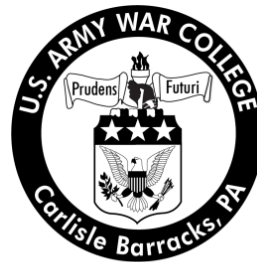


Illicit Drug Trafficking in West Africa – Primary Surveillance Radar Introduction

by

Colonel Gregory J. Broecker
United States Army



United States Army War College
Class of 2012

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USAWC STRATEGY RESEARCH PROJECT

**ILLCIT DRUG TRAFFICKING IN WEST AFRICA - PRIMARY SURVEILLANCE
RADAR INTRODUCTION**

by

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ABSTRACT

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The latest World Drug Report from the United Nations Office on Drugs and Crime (UNODC) paints a grim picture of worldwide drug smuggling. Cocaine bound for wealthy industrialized countries is increasingly transiting through poverty-stricken developing countries. The UNODC reports show a clear increase in cocaine and other illicit drugs transiting West Africa. These drugs originating in Latin and South America are moving via sea, land and air through West African countries north into Europe and North America. Weak governance contributes to this increasing problem, facilitating logistics routes for drug smugglers. The U.S. has multiple tools at its disposal; security assistance resources, partnering countries to coordinate with, and various international organizations to leverage, orchestrating mechanisms in countering illicit drug trafficking via air through West Africa. Introducing primary surveillance radar (PSR) to the region will illuminate non-cooperative movement and add another tool to counter illicit drug trade through West Africa. PSR will also serve to cover multiple agency policy objectives and underpin effective airspace management, enabling trade, investment and economic development.

ILLCIT DRUG TRAFFICKING IN WEST AFRICA - PRIMARY SURVEILLANCE RADAR INTRODUCTION

Africa Command protects and defends the national security interests of the United States by strengthening the defense capabilities of African states and regional organizations and, when directed, conducts military operations, in order to deter and defeat transnational threats and to provide a security environment conducive to good governance and development.¹

The illicit drug trade transiting West Africa is a transnational threat as described by General Carter F. Ham before the House Armed Services Committee last year.² The United States Africa Command (USAFRICOM) commander testified that violent extremism, piracy, and narcotics trafficking constitute three of the most dangerous threats to Africa, Europe and United States' interests. In and of themselves, each of these threats requires complex, multi-national, political-military solutions and appropriate levels of resources. In addition to financial resources, "maintaining a predictable pattern of available operational forces for sustained engagement activity is critical to the success of our efforts on the continent and an ongoing challenge."³ West African geo-politics and those of their partners add to this complexity.

Narcotics trafficking poses a significant threat to regional stability in West and East Africa. With underdeveloped governments and lax border enforcement, reporting is certain to be misleading, since much of the smuggled cocaine and other drugs remain undiscovered. This paper outlines the illicit drug trade problem in West Africa, provides engagement avenues to leverage in combating this trade, shows policy support to engage on this issue, highlights the need to introduce primary surveillance radar in the region and potential sources for these radar and funding. For the purposes of this

paper, West Africa includes the following countries: Benin, Burkina Faso, Ivory Coast (Cote D'Ivoire), Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo (Figure 1).



Figure 1: African Development Bank Group - <http://www.afdb.org/en/countries/west-africa/>

The Drug Trade: An Overview

Africa is presently experiencing an unprecedented rise in drug trafficking. This growth of organized crime is an increasing national security threat, as evidenced by the integration of South American drug trafficking networks with African and European buyers and distributors. Organized criminal groups are exploiting governmental weakness and corruption prevalent in many African nations, but especially in West Africa. West Africa is increasingly being used by South American drug cartels as a transshipment location to move metric ton quantities of cocaine to Europe and, in some cases, the United States. This movement covers sea, land and air. Columbian and Venezuelan traffickers are entrenched in West Africa and have cultivated long standing relations with African criminal networks and underpaid, undertrained or untrained

government officials to facilitate their activities. South American drug cartels take advantage of the region's porous borders, poorly equipped and under trained law enforcement agencies.

The threat of narco-terrorism in West Africa is real and includes the presence of international terrorist organizations operating out of or based in Africa, such as the regional threat presented by Al-Qaeda in the Lands of the Maghreb (AQIM).⁴ Information also identifies elements of Colombia's Fuerzas Armadas Revolucionarias de Colombia (FARC) as being involved in cocaine trafficking in West Africa. Insurgent and anti-government groups undermine stability, the rule of law, and the weak central governments, all of which are conditions exploited by international drug organizations. There is a risk that the rule of law in some West African states, like Guinea Bissau, might collapse under the sustained pressure from foreign and local drug trafficking organizations. The transportation, money laundering and logistical infrastructures utilized by drug trafficking organizations in West Africa are also vulnerable to use by terrorist organizations.⁵

South American cocaine drug trafficking organizations have impacted much of West Africa due to the rising demand for cocaine in Europe. This expansion of the European market is not possible without safe bases of operation on the African continent.⁶ United States government (USG) successes in stemming direct flow of South American drugs into the U.S. also has an effect as it forces cartels to move their operations along circuitous routes.⁷ The current political and economic environment in Africa presents an unprecedented opportunity for drug traffickers and terrorists to flourish and expand their operations on the continent. Weak economies throughout

Africa make drug trafficking one of the more profitable ways for criminal organizations to generate money. This money is also attractive to impoverished Africans simply struggling to survive day to day. Many West African governments do not have the economic capacity or political will to address the drug threat in the face of other issues such as famine, disease, poverty and the demand for political reform. The latter issue consumes much of a country's resources when rule is tenuous. Many West African leaders are more concerned with retaining their position and use the various government agencies to stay in control. Militaries, police and other security forces are used less for the good of the people and increasingly become complicit by virtue of ignoring the problem.⁸

