Africa (with required infrastructure) would help the logistician accomplish responsiveness. This concept is not new. For example, Norway has several caves of pre-staged equipment and supplies that can support a Marine Expeditionary Brigade (MEB) at a shared expense with the Norwegians to house, provide funding, and maintain. Some of the obstacles in Africa are that it is not a united nation, security will most likely be an issue, and identifying the correct nation to have the pre-staged equipment and supplies to be the logistics hub for operations might cause issues with other African countries due to jealousies. Another issue concerning this concept is how and who pays for the pre-staged equipment and supplies and what type of supplies and equipment would actually be purchased. Having fifty four nations in Africa (with the help of outside nations) agree to provide funding or other resources towards a standing logistics hub is hard to achieve until a crises arises and they actually need help. Bringing the African Union to the table and holding the countries accountable to their agreement to allow and support a joint forward base with pre-staged equipment would solve much of the responsiveness aspect. It could also provide an opportunity for the Combatant Command of

AFRICOM to actually locate on or close to the continent for which it is responsible while showing Africa that it has the long term support of the United States in its future. This will provide a stabilization factor that Africa does not have at this time. Major General Vechery (AFRICOM's senior logistician) hosted an Africa Logistics Forum and thirty eight African countries participated. In the three day conference they identified three priority logistics areas of concern: strategic lift, continental logistics base, and contingent owned equipment lending additional credit to this argument.²² Having this capability in or close to Africa would allow the joint force logistician be responsive to crises and enable another key joint logistics principle of flexibility.

While responsiveness is a commander's grading report on logisticians, flexibility is how logistician's grade themselves on how they provide support in a dynamic environment. The logistician's ability to anticipate requirements in an operational environment allows for the development of viable options able to support operational needs.²³ The eastern part of Africa has a Combined Joint Task Force (CJTF) in the Horn of Africa (HOA) and was created in 2008. It is located in Camp Lemonnier, Djibouti. This CJTF is assigned ten countries in East Africa that covers over 1500 miles. This CJTF is as close as it comes to having a small pre-staged logistics capability on the continent but it does not mean that the ten countries it is responsible for have the existing infrastructure to provide easy support to operations. Its primary mission is to conduct stability operations in the area against Violent Extremist Organizations.²⁴ Each of the ten countries has different infrastructure issues. When a crisis arises, the logistics plan for any operation is based on which of the ten countries the operation is taking place in because each country has different levels of infrastructure to support operations to include roadways and runways. It is not a one size logistics plan fits all problems. For example, Djibouti has the

infrastructure to support C5 operations on their runways and has a deep water port to support shipping operations. This capability exists because the United States provides the funding and the upkeep to this infrastructure. The other nine countries do not have the same capability to support the operations limiting the logistics options for support primarily to cargo helicopters in which there are few and not always ready to fly due to maintenance issues or other operational commitments.

The second concern is having the flexibility to deal with multiple crises' at one time. The limiting factor is not only the infrastructure but the CJTF HOA's personnel and equipment to support multiple lines of effort simultaneously. CJTF HOA has approximately 4000 service personnel deployed there at any one time to conduct or support operations.²⁵ The CJTF mission focuses on ten countries leaving AFRICOM directly responsible for the other forty four countries in Africa. There is no flexibility to deal with multiple crises in Africa at this time. To tackle these issues the United States is partnering with the African Union (AU) and is assisting the AU to create an operational African Standby Force (ASF). The reason for the creating of the ASF is to respond to humanitarian crises on the continent by sending in 1000 men within fourteen days. So far the ASF has not been able to accomplish this feat because they do not have strategic airlift or the ability to sustain the ASF during operations. AFRICOM is forced to respond due to the lack of ability of the AU and ASF. The research indicates the lack of infrastructure to include roads and runways to support dispersed operations as the main contributor to this failure.²⁶ Without pre-staged equipment and supplies and ways to move them, the logistician's ability to provide a flexible response to the operation is limited and will delay the operational tempo. The time, distance, and lack of infrastructure required to respond multiple crises could cause the US

response to a crises be too late and too far to make a real impact or have the influence desired. It also validates that CJTF HOA cannot be the response force to all of Africa.

