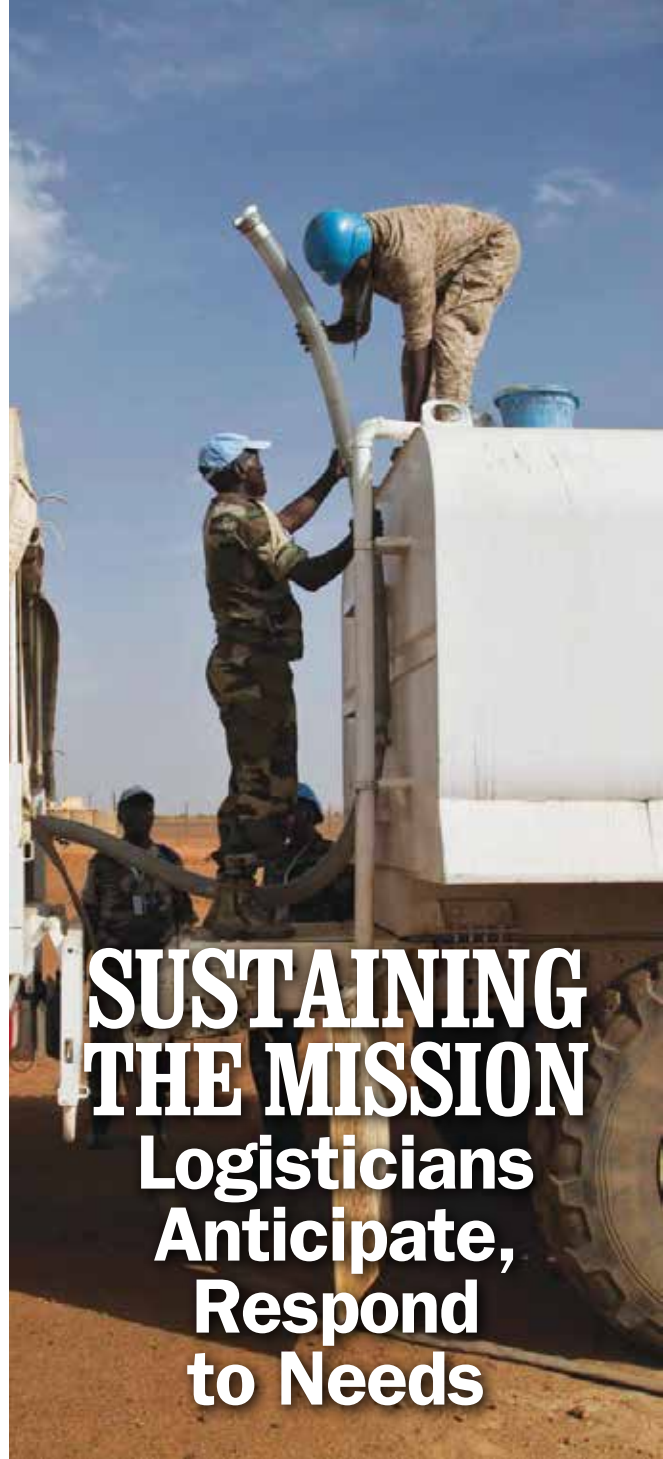


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AFRICA DEFENSE FORUM



SUSTAINING THE MISSION

Logisticians
Anticipate,
Respond
to Needs



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ON THE COVER:

From the upper left corner and moving clockwise, Armed Forces of Liberia engineers build an Ebola treatment unit; peacekeepers from Côte d'Ivoire's Transport Company deliver drinking water in Mali; and a Zambia Air Force medical team loads a simulated casualty onto an Mi-17 helicopter.

U.S. ARMY AFRICA/SGT. 1ST CLASS WILL PATTERSON
MINUSMA/MARCO DORMINO
U.S. ARMY AFRICA/U.S. AIR FORCE
STAFF SGT. BRIAN KIMBALL

There's no escaping the importance of logistics. Without the ability to effectively move and sustain troops, commanders' plans aren't worth the paper they're printed on. In short, logistics can be the difference between a mission's success and failure.