The introduction and transshipment of hard drugs (mostly cocaine) from outside the region requires complicity of local actors and has had a significant detrimental impact on society. This complicity will certainly try to stymie USG efforts that encroach on officials and organizations involved with these nefarious activities. Easy money has a corrupting effect on youth, with a get-rich-quick message and a devaluation of traditional values which have always kept these societies cohesive and united. This tension breeds violence and increasingly threatens people's daily lives. The exporting and laundering of the resulting dirty money destroys hundreds of legitimate small businesses. Drug abuse and addiction find their way onto the streets of these vulnerable states, taking a terrible toll on families, education and social cohesion.⁹

West African Trade

West Africa has a long history of trade. This was not restricted to the export of slaves and tropical commodities, such as kola and cannabis. Imported American rum, French brandy and Dutch gin was also traded along these coasts for more than 500

years. Kola stimulant, cannabis and alcohol were all legally traded between Europe, the Middle East and the Sahara. Given West Africa's long history of trade and well established routes, the transit of cocaine beginning in the late 1970s was a surprise to no one. Heroin was smuggled from India, Pakistan and Thailand to Europe and the United States via West Africa. Cocaine came from the South American continent at roughly the same time. Economic hardship and poor living conditions created a permissive environment that facilitated the expansion of the drug trade throughout West Africa. These trade routes were well established by the 1990s.¹⁰

Large scale smuggling has become more widespread in recent years. Foreign players often lead this type of smuggling out of Latin America or Europe. West Africa is used primarily as a trans-shipment point for illicit trade bound for Europe, the United States and beyond. Criminal organizations use Gambia, Guinea and especially Guinea-Bissau as major hub, with a level of transport previously unknown. Cargo by the ton is moved via cargo and private aircraft, yachts and container ships. The traditional ports are also viable and frequented as transit hubs. For example, June 2006 reporting shows the seizure of 15.7 tons of cocaine in Lagos, Nigeria.¹¹

Estimates on the amount of cocaine moving through West Africa vary greatly. Interpol estimates that roughly 330 tons of cocaine is shipped annually through West African ports and waters. The United States believes the amount is approximately 270 tons, and the United Nations estimates that a modest 44 tons is transiting the region on an annual basis (Figure 2).¹² Regardless of the differences in estimates on cocaine quantities being smuggles, all three organizations agree and show that the illicit drug trafficking via West Africa is on the rise.

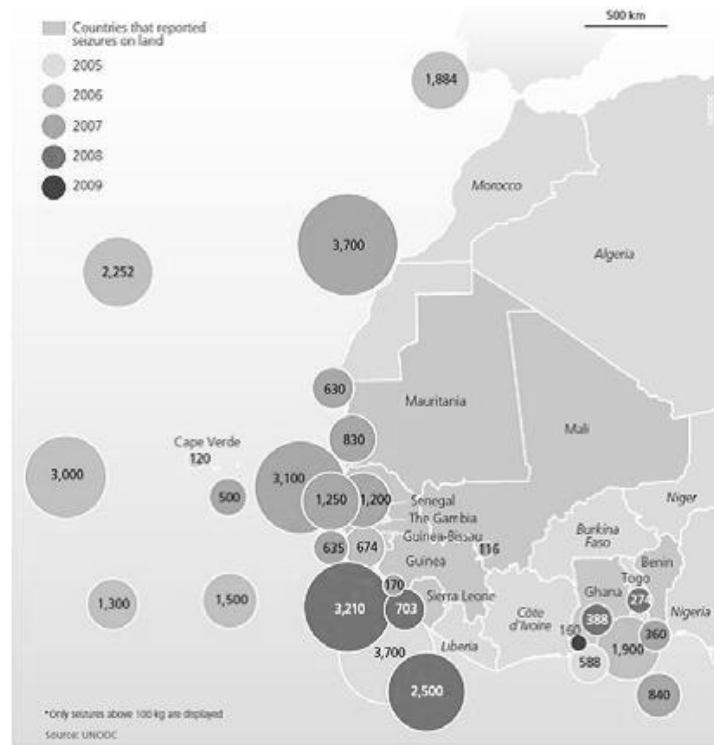


Figure 2: West Africa: cocaine trafficking routes and seizures (Source: “Crime and instability”, UNODC 2010)

Growing Evidence in the News

Open press reporting shows that the influence of the illicit drug trade spans West Africa. On January 9, 2012, New America Media reported Brazilian Narcos working with al-Qaeda in the Islamic Maghreb (AQIM) and Hezbollah. Their mutual interest is facilitating air shipments out of South America to Guinea-Bissau and Mali. The U.S. Drug Enforcement Administration reports that the drugs then continue from West Africa to Europe, where the profits on drug sales fund these terror organizations.¹³

On January 3, 2012, the chief of customs for Burkina Faso was fired and arrested for having \$4 million in cash. The cash was kept in suitcases. Although no link was given to the cash that the customs official had in his possession, it can be assumed

that there is a nefarious origin. Burkina Faso is one of the poorest countries on earth and government officials are underpaid.¹⁴ In countries where cash remains the primary method of payment and where carrying large amounts of cash is considered common, border and customs officials may have difficulty discerning between bulk cash smugglers and normal activity.¹⁵

The Global Post reported that eight foreigners were given 50-year jail terms for smuggling more than 2 ton of cocaine into Gambia. Four were Venezuelans, two were Dutch, one was a Mexican citizen and another Nigerian. They were arrested the previous summer in possession of over 2 tons of cocaine. The street value was reported to be worth as much as a billion U.S. dollars.¹⁶