If the operational commitment is long term, sustainability will be the key to success for the commander. Sustainability is a function of providing for and maintaining those levels of ready forces, materiel, and consumables necessary to support military action. Sustainability is focused on the long-term objectives and requirements of the supported forces.²⁷ One way to assist the sustainment of the force is through contracting support. One of the basic contracted services that are used today by the AU and business in Africa is tactical air delivery because most of the countries in Africa cannot afford the cost to fly or maintain this capability. CJTF HOA uses contracting to help support their existing operations now but is mainly contracted services. CJTF has a deep water port that allows ships to deliver supplies and equipment and a dedicated joint force to use, protect, and distribute these logistics as needed. The main idea of contracting sounds easy and is brought up in the logistics forum that AFRICOM hosts. Contracting local African vendors to move goods or to provide services would provide local jobs and help stabilize the local economy. This would help alleviate or limit the need for heavy military vehicles using the limited and decaying roads in the rural areas that might require support during operations. By using local vendors, it would provide a boost to the local economy and increase stability into that area. Currently CJTF HOA is contracting over 100 local and third country nation workers.²⁸ Contracting for services or transportation is about the only contracting that exists in Africa at this time for the joint forces. However, this means that the United States is investing money into the African economy and that the African nations are not. This should not be the long term solution. Contracting also faces existing issues with the logistics system that the joint forces deal with no matter where they are located. One of these

issues is the supply system. If it is available in the supply system, the joint forces are required to order it from that. It does not matter if it takes up to six months to receive the item that is ordered. There are ways around this with urgent needs statement but it should not be the standard operating procedure. An update to the supply and purchase policies that constrain the logistician's ability to support the warfighter would enable the sustainment principle with on time contracting in certain cases.²⁹ Contracting does not solve all the issue though. If contracting is used to build up supplies to support the warfighter, it would still require the infrastructure required to receive, distribute, and store the supplies.

The logistics issue always comes back to lack of infrastructure (storage capacity, lack of runway space and roadways that enable vehicles to distribute supplies) and lack of monetary resources to support these operations. Sustainment by definition is associated with long term operations. Long term operations take a considerable amount of funding to support the joint force. It also takes foresight, planning, and commitment to achieve sustainment in African operations. As mentioned before, the African Logistics Forum is investigating how to establish a logistics base with prepositioned logistics in or close to Africa.³⁰ This course of action is a great idea but has a large upfront cost and annual cost once established. The AU understands this would be a great investment in the overall scheme. The issue with the AU is there is no way to make 54 individual governments commit to funding this plan or hold them accountable to do so. The African nations typically wait until help is needed before they are ready to commit. This takes the foresight and planning out of the equation and institutes reaction based operations. A comparison to some of the issues faced in the AU without a strong union is the Articles of Confederation before America became the United States in 1789 with the Constitution. The thirteen states all operated with different rules and had different levels of commitment to the

actual federal government. This led to different types of currency, infrastructure, taxes on the borders, and no stability throughout the nation. One thing in Africa that is certain is the need for upgraded common infrastructure and a pre-staged logistics base to support future operations.

Africa is a hot bed for conflict and will continue to need humanitarian assistance. The most likely course of action for Africa in the future is humanitarian in nature. That does not mean that pockets of VEOs will not exist and have to be dealt with. Africa has 54 recognized countries in an area of over 11 million square miles that has limited infrastructure to support any operations that will arise. The joint force will most likely conduct operations in AFRICOM and must be able to solve the logistical problems that will emerge to support the forces. These issues need to be solved sooner than later. If not, AFRICOM will be in react mode for every crisis instead of helping the Africans solve the overall logistical situations that inhibit operations, giving African solutions to African problems. If nothing is done, AFRICOM will be stuck in react mode and the enemy (VEOs) should take advantage of the joint force's inability to sustain long term operations. In the current condition of the African continent and the available resources to the joint forces, operations in the AFRICOM AOR (especially the west coast of Africa) will be limited because of the inability to achieve the key joint logistics principals of responsiveness, flexibility, and sustainability.