This fact is agonizingly clear on the African continent, where conflicts erupt in regions that are difficult to reach by air or land. This remoteness hampers peacekeeping efforts and costs lives.

The African Union recognizes the challenge, and logistics is a key component of its newly operational African Standby Force (ASF). To attain the goal of "silencing the guns" on the continent by 2020, the AU is working to find a way to swiftly deploy and sustain its peacekeeping forces for long periods. It is making progress. A continental logistics base is planned in Douala, Cameroon, that will store equipment for rapid deployment and for establishing a mission headquarters when the ASF is on the ground. The AU created a continental movement coordination center to identify the best resources for strategic airlift and sealift to move troops, vehicles and equipment to the front lines. The continent's many militaries also are emphasizing training logisticians to meet the challenges of 21st-century multidimensional peacekeeping operations.

U.S. Africa Command and African partners can work together to offer training, share best practices, provide airlift or sealift, and hold events such as the annual Africa Logistics Forum to build relationships. Effective logistics is built on partnerships and planning. Addressing logistics challenges before they arise helps minimize problems that once seemed insurmountable.

U.S. Africa Command Staff



A tank convoy rolls through the Lohatla training area in South Africa during exercise Amani Africa II in October 2015 to test the readiness of the African Standby Force. REUTERS



Logistic Power

Volume 9, Quarter 2

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Amani Africa II Prepares Standby Force to Meet Challenges



Jacob Zuma,
president of the
Republic of South
Africa, spoke
during the closing
ceremony of the
Amani Africa II
Field Training
Exercise in Lohatla,
Northern Cape,
South Africa, in
November 2015.
His speech has been
edited to fit this
format.

This exercise demonstrates that Africa is serious about peace and that the continent is also serious about investing in peace. We often proclaim that we want African solutions to African problems. Through this exercise, we are demonstrating that readiness to solve our problems on the continent.



We are indeed proud to proclaim today that Amani Africa II has been a tremendous success. We have taken a significant step toward bringing the African

Standby Force and its Rapid Deployment Capability into operation. We have committed ourselves to silencing the guns on our continent by 2020, in alignment with our commitment to Agenda 2063. However, we still need to be prepared to effectively intervene in situations of crises to stabilize our countries when the need and the call arise.

The reality is that some countries on our beloved continent are still experiencing conflict, strife and war. The people of the Central African Republic, South Sudan, Mali, Libya, Somalia and eastern Democratic Republic of the Congo still live in the hope of achieving peace. We therefore have a duty as the leadership of the continent to assist sister countries to achieve peace. That is what makes this exercise so important.

It is particularly gratifying that the five regions of our continent were represented at this exercise through the regional economic communities and their brigades. SADC [Southern African Development Community], the Eastern Africa Standby Force, North Africa Regional Command, ECOWAS [Economic Community of West African States] and the volunteering nations of ACIRC [African Capacity for Immediate Response to Crises] have all participated in this historic exercise, which is the first of its kind.

Apart from testing harmonization, this exercise has gone a long way toward strengthening cooperation between the African Union and the regional mechanisms for the purposes of future peacekeeping operations. This exercise is also unique in that it practiced the multidimensional nature of peace support operations, bringing together the military, police and civilian elements in an

integrated approach. In this regard, we congratulate the countries and regions that have been involved in this exercise for availing the necessary resources and assets.

We need to do more to mobilize domestic resources to fund and capacitate our peace support operations. Identifying and raising our own funds will ensure that we enhance the sustainability of our missions while at the same time ensuring ownership and self-reliance. We must build further on this milestone as we move toward full operational capability.

This exercise has also contributed significantly to consolidating the positive relationships, not only between the different armed forces, police and civilian components that were involved, but also between the home countries of these forces. The opportunity presented by Amani Africa II will also improve relations between the regional economic communities and the African Union on the continental level.



Ugandan Soldiers take part in Amani Africa II, the largest military exercise of the African Union's African Standby Force, at the South African Defence Force training camp in Lohatla. The force was created to quickly intervene in conflicts and crises. AFP/GETTY IMAGES

Indeed, we are of the firm belief that the collective efforts of the military, police and civilian components will be invaluable in providing an effective and credible response to humanitarian crises on the continent. We congratulate all the forces once again for this success. We also commend the AU Commission for the leadership it provided at the strategic headquarters level in Addis Ababa, Ethiopia.