Reuters published a report on November 27, 2009 about a Boeing 727 cargo plane being burned or having crashed in Mali's remote eastern region. With no surveillance and little control of the region, South American drug traffickers are said to favor this area as a pit-stop between South America and Europe. The United Nations was referenced as opining that as much as 10 tons may have been aboard. The same report referenced an incident of 750 kilograms of cocaine being transported by truck from Mali to Algeria being intercepted by border guards.¹⁷

Most alarming was an MSNBC article on 15 November 2010 outlining the use of aircraft by drug traffickers through West Africa. U.S. federal regulators show South American gangs buying older jets, loading them with cocaine and flying them through West Africa to markets beyond. U.S. indictments show that this trend is clearly linked to lack of security oversight and lack of radar coverage. U.S. court cases involving trans-Atlantic flights include:

- The Valencia-Arbelaez Organization caught buying a \$2 million plane to run monthly flights between Venezuela and Guinea. The group admitted they already operated six aircraft between South America and West Africa.
- A Colombia – Liberia ring was arrested after one of its planes was seized (May 2010) with two tons of cocaine onboard. According to prosecutors, the gang ran this route twice a month and had an additional five aircraft in operation.
- Three citizens of Sierra Leone were apprehended while scouting airstrips and coordinating a four-ton delivery of cocaine from South America.
- Francisco Gonzalez Uribe, a Colombian trafficker awaiting sentencing in the U.S. was recorded trying to purchase large aircraft including a DC-8 (four-engine jet).
- Walid Makled-Garcia linked to a DC-9 that landed in Mexico in 2006 with more than 12,300 pounds of cocaine on board.

In all of these cases, suspects admitted that the majority of cocaine was bound for Europe, but part of each shipment was also earmarked for New York.¹⁸

Arab Spring

The Arab Spring has the potential of providing additional avenues for illicit movement from West Africa through North Africa into Europe and destinations beyond. With security institutions focused on maintaining civil order and protection of citizens from political violence, borders, air space, rule of law, and sovereignty mechanisms are not enforced to their fullest. The amount of ungoverned space between West Africa and North Africa has the serious potential to increase as a result of this political change.

The disruption of normal government services and activities gives rise to exploitation. Drug traffickers are certain to take advantage of this situation and exploit weaknesses where possible. The recent Tuareg unrest in northern Mali and Niger is also of concern. Illicit drug traffickers will use the fact that the Tuareg people are marginalized and disenfranchised by the governments of Mali and Niger for their own purposes.¹⁹

West African Membership in Multilateral Anti-Crime Agreements or Bodies

West African nations know and understand the problem of illicit trade but lack the institutions to combat it. Weak governance that is often times focused on a specific leader's preservation of power and not rule of law exacerbates these issues. There are multiple regional, international and treaty frameworks in existence to assist West African states in fighting this crime. All countries are party to the United Nations Single Convention on Narcotic Drugs. All but Liberia are party to the 1971 United Nation Convention on Psychotropic Substances. Liberia is a signatory to the Convention, but it did not ratify, accede, or succeed to the Convention as a States Party. All West African countries are Party to the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. All but Ivory Coast and Sierra Leone are party to the 2000 United Nations Convention against Transnational Organized Crime. Ivory Coast, Gambia, Ghana, and Guinea are not party to the 2003 United Nations Convention against Corruption.²⁰ All West African countries are members of the Intergovernmental Action Group against Money Laundering in West Africa (GIABA).²¹

On-Going Efforts and Programs

Given the complexity of the problem, interdiction efforts have to follow multiple lines of effort encompassing treaties and policy all the way down to enforcement on the ground. Sea interdiction efforts are under way and presently primarily funded by the

European Union. Land law enforcement operations are loosely addressed through a variety of U.S. agencies, as well as European countries and organizations.

The European Union (EU) has initiated several programs to counter drug smuggling through Africa. West African efforts have focused on sea interdiction under the EU Seaport Cooperation Program (SEACOP). This program was launched in 2010 and is funded through 2014. SEACOP's main objectives are to support capacity building and strengthen regional and trans-regional cooperation by setting up Joint Maritime Control and Joint Maritime Intelligence Units in key ports; improving regional cooperation and intelligence sharing; providing regional maritime training; and creating national and regional maritime information systems. The EU has allocated \$1,126,000.00 to execute this program.²²

AFRICOM and the Department of State have been instrumental in funding, training and implementing a marine surface surveillance system along the coast of Nigeria. This program provides Nigeria the capability to gain awareness of their maritime traffic. This system is integrated into the global Maritime Safety and Information System database which tracks ships world-wide.²³ AFRICOM is actively working to implement this Regional Maritime Awareness Capability (RMAC) in the West African nation of Ghana too. Like Nigeria's system, this will provide Ghana the capability to track maritime traffic in the Gulf of Guinea.²⁴

An additional EU program of note is the Airport Communication Project (AIRCOP). This program is designed to support the fight against organized crime on cocaine trafficking routes, focused on human, drug and art trafficking. The program addresses 22 countries on 3 continents along routes from Latin America to Europe, with

a special focus on West Africa. It encompasses the trans-regional dimension by creating cooperative links between West Africa, Latin America and Europe. The aim is to strengthen capacity for international cooperation between law enforcement, prosecution and judicial authorities in all three regions. Interdiction focuses on anti-drug capacities at select airports and seaports in West Africa and Latin America, establishing trans-regional frameworks for judicial cooperation, training, joint investigations and operations as well as information sharing. These activities are being carried out by the law enforcement, border control and customs authorities of the EU Member States as well as with the UN Office on Drugs and Crime (UNODC), the World Customs Organization (WCO) and Interpol. The EU has allocated \$6,600,000.00 for this program.²⁵