What are some of the outcomes/suggested implications?

1. Without infrastructure (roads, runways, and storage facilities), equipment (vehicles and tactical airlift), and strategic airlift, operations will be limited.
2. Response time to crises could cause the response to be too late to matter.

3. If we do not figure these issues out (operations too difficult/costly to sustain), the enemy will use this to their advantage to establish training/base camps to support terrorist operations.
4. The east coast and northern coast of Africa have the capability and capacity to respond to crisis but the west coast does not.

South Atlantic Logistical Island (SALI)

Creating the West African solution was based on the most likely course of action for future Africa and the requirement for the joint force to use the joint logistics principles. The three joint logistics principles that are impossible to achieve are responsiveness, flexibility, and sustainment due to the lack of forces and equipment available in that part of the world to initiate and sustain operations. These three joint principles of logistics are not present but are required in West Africa due to the projected future of Africa. The increase in population (expected to be 25% of the world's population by 2050)³¹ and the decrease in resources available to meet the basic needs of the people of Africa will likely cause a destabilization of governments and result in many humanitarian crises. That does not rule out the worst case scenario. West Africa is ripe with invitation for terrorist organizations as shown in the Nigerian case study. The solution in this paper is viable to both the most likely and worst case scenario in West Africa.

It has been established that Africa has poor infrastructure and has security concerns. Through research and foresight, the Africa Group has determined that Africa's largest potential for conflict or humanitarian crises in 2035 and beyond will be the West Coast of Africa. It will be one of the most difficult sectors of the world for the United States to react too if and when a conflict or crises occurs. Currently the United States has the capability to support operations and respond to crises on the east coast of Africa with the CJTF located in Djibouti Africa. The United States also has the capability to respond to crises in northern Africa with the Marine Expeditionary Unit and the Special Purpose Marine Air Group Africa located in Moron Spain. The United States does not have forces or equipment located on the west coast of Africa that can respond to a conflict or humanitarian crises when they arise in a timely manner. Saving time means saving lives in a humanitarian crisis. It is much easier and faster to move military

personnel on planes than it is to move military equipment due to size and weight. Heavy military equipment will require shipping on vessels and that takes time. If the United States wants a response time that will save lives and have positive effects on the situation, it is crucial to establish pre-staged equipment and supply base on Ascension Island. The Ascension Island will provide a secure place to pre-stage military equipment and supplies that will enable the joint military force to achieve the key joint force logistics principles of responsiveness, flexibility, and sustainability during operations and crises in West African.

The Ascension Island is ideally located in the South Atlantic Ocean approximately 1,000 to 1,500 miles away from the several countries on the west coast of Africa. It is a volcanic island that has few inhabitants. The Ascension Island is a British Territory. It proved its worth as a viable pre-staging base for the British in 1982 and was critical to the sustainability of the British forces and allowed for their success during the Falklands War.³² The United States built an airbase (Wideawake Airbase) with a 10,000 foot runway during World War Two on Ascension Island that is still in use today by the British Royal Air Force (RAF).³³ This runway (in addition to the base itself) will support receiving, staging, onward movement and integration (RSO&I) into the theatre of operations in West Africa. The Georgetown Pier is the Ascension Island's main pier. It is small and would require updating and extending (which would require additional United States investment) to work with our naval vessels and the ships that used to be part on Maritime Prepositioning Ships Squadron (MPSRON) 1 for operations.