As we continue to build our capacity, we will also continue to cooperate with the United Nations and with international partners as we strive for continental and global peace.



Students at Lighthouse Grace Academy use “Kio Kit” tablets during a class session in the Kwangware suburb of Nairobi, Kenya.
AFP/GETTY IMAGES

IN KENYA, A DIGITAL CLASSROOM IN A BOX AGENCE FRANCE-PRESSE

At Lighthouse Grace Academy in Nairobi’s Kwangware suburb, students are using a new learning tool. It’s the “Kio Kit,” a digital classroom in a suitcase designed by local technology company BRCK.

“The Kio Kit is a way to turn any classroom into a digital classroom,” said Nivi Mukherjee of BRCK Education, the subsidiary that launched the product in September 2015.

“You open the box, and there are 40 tablets inside; there is a BRCK inside, and on the BRCK there is a Linux

[open-source] server — so we can locally cache educational content and serve it up to the tablets.”

Blessing, a 7-year-old student, taps away on her new tablet in her crowded tin-walled classroom. “It’s fun,” she said. Her teacher, Josephine Boke, said the kit “is nicely designed for the young hands, and it’s easy to use and easy to adapt to the

technology. To the kids, they get excited when they are using it. It gives me an easy time as a teacher.”

The tablets and the BRCK are symbiotic. The modem is in a watertight, plastic, wheeled suitcase that has slots for the tablets and wirelessly charges both. New digital learning materials are uploaded to the BRCK wirelessly during the night when more bandwidth is available, and is then shared with the tablets during classes. Kits cost \$5,000, but each one can serve hundreds of children.

“We see this kit being rolled around from one classroom to the next throughout the day, throughout the week, children sharing it, having access to the kind of content and e-textbooks they wouldn’t otherwise have access to,” Mukherjee said. “We don’t think it’s beyond the reach of public schools to spend \$5,000 giving digital access to 400 children.”

Just five primary schools and libraries were using the Kio Kit as of November 2015, but BRCK Education already has 300 preorders, and Mukherjee soon hopes to be producing “thousands each month.”

REFUGEES

of Boko Haram Attacks

Return to Nigeria

AGENCE FRANCE-PRESSE

More than 1,000 Nigerians, out of the thousands who fled attacks by Boko Haram jihadists to neighboring countries, returned to their homeland at the end of 2015.

Between December 14 and December 16, 1,187 Nigerians who had been sheltering across the border in Cameroon resettled in a refugee camp in the northeastern state of Adamawa “as a result of improvement in the security situation,” National Emergency Management Agency spokesman Sani Datti said.

An additional 15,000 Nigerians were expected to return to their country in subsequent weeks, Datti said.

Since August 2015, thousands of Nigerian citizens have come back across the border, wooed by President Muhammadu Buhari’s pledge to seriously dent Boko Haram’s fighting capacity by the end of the year.

Buhari said in early December that his government would “do all within its powers to facilitate the quick return and resettlement” of those displaced.

Security analysts say the Army has achieved some success in pushing the extremists out of captured territory in Nigeria’s northeast and reducing their ability to mount attacks.

But sporadic deadly raids on towns and villages in the region continue, as well as in northern Cameroon, southeastern Niger and on the Chadian side of Lake Chad, where all four countries meet.



Nigerian refugees who fled Boko Haram get drinking water at a camp in Niger in September 2015. Since August 2015, thousands of Nigerian citizens have come back across the border. AFP/GETTY IMAGES



THE ASSOCIATED PRESS

Moroccan Solar Plant to Bring Energy to 1 Million People

BBC NEWS AT BBC.CO.UK/NEWS



Morocco has launched the Noor 1 Ouarzazate solar thermal plant, the most ambitious project yet from a country determined to be a leader in clean energy. The giant plant will harness the sun’s energy to melt salt, which will hold its heat to power a steam turbine in the evenings.

Morocco’s King Mohammed VI unveiled the Saudi-built plant — one of the world’s biggest — on February 4, 2016, The Associated Press reported.