West African states are also active under the umbrella of the United Nations Office on Drugs and Crime (UNODC). In December 2008, Heads of State and Government of the Economic Community of West African States (ECOWAS) approved a Regional Framework and Action Plan on Combating Drugs and Organized Crime in West Africa. They acknowledged the ongoing individual and collective efforts against illicit drug trafficking and related crimes by Member States at the regional and national levels, especially within the framework of the Economic Community of West African Fund States Drug Fund (ECODRUG Fund), Inter-Governmental Action Group Against Money Laundering (GIABA), the West African Joint Operations (WAJO), the West African Police Chiefs Committee (WAPCCO) and other similar multi-lateral and bilateral initiatives to address the drug and trafficking problem affecting the region. These West African countries met again at the African Union Conference of Ministers for Drug

Control and Crime Prevention, held in Addis Ababa from 28 September to 2 October 2010. African ministers and experts responsible for drug control and crime prevention in the member States of the African Union agreed to fight the illicit trade and cultivation of drugs, to develop adequate monitoring and regulatory systems for ensuring the availability of drugs for medical purposes, and curb the availability of drugs on unregulated markets. The UNODC, in collaboration with the ECOWAS Commission has produced a project document for action.²⁶ This action plan was “revitalized” in Vienna, Austria from 21-24 March, 2011 during the 54th UNODC commission meeting.²⁷

Developing Airspace Management

Airspace management has been discussed at various levels and at multiple forums, but has not generally been pursued due to cost, complexity and perceived loss of sovereignty issues by West African leaders. The exception is Nigeria, where sea, land and air coverage is being tackled. For example, DEA has a regional office in Ghana that is working within and across West Africa to build law enforcement capacity.

The airline industry is a willing partner in its desire to upgrade, improve and build airspace management facilities where necessary. They understand the issues and badly want improvements in West Africa and across the continent. Development in the area of airspace management will benefit all and improve air safety, which ranks among the worst in the world. There will certainly also be exceptions, as some air transport companies have benefitted from disjointed coverage and lack of willingness by governments to establish common policies. This situation provides some air transport companies the cover to evade detection or regulatory control by the region’s governments.

Policy and training concerning airspace management are areas that require focused and specific development for effective airspace management. This is clearly a government function and cannot be filled by the private sector. Airport management and security related to a country's sovereignty is generally under the purview of Ministries of the Interior. Interior Ministries across West Africa have poor training and are susceptible to corruption. This combination is not well suited to open and productive negotiations without diplomatic and senior leader involvement.

African nations, via the African Union and the United Nations, have been slow to adopt a common policy with regard to airspace management and transportation. Still, there is a political desire by most countries to improve airspace management conditions and effectiveness. "This includes the provision of adequate control, navigation, surveillance and air traffic management (CNS/ATM) systems in order to enhance smooth and safe air traffic flow across the air space of Africa. In this regard, Africa needs a consolidated airspace management programme to augment national and regional safe skies initiatives."²⁸

Seven of the West African states recognize and have banded together to fight this illicit movement of drugs through their countries under the umbrella of the "Dakar Initiative". This initiative was fall-out from the 2009 discovery of the Boeing 727 that crash landed in northern Mali. The aircraft originated in Venezuela with a load of cocaine. The European Union has pledged \$21 million to combat the trend of illicit drugs movement by air under the umbrella of the Dakar Initiative. The seven countries associated with the Dakar Initiative are: Gambia, Guinea-Bissau, Guinea, Cape Verde, Mali, Mauritania and Senegal.²⁹

Effective airspace management not only aids in countering illicit drug trafficking, it will advance economic development and U.S. commercial interests in developing and middle income countries. USG use of foreign assistance funds to support sound investment policy and decision-making in host countries creates an enabling environment for trade, investment, and sustainable economic development. “Aviation is a critical sector that is essential for supporting business and economic development in West Africa. A safe and secure aviation environment can help attract investment in industries that generate significant local employment opportunities, raise incomes, and help elevate people out of poverty. Improved air connections between major cities are needed to promote business links that are the foundation for trade and investment. Simply put, a modern aviation sector facilitates trade and is a catalyst for economic growth.”³⁰

Infrastructure is not at the heart of the problems of the airspace management sector everywhere in West Africa. The number of airports is stable and there are enough runways to handle traffic in the near future with better scheduling and relatively modest investment in parallel taxiways, coupled with improvements to terminal facilities.³¹ The safety problem is more pilot capability and safety administration than unsafe aircraft, though air traffic control facilities are severely lacking.³²

Air traffic management is critical to controlling airspace, air safety and extending national sovereignty beyond the airport. Air Traffic Control radar is an important tool in the safe and efficient management of airspace. “Safe and efficient air travel involves radars for short-range surveillance of air traffic and weather in the vicinity of airports, the long-range surveillance and tracking of aircraft and weather on routes between airports,

and the surveillance of aircraft and ground vehicles on the airport surface and runways.”³³ At present, Africa only has secondary surveillance radar (SSR) in operation. According to the International Civil Aviation Organization’s (ICAO) Global Air Navigation Plan, only Algiers, Canarys, Egypt, Ghana, Kenya, Morocco, Nigeria, South Africa and Tunisia operate SSR³⁴. SSR are systems that require aircraft to have transponders to register their movement. There are no primary surveillance radar (PSR) registered with the ICAO.

This means that all air transits have to be cooperative to register with associated secondary surveillance radar of airports and countries in the region. The secondary surveillance system requires a cooperating transponder on an aircraft to track it. This transponder emits a signal allowing it to be tracked, providing data on altitude and identity. Absent the pilot activating the unit and operating this transponder in the “ON” mode, an SSR cannot track or see the aircraft (Figure 2). This willing partner relationship is critical in the electronic interrogation between ground and aircraft. Although not verifiable, simple deduction would lead to a conclusion that aircraft moving illicit drugs or other illegal cargo fly without the transponder operating.