Ascension Island would provide the responsiveness that the United States Joint Force would require to respond to conflict or humanitarian crises. Currently The United States does not have equipment in an area that could respond to conflict/crises. The United States Marine Corps (USMC) currently has two Maritime Prepositioning Ships Squadrons (MPSRON) with 14

ships overall. MPSRON-2 is based at Diego Garcia in the Indian Ocean, and MPSRON-3 is based in the Guam-Saipan area of the Western Pacific Ocean.³⁴ The two MPSRONs have equipment and supplies that supports two Marine Expeditionary Brigades (MEBs) for thirty days. These two MPSRONs are not viable responsive solutions for conflict/crises on the West Coast of Africa. The best sail time from Guam to the Gulf of Guinea is 29 days at 15 knots. The best sail time from Diego Garcia to the Gulf of Guinea is 18 days at 15 knots.³⁵ Once a pre-staged logistics base is established on Ascension Island, it reduces the sail times to 3 to 8 days (depending on which West African nation) which will increase the United States Joint Force's responsiveness to any conflict/crises as indicated in the figure 1. The United States will have limited time to respond to a crisis on the West African shores to save lives and have desired effects on the situation and cannot wait for equipment to come from the United States. Response time equals lives saved. If the equipment is in reach of the theatre on Ascension Island, troops can be flown in to marry up with the equipment within days. This reduces the response time to crisis from 3-4 weeks to less than 7 days.

Figure 1



	ASCENSION ISLAND	AGADIR (MOROCCO)	CONARKY (GUINEA)	LAGOS (NIGERIA)	LOBITO (ANGOLA)	CAPE TOWN (SOUTH AFRICA)
ASCENSION ISLAND		2464 NM	1074 NM	1371 NM	1691 NM	2396 NM
AGADIR (MOROCCO)	7.9 DAYS		1542 NM	2699 NM	3640 NM	4693 NM
CONARKY (GUINEA)	3.4 DAYS	4.9 DAYS		1205 NM	2140 NM	3201 NM
LAGOS (NIGERIA)	4.4 DAYS	8.7 DAYS	3.9 DAYS		1285 NM	2566 NM
LOBITO (ANGOLA)	5.4 DAYS	11.7 DAYS	6.9 DAYS	4.1 DAYS		1406 NM
CAPE TOWN (SOUTH AFRICA)	7.7 DAYS	15.0 DAYS	10.3 DAYS	8.2 DAYS	4.5 DAYS	

Figure 2 (Sail time from Norfolk considers lack of shipping and pre-staged equipment)



However the United States may decide to bolster the British defense with additional A2AD assets to protect the investment. Proper storage facilities with maintenance and cleaning bays will be required to be built and maintained. One of the benefits for establishing a pre-staging base on Ascension Island and not mainland of Africa is security. The British provide the security and it is at least 3 days sail time to mainland Africa. This gives enough over the horizon stand off from terrorists on the mainland of Africa. By establishing a MEB's worth of equipment and supplies on Ascension Island (with special emphasis on humanitarian crisis response equipment and supplies), it gives the Combatant Commander the appropriate amount of time to react (responsiveness) to any conflict/crises. The work that is done to establish this critical logistics node is as close to 'left of the boom' as a commander could ask for.

The question of where does the equipment come from to pre-stage on Ascension Island comes to mind. Currently there are two MPSRONS as mentioned before. They are MPSRON 2 and MPSRON 3. The USMC had an additional MPSRON (MPSRON 1 located in the Mediterranean Sea) until it was disestablished in 2012.³⁶ The ships and equipment did not go away; they were divided up and transferred to MPSRONS 2 and 3. The ships and equipment from MPSRON 1 should be used to establish the pre-positioning equipment on Ascension Island. This action would drastically reduce startup costs for the Department of Defense. The ships could and should be used as the ship to shore connectors during the crisis. Once again this requires updating the Georgetown Pier on the island to be able to support naval ships and the MPSRON 1 ships. An alternative ship to shore connector would be the Army Landing Craft Utility (LCU) 2000. It has a range of 6,500 nautical miles at a rate of 10 knots with a 600 ton payload and only requires a 9 foot draft fully loaded.³⁷ In order for these connectors to be viable against a legitimate A2AD threat, they need adequate active and passive defenses to have

survivability (see Major Jason Laird's unpublished paper). Distributed operations will also be required to ensure that the enemy does not destroy the joint force ability to initiate and sustain operations.