The mirrors will cover a space as large as the country’s capital, Rabat. The first phase will generate for three hours after dark. The last stage aims to supply power 20 hours a day. Developers say phase one will bring energy to a million people.

The next three phases of the project, which are scheduled to start coming online in 2016, will make Noor the “largest solar power production facility in the world,” developers told Agence France-Presse. It will cover 30 square kilometers.

The project is part of Morocco’s pledge to get 42 percent of its electricity generation from renewable sources by 2020.

The complex sprang from the king’s vision to turn his country into a renewable energy powerhouse. The country has been 98 percent dependent on imported fossil fuels, but the king believed in the viability of the vast capacity of Atlantic wind, mountain hydro power and scorching Saharan sun.

Morocco has pledged to decrease carbon dioxide emissions 32 percent below business as usual by 2030, conditional on aid to reach the renewables target. Currently Morocco imports electricity from Spain, but engineers hope that will not last long.

Morocco’s previously barren slice of the Sahara is proving useful for generating solar power. Solar thermal technology only works in hot, sunny countries. The price is falling, and its growing capacity to store energy is arousing interest.

ANTICIPATE *AND* RESPOND

LOGISTICIANS RELY ON TRAINING AND CORE
PRINCIPLES TO KEEP OPERATIONS RUNNING



ADF ILLUSTRATION

The life of the logistician is not a glamorous one. Sometimes called “sustainers” or “loggies” or simply “the guys in the rear with the gear,” their job is to keep operations running smoothly. In fact, logistics officers say that if they’re doing their jobs correctly, no one will notice them.

But to the trained eye, it is clear that what they do takes a lot of skill. They are, in many ways, the unsung heroes of successful military missions. They plan and carry out the movement and maintenance of forces. They acquire, store, transport and dispose of materiel. They see to the construction and upkeep of facilities, and much more.

When troops are fed, clothed and armed, that means logisticians are getting the job done.

A sardonic, oft-repeated quote describes the role of logisticians: “They are a sad and embittered race of men who are very much in demand in war, and who sink resentfully into obscurity in peace. They deal only in facts, but must work for men who merchant in theories. They emerge during war because war is very much a fact. They disappear in peace because peace is mostly theory.”

So how can logisticians overcome their obscurity and get the training needed for the challenges they face? And what skills are most important to their success?

There are a handful of guiding principles that a skilled logistician must rely on. Here are some of those standards drawn from the *African Standby Force Logistics Manual* and the U.S. Army’s logistics manual.

Foresight: One of the key attributes is the ability to plan. Before a mission, a good logistician will create a logistics information plan that accounts for the flow of personnel, equipment and sustainment. Logisticians are trained to plan for the worst-case scenario and then scale back as required.

Col. Uduak Udoaka, a U.S. Air Force logistics officer who spent his childhood in Nigeria, said the ability to see a need ahead of time is sometimes called “sense and respond” logistics. “Anticipating when a need will arise and putting mechanisms in place to meet that need is how battles are won,” Udoaka said.

Matters get even more complicated when the mission involves deploying to a foreign country and issues such as border crossings, customs, engineering permission and provision of supplies

must be agreed upon with the host country and transit countries.

Although experience and intuition play a role, automated systems can help logisticians create a common operating picture that they can alter based on the unique aspects of a given mission. For instance, the African Standby Force support concept offers mission planning tools based on a brigade size of 5,000 that can be scaled up or down. “All you need to do is just populate it when the requirement to start a mission arises,” said Brig. Gen. David Baburam, former head of the African Union Mission Support Unit. “But that does not happen. Every time there is a new mission, people go back to the drawing board and start from scratch.”

Cooperation: This is particularly important in multinational peacekeeping missions on the African continent that include different command structures, languages and hardware. In an article for *Army Sustainment* magazine, Capt. Theresa Christie, a logistics trainer at the Joint Multinational Readiness Center in Germany, said a key to cooperation is to integrate every unit before the mission begins. “Units that fail to cooperate in planning find themselves struggling throughout the operation,” she wrote.

Christie said interoperability challenges are easier to overcome when Soldiers from various nations have learned to trust one another. “There are many ways to incorporate multinational units into the team, but it must be a conscious decision enacted at all levels,” she wrote. “Distrust and animosity will grow if soldiers are not cooperating with their peers from other nations, foreign soldiers are not receiving the same support, or there are issues communicating at the higher echelons. If it continues, the inability to trust will destroy the partnership.”

Another way to cut down on equipment interoperability problems is the common purchase of certain “mission essential” equipment such as radios and generators that are then used by multiple countries. This has been examined by the AU but is not currently feasible. As such, multinational exercises where equipment interoperability can be tested are key for preparation.

Flexibility: Good logisticians know how to strike a balance between rigid systems and structures and flexibility to match changing facts on the ground.

A NETWORK *of* LEADERS

ADF STAFF

Logistics is a highly specialized military career path with skills that take years to hone and that can be used later in the private sector. As such, militaries are beginning to recognize the importance of training logisticians. There are numerous initiatives designed to improve this training in Africa and give African logisticians the opportunity to study abroad.

The Kenya-based African Peace and Support Trainer's Association is working to develop a common logistics curriculum at African peacekeeping schools and centers of excellence. The United Nations offers staff officer planning courses, and U.S. Africa Command offers tactical-level logistics training and holds an annual Africa Logistics Forum at which leaders from across the continent gather to discuss needs and build partnerships. Additionally, the International Military Education and Training program, a U.S.-funded initiative, invites logistics officers to receive special training at U.S. war colleges.

A key to improved training of logisticians will be to prioritize it as a specialty. For example, the United States has four-star commands centered on logistics and sustainment. This not only recognizes the importance of logistics to a mission, but it offers a career track for logistics officers' growth and development.

Brig. Gen. David Baburam, former head of the African Union Mission Support Unit, emphasized that training also must extend to the lower ranks. "I think the entire package of logistics training needs to be relooked at so it spreads to very junior levels, because that's where the important logistics activity takes place," he said. "Also, more emphasis should be on planning and issues like enabling the commanders to monitor their logistics."

Col. Uduak Udoaka, a U.S. Air Force logistics officer, said training must begin with good recruitment, finding the best candidates and then investing the time and resources needed to develop them. Although there are opportunities for specialization, the best logisticians study all logistical fields, which are as follows:

- **Deployment and distribution:** This relates to the way forces are moved to an area of operation and sustained while deployed there.
- **Supply:** This is the management of supplies and equipment, their storage, and putting in place the networks needed to replenish stocks.
- **Maintenance:** Depending on the mission, the repair and maintenance of equipment and vehicles can be done at the point of use in the field or at a central facility.
- **Logistics services:** Sometimes referred to as "base operations support," this includes all the services — such as food, water, lodging and sanitation — that are essential to supporting forces that are living and working at a particular location.
- **Engineering:** This is the construction of buildings and roads needed for a given mission.
- **Health services:** The medical treatment of Soldiers falls under logistics because troop health is vital to readiness and mission success.
- **Planning, command and control:** Logistical planners plot out what is to be expected and what is needed to sustain a mission. Command and control elements provide the ongoing guidance and oversight to ensure that things run smoothly.



**“One
common
thread is
the ability
to think
outside the
lines when
processes
don’t flow
as planned.”**

— Col. Uduak Udoaka,
a U.S. Air Force logistics officer



REUTERS



REUTERS

An aspect of flexibility is improvisation, which means making do with the tools, goods and personnel on hand as opposed to what is ideal. For example, in wartime, anticipated deliveries of supplies might be unable to get through due to enemy attacks or impassable roads. Weather or convoy breakdowns can lead to an urgent and unexpected need for spare parts or repair work.

“One common thread is the ability to think outside the lines when processes don’t flow as planned,” Udoaka said. “During the fog of war is when logisticians tend to shine.”

Exercises are helpful in teaching logisticians to hone their flexibility. Well-designed exercises will include “injects”: unexpected events such as a disease outbreak or system failure that stress test logistics. Exercises also can teach logisticians not to become overly dependent on one tool to track the movement of supplies. For instance, if a computerized tracking system breaks down, logisticians should be prepared to use mobile phones and spreadsheets to accomplish the same task.

Timeliness: A bullet that arrives too late is useless. Logisticians and mission commanders