Figure 3: Becker ATC 4401 compact aircraft transponder

The ICAO navigation charts for Africa show eight secondary surveillance radar systems active in West Africa. These radar generally have a maximum range of 250 nautical miles. Eight radar systems operating to cover an area slightly smaller than the continental United States is hardly enough to control air space over West Africa. The following matrix provides a picture of airports to radar ratio and where coverage is lacking (Figure 3).

ICAO's Global Air Navigation Plan shows no primary surveillance radar on the African continent. This radar is expensive and requires trained personnel. Absent this interrogation radar, there is little anyone can do if transponders and cooperative aircraft do not willingly allow registration with the SSR. PSR is a non-cooperative process and does not require any avionic devices to be available or to emit a signal from an aircraft. Barring cooperative and functioning transponders, primary surveillance radar (PSR) is the only tool that can track aircraft. The simple introduction of PSR will not stop illicit movement altogether, but it will enable governments to track aircraft and identify those without flight plans, those without a transponder on, and those that exhibit suspect behavior for inspection.

Open source press reports the militaries of Egypt, Nigeria, Morocco³⁵ and South Africa³⁶ have some primary surveillance radar capability or, in the case of Morocco, have plans to acquire them. The South Africans had deployed one of their systems to South Sudan in support of the declaration of independence and associated ceremony, but there is nothing that suggests these radars are resident in West Africa. With the exception of Nigeria, which completed the Total Radar Coverage of Nigeria (TRACON) project in 2010, no other West African countries have this capability. Nigeria's

TRACON project provides complete coverage of the country's airspace with a combination of primary and secondary radar across the country.³⁷ Given the heavy focus on land and sea by outside donors, focusing on the gaps in air interdiction offers the United States a high pay off opportunity in focusing assistance to West Africa.

Country - West Africa	Paved Airfields	UnPaved Airfields	Radar Type & Number	State Size Comparison
Benin	1	4		Smaller than PA
Burkina Faso	2	22		Larger than CO
Cote D'Ivoire	7	20	SSR (1)	Larger than NM
Gambia	1	0		2 X Delaware
Ghana	7	4	SSR (2)	Smaller than OR
Guinea	4	12		Smaller than OR
Guinea-Bissau	2	7		3 X Connecticut
Liberia	2	27	SSR (1)	Larger than TN
Mali	8	12		2 X Texas
Niger	10	17	SSR (1)	2 X Texas
Nigeria	38	16	SSR (2)	2 X California
Senegal	10	10	SSR (1)	Smaller than SD
Sierra Leone	1	9		Smaller than SC
Togo	2	6		Smaller than WV

Figure 4: Data derived from CIA Factbook Online and ICAO Global Air Navigation Plan

Sources for Primary Surveillance Radar Systems

U.S. Africa Command has organic assets to engage West African counterparts in the development of Africa specific enforcement initiatives. Efforts to develop a common policy across the continent and region must be redoubled and advanced through governments with advanced initiatives in the field of airspace management. A key element in combating international drug trafficking is the concerted and coordinated efforts of the inter-agency community to jointly identify areas vulnerable to enforcement efforts and simultaneously direct assets to vigorously target the identified chokepoints on a coordinated and sustained basis. We can expect illicit drug movements to be fluid,

taking those routes which are most easily exploited as policy and efforts are enabled across the region.

To this end, DoD/AFRICOM has assets throughout West Africa that can be leveraged to retard movement along these new trade routes, with the objective to cause major disruption to the flow of drugs from source zones to the continental United States. This strategy includes an integrated inter-agency approach incorporating like-minded states and organizations to emplace structure that will effectively address this issue. This new strategic approach rests on four pillars: system availability, interagency integration, foreign regional empowerment and incorporation of like-minded states and organizations.

The Federal Aviation Agency (FAA) is slowly phasing primary surveillance radar out due to age, efficiency and cost, but a skeleton network will remain as the United States moves to Automatic Dependent Surveillance-Broadcast (ADS-B) across the country. The U.S. military too will likely phase out some of their primary surveillance radar systems as the FAA upgrades throughout the U.S. and cost saving measures are implemented with the recent DoD budget, providing an opportunity to utilize these systems elsewhere. PSR radars would assist in the civilian development of airports and commerce in West Africa, as well as track non-transponder or non-cooperating targets.³⁸ This presents AFRICOM with an opportunity to introduce some of these radars into West Africa.

AFRICOM should start the process by exploring the opportunities of primary surveillance radar (and secondary surveillance radar) availability with the upgrade of the air traffic management ongoing in the United States. The contraction in the DoD budget

may also provide opportunities for excess defense articles being available at little to no cost. As DoD phases out older PSR systems, West Africa may benefit under military to military agreements with the condition that they be used for drug interdiction and support their country's civil aviation sector.

Given this identified threat and understanding there are limited resources with the coming contraction in the Department of Defense budget³⁹; it becomes paramount that funding and a plan of action be worked before embarking on a new line of effort. Africa Command has multiple funding streams to use outside that which their submitted budget addresses (Joint exercises, force training, contingencies, and selected operations, including funding for special operations forces (SOF) training with foreign forces on the continent). This initiative could be a candidate for the "Combatant Commander Initiative Fund" from the Chairman of the Joint Chiefs of Staff. Eligibility of these funds includes force training; contingencies; selected operations; command and control; joint exercises to include activities of participating foreign nations; humanitarian and civic assistance; military education and training to military and related civilian personnel of foreign countries; personnel expenses of defense personnel for bilateral or regional cooperation programs; force protection; and joint warfighting capabilities.⁴⁰

Land and border control is being addressed through the European Union and the U.S. Drug Enforcement Agency. DEA has a regional office in Ghana that is working within and across West Africa to build law enforcement capacity. It is important to maintain on-going Drug Enforcement Agency (DEA) efforts in the region. These efforts are critical and can complement programs of AFRICOM in building air-space management capability.

The Department of Defense also has a budget account known as the “Combating Terrorism Readiness Initiatives Fund.” This fund provides combatant commanders resources to address and react to unanticipated requirements. Authorized activities under this fund include procurement and maintenance of physical security equipment; improvement of physical security sites; under extraordinary circumstances: physical security management planning; procurement and support of security forces and security technicians; security reviews, investigations, and vulnerability assessments; and any other activity relating to physical security.⁴¹

Department of State recently received a \$10 million increase over fiscal year 2010 to fund programs in West Africa that will develop strong law enforcement investigative abilities and justice sectors capable of prosecuting and convicting narco-traffickers.⁴² Using this money in support of introducing PSR is in the interest of Department of State and supports both DoS and DoD initiatives.

Given the linkage between terrorist organizations and drug traffickers in West Africa, existing counter-terrorism programs and operations provide another avenue for the introduction of PSR to the region. “Operation Enduring Freedom-Trans Sahara (OEF-TS) is the US Military regional plan against terrorist and violent extremists. OEF-TS is the military component to Trans Sahara Counterterrorism Partnership (TSCTP). Together with other USG organizations, OEF-TS will help enhance stability and deter terrorist activity on the African continent, with an emphasis on greater security in North Africa. USAFRICOM is working with international partners in a regional approach to common areas of concern such as commerce, education and economic development. OEF-TS works with the partner nations to expand military -to-military cooperation,

ensure adequate resources are available to train, advise, assist regional units, and establish mechanisms to promote better regional cooperation, communications, and intelligence-sharing.”⁴³ Using this existing framework, AFRICOM has an opportunity to explore expanding this vehicle to include air space management tools.

Air interdiction of illicit drug shipments across West Africa would certainly qualify under these multiple programs. The impetus is in getting not only U.S. executive agencies outside the Department of Defense to buy in, but also international entities. Africa Command will need to approach all the African nations in West Africa to gain their support for this effort. The body of ECOWAS, the EU and the UN will also need to be involved. This is a very complex problem that will take multiple years and multiple lines of effort. Some nations will certainly not participate, as they are already too heavily influenced by drug cartels and other criminal elements. However, the introduction of PSR may serve as a catalyst to isolate these regimes, increase the cost for drug traffickers to operate in West Africa and stem the flow of drugs via the region.

Policy Support in National Documents

Illicit drug trade through West Africa has negative national security implications for the United States. With the formation of United States Africa Command (AFRICOM) in 2007, U.S. policy makers recognized the emerging strategic importance of Africa. The National Security Strategy published by the last administration, and the 2010 Quarterly Defense Review (QDR), outline that “sustaining existing alliances and creating new partnerships are central elements of U.S. security strategy.” Building partnerships, forming enduring relationships and sharing common interests are critical to realizing national security strategic objectives. In the regional context of Africa, the QDR states that the United States will work with African partners to enhance stability

and prosperity through capacity building, assisting fragile states and addressing humanitarian crises.⁴⁴ The United States conducts stability operations to advance U.S. interests and values with short term goals of providing security and humanitarian assistance and a long term goal of developing “indigenous capacity for securing essential services, a viable market economy, rule of law, democratic institutions, and a robust civil society.” It emphasizes that successful stability operations require integrated civilian and military efforts.

The Unified Command Plan (UCP) and associated Combatant Commands (COCOMs) also provide a legal framework under which AFRICOM can address the flow of illicit drugs in West Africa, and in general, across Africa.⁴⁵ Although the Unified Command Plan is classified, the sections of Title 10 provide a window into what the possibilities there are in addressing the problem of illicit drug trade in West Africa. Using military structure, resources and manpower, AFRICOM is well positioned to address this problem set. It’s headquarters is staffed with not only service members from all branches, but with other executive branch agencies that are collectively referred to as the Interagency, and also have an interest in the UCP because some of our military tasks intersect with the responsibilities of these agencies. The State Department, Department of Justice, Department of Homeland Security, and the Central Intelligence Agency all have an interest and all have unique capabilities that should be leveraged by the combatant command. Although these agencies do not participate in the UCP development process, they do have an interest in these assigned tasks and can and do become involved in some of the larger issues affecting the United States within and across COCOM areas of responsibilities. The National Security Council can

also be leveraged by Africa Command should the need for additional resources or emphasis be required concerning the introduction of PSR.

Summary

As the world continues to become more interconnected and the security and stability of one country impact others around the globe, it becomes increasingly important that DoD work effectively to maximize the positive impacts of law enforcement and good governance. The United States' interests and security are clearly integrally connected to the continent of Africa. While Africa continues to evolve in the areas of democracy, rule of law and transparency, DoD involvement in support of these efforts will invariably assist in curbing weak governance, violent conflict and slow economic development.

Without strong leadership and resources to facilitate capacity, West Africa left to their own devices, will continue to languish and illicit drug trafficking will flow unabated. With Guinea-Bissau an example of what happens when weak government and rule of law are left to drug traffickers with budgets that exceed some country gross domestic product (GDP) levels, engagement is paramount to stability.

The latest World Drug Report from the United Nations Office on Drugs and Crime (UNODC) paints a grim picture of worldwide drug smuggling. Cocaine bound for wealthy industrialized countries is increasingly transiting through poverty-stricken developing countries. The UNODC reports show a clear increase in cocaine and other illicit drugs transiting West Africa. These drugs originating in Latin and South America are moving via sea, land and air through West African countries north into Europe and North America. Weak governance contributes to this increasing problem, facilitating logistics routes for drug smugglers. The U.S. has multiple tools at its disposal; security

assistance resources, partnering countries to coordinate with, and various international organizations to leverage, orchestrating mechanisms in countering illicit drug trafficking via air through West Africa. Introducing primary surveillance radar (PSR) to the region will illuminate non-cooperative movement and add another tool to counter illicit drug trade through West Africa. PSR will also serve to cover multiple agency policy objectives and underpin effective airspace management, enabling trade, investment and economic development.

Endnotes

¹ GEN Carter F. Ham, U.S. Army, Posture Statement of United States Africa Command, before the House Armed Services Committee, 112th Congress, 2nd session, February 29, 2012, 1.

² Ibid., p.4.

³ GEN Carter F. Ham, U.S. Army, Posture Statement of United States Africa Command, before the House Armed Services Committee, 112th Cong., 1st session, April 5, 2011, p. 26.

⁴ Tim Gaynor and Tiemoko Diallo, "Al Qaeda linked to Rogue Aviation Network", January 13, 2010, linked from the Reuters Home Page at <http://www.reuters.com/article/2010/01/13/us-drugs-security-aviation-idUSTRE60C3E820100113> (accessed on January 5, 2012).

⁵ Liana Sun Wyler and Nicolas Cook, *Illegal Drug Trade in Africa: Trends and U.S. Policy* (Washington, DC, Congressional Research Service, 30 September, 2009), 7.

⁶ Ibid., pg 8.

⁷ United Nations, United Nations Office on Drugs and Crime, *World Drug Report 2011*, (New York, 2011), 37-41.

⁸ Ibid., pg 37-41.

⁹ Charles Ejiofer, "Nigeria: Consequences of Drug Abuse and Illicit Trafficking", 19 February 2009, linked from the allAfrica.com Home Page at <http://allafrica.com/stories/200902190244.html> (accessed February 3, 2012).

¹⁰ Gernot Klantschnig, "The Drug War in West Africa", 25 October, 2011, linked from World Politics Review Home Page at <http://www.worldpoliticsreview.com/articles/10446/the-drug-war-in-west-africa?page=1> (accessed March 5, 2012).

¹¹ Ibid., pg 3.

¹² Alagi Yorro Jallow, "Narcotics Trafficking in West Africa Worsens; Seized Cocaine Worth More than Gambia's GDP", August 8, 2011, linked from Freedom Newspaper, Gambia Premium Online Newspaper at http://www.google.com/url?sa=t&rct=j&q=narcotics%20trafficking%20in%20west%20africa%20worsens%3B%20seized%20cocaine%20worth%20more%20than%20gambia%E2%80%99s%20www.freedomnewspaper.com%2FHomepage%2Ftabid%2F36%2Fmid%2F367%2Fnewsid367%2F6591%2FGambia--Narcotics-Trafficking-in-West-Africa-Worsens-Seized-Cocaine-Worth-More-than-Gambias-GDP%2FDefault.aspx&ei=CgBiT4iOMaru0gHEm8WtCA&usg=AFQjCNHKMR0QtqlyyIDx0V_ycZzmumhAlg (accessed March 10, 2012).

¹³ Louis E.V. Nevaer, "As Brazil Booms, So Do New Drug Routes", January 9, 2012, linked from New America Media at <http://newamericamedia.org/2012/01/as-brazil-booms-so-do-new-drug-routes.php> (accessed on January 10, 2012).

¹⁴ The British Broadcasting Corporation, "Burkina Faso customs chief fired over \$4m cash find", January 3, 2012 linked at the BBC Online at <http://www.bbc.co.uk/news/world-africa-16398130> (accessed on January 5, 2012).

¹⁵ John Rollins, Liana Sun Wyler and Seth Rosen, *International Terrorism and Transnational Crime: Threats, Policy, and Considerations* (Washington, DC, Congressional Research Service, March 18, 2010), 16.

¹⁶ Thompson Reuters Africa, "Gambia jails eight foreigners for 50 years for drugs", 12 October 2011, linked to the Reuters Africa Home Page at <http://af.reuters.com/article/gambiaNews/idAFL5E7LC42T20111012> (accessed January 5, 2012).

¹⁷ Defence Web South Africa, "Mali probes wreckage of suspected Boeing 727 drugs plane", November 27, 2009, linked from the Reuters Online at http://www.defenceweb.co.za/index.php?option=com_content&view=article&id=5571:mali-probes-wreckage-of-suspected-boeing-727-drugs-plane&catid=35:Aerospace&Itemid=107 (accessed January 5, 2012).

¹⁸ Chris Hawley, "Sky's the Limit, Drug Smugglers buy Cargo Jets", November 15, 2010, linked to the MSNBC Web Page Online at http://www.msnbc.msn.com/id/40194116/ns/world_news-americas/t/skys-limit-drug-smugglers-buy-cargo-jets/# (accessed on January 5, 2012).

¹⁹ Pittsburgh Post-Gazette, "Mali's Unrest: A Rebellion Triggers a new Humanitarian Crisis", February 25, 2012, linked to the Pittsburgh Post-Gazette Online at <http://www.post-gazette.com/pg/12056/1212503-192.stm> (accessed on February 26, 2012).

²⁰ The governments of Ivory Coast and Guinea are signatory to the convention, however they did not ratify, accede or succeed to the Convention to a States Party. All other are signatories to the convention.

²¹ Liana Sun Wyler and Nicolas Cook, *Illegal Drug Trade in Africa: Trends and U.S. Policy* (Washington, DC, Congressional Research Service, 30 September, 2009), 45-47.

²² The European Commission, “*Long-term responses to global security threats: Contributing to security capacity building in third countries through the Instrument for Stability*”, (Brussels, March 2011), 12.

²³ The Nigerian Voice, Maritime Security: PICOMSS Acquires Hi-Tech Surveillance Gadgets, July 1, 2011, linked to the Nigerian Voice Online at <http://www.thenigerianvoice.com/nvnews/55031/1/maritime-security-picomss-acquires-hi-tech-surveil.html> (accessed on March 1, 2012).

²⁴ Kris Arvind, “New Radar System Improves Sea Safety for Sao Tome and Principe”, March 15, 2011, linked to the United State Africa Command Home Page at <http://www.africom.mil/getArticle.asp?art=6204> (accessed on March 1, 2012).

²⁵ The European Commission, “*Long-term responses to global security threats: Contributing to security capacity building in third countries through the Instrument for Stability*”, (Brussels, March 2011), 11.

²⁶ United Nations, United Nations Office on Drugs and Crime, *Regional Programme for West Africa 2010–2014*, (New York, 2010), 6-18.

²⁷ United Nations, United Nations Office on Drugs and Crime, *54th session of the Commission on Narcotic Drugs*, (Vienna, March 2011), 1.

²⁸ African Union, Meeting of African Ministers Responsible for Air Transportation, Sun City, South Africa, 16-19 May 2005. www.africa-union.org/infrastructure/.../en/Concept%20Note.doc

²⁹ The U.S. Trade and Development Agency (USTDA) in Sub-Saharan Africa, “Partners in Aviation”, (Arlington, November 2009), 1.

³⁰ Ibid., p. 1.

³¹ Vivien Foster and Cecilia Briceño-Garmendia, “Africa’s Infrastructure: A Time for Transformation, 2010, Airports and Air Transport”, The World Bank, (Washington, DC 2010), p 259.

³² Heinrich C. Bofinger, “An Unsteady Course: Challenges to Growth in Africa’s Air Transport Industry”, (Washington, DC July 2009), p5.

³³ U.S. Department of Commerce, Federal Radar Spectrum Requirements, NTIA Special Publication 00-40, May 2000, pg 2.

³⁴ International Civil Aviation Organization (ICAO) Global Air Navigation Plan, (Montréal, Quebec, Canada, 2011), Table CNS 4A, p 190.

³⁵ Morocco wants to purchase eight AN/MPQ-64F1 radars, 27 June 2011. http://www.defenceweb.co.za/index.php?option=com_content&view=article&id=16614:morocco-wants-to-purchase-eight-anmpq-64f1-radars&catid=48:Information%20%20Communication%20Technologies&Itemid=109

³⁶ Reutech Radar Systems, linked from the Home Page at <http://www.rrs.co.za/> (accessed on January 10, 2012).

³⁷ Kris Arvind, "New Radar System Improves Sea Safety for Sao Tome and Principe", March 15, 2011, linked to the United State Africa Command Home Page at <http://www.africom.mil/getArticle.asp?art=6204> (accessed on March 1, 2012).

³⁸ Swiss Federal Department of the Environment, Transport, Energy and Communications (N° 1744), "Final report on Skyguide radar systems", (Zurich, 26 June 2002), p 4 – 48.

³⁹ Lieutenant General David W. Barno, U.S.Army (Ret), "Hard Choices, Responsible Defense in an Age of Austerity", Center for a New American Security, (Washington, DC, October 2011), p 8.

⁴⁰ U.S. Joint Chiefs of Staff, Rapid Validation and Resourcing of Joint Operational Needs, Joint Instruction CJCSI 3470.01, (Washington, DC, July 1, 2005).

⁴¹ U.S. Joint Chiefs of Staff, Rapid Validation and Resourcing of Joint Operational Needs, Joint Instruction CJCSI 5261.01F, (Washington, DC, October 21, 2008).

⁴² The White House, United States National Drug Control Strategy, (Washington, DC, 2010), p 107.

⁴³ United States Africa Command, OEF Trans-Sahara Fact Sheet, linked to the U.S. Africa Command Home Page at <http://www.africom.mil/oef-ts.asp> , (accessed on March 15, 2012).

⁴⁴ Realizing the interdependency of USG agencies and the need for stability operations skills in the Department of Defense (DoD), two policy directives were signed into law in 2005. The Department of Defense Directive (DoDD) 3000.05 and the National Security Presidential Directive (NSPD) 44 transformed the way both the Department of Defense and the Department of State (DoS) function and integrate together. These two directives form the foundation for current interagency efforts. DoDD 3000.05 provides guidance and defines stability operations as a core mission that the DoD shall be prepared to conduct and support.

⁴⁵ United States Code, Title 10, General Military Law, Organizational and General Military Powers, Chapter 6: Combatant Commands. <http://uscode.house.gov/download/pls/10C6.txt>
Explanatory footnote: The laws under Title X are governed by provisions in sections 161 through 168. These sections address the following provisions; Section 161: The establishment of COCOMs; Section 162: Chain of command and assignment of forces for COCOMs; Section 163: Role of the CJCS; Section 164: Assignment and powers and duties of commanders of COCOMs; Section 165: Administration and support of COCOMs; Section 166: COCOM budget proposals; Section 166a : Funding COCOMs through the CJCS ; Section 166b: Funding for combating terrorism readiness initiatives; Section 167: Unified COCOMs for special operations forces; Section 167a: Unified COCOMs for joint war fighting experimentation: acquisition authority; and Section 168: Military-to-military and comparable activities