Once the pre-staged base is established, a requirement to maintain and exercise the equipment would arise. This task could be taken on by a yearly exercise conducted by 2d Marine Logistics Group. A task organized General Support Combat Logistics Battalion could be task organized once a year to conduct the maintenance, exercise the equipment, and certify/ensure that shelf life supplies were still good for issue or replace them as required. This annual exercise would take approximately a month each year and would ensure that the equipment and supplies are ready to be used when the need arises. There is no requirement to keep permanent forces there. Maintenance, supplies, and structure upkeep cost money but could be burdened shared by the British or NATO forces like the pre-staged equipment in the Norwegian caves that support European Command.

When the pre-staging logistics base is established, it will provide the flexibility to support multiple crises' and or the ability to use the Ascension Island as a logistics pivot point for the whole west coast of Africa (see figure 1). The ocean is the highway to the west coast of Africa and never needs infrastructure upkeep. This saves large sums of time and money that would have to be invested in the mainland of Africa for roads if a pre-staging base was built in a specific country in Africa. If a pre-stage base was built on the mainland of Africa, it would limit the commander's flexibility to pivot to additional crises. Ascension Island allows the United States military to establish a pre-staged logistics base that can support the whole west coast of Africa within 3 to 8 days to ship the equipment to conduct the operation. Responsiveness and

flexibility are critical to the operation, but once any operation starts it is essential for operational success to sustain the operation.

Once established as a pre-staging base, the Ascension Island provides sustainment for the operation. It is secure and has a 10,000 foot runway that allows for military aircraft to fly in personnel and supplies for the continuation of the operation. By having the logistics base on Ascension Island, it allows the ground commander that is conducting the operation on the west coast of Africa to remain mobile and not be bogged down by the “iron mountain” of supplies. The commander can be resupplied using on time logistics to sustain the operation and it gives the commander more flexibility by not being tied down to a piece of ground. The sustainment can be delivered to the operation by ships or manned or unmanned aircraft/ships. The idea is to have enough equipment and supplies to operate and not so much that a commander is bogged down guarding his/her rear area.

The west coast of Africa will be a source of conflict and humanitarian crises in 2035 and beyond. If the United States wants a response time that will save lives and have positive effects on the situation, it is crucial to establish a pre-staged equipment and supply base on Ascension Island. The Ascension Island will provide a secure place to pre-stage military equipment and supplies that will enable the joint military force to achieve the key joint force logistics principles of responsiveness, flexibility, and sustainability during operations and crises on the African West Coast.

Assumptions and implications for this solution:

1. The British will agree to the United States building a Pre-staged Logistics Base on Ascension Island.
2. The United States will be in react mode to any crisis on the west coast of Africa and

- time is not on the United States side to figure out a solution after the crisis occurs.
3. The British have sufficient defense on the Island but the United States will provide additional A2AD equipment to protect the investment.
 4. There is a significant cost savings by using existing equipment from MPSRON 1 that was redistributed to MPSRONs 2 and 3.
 5. The location of the Ascension Island is strategically located (cost effective) to support operations in South America as well as Africa as was proved by the British in the Falkland's War.
 6. Passive and active defense will be installed on connectors (MPSRON ships and LCU 2000s) that will be used to initiate and sustain the forces ashore.
 7. Using Ascension Island for West Africa is a cost saving measure that provides the joint force the capability to respond to crisis on the east coast of South America.

Notes

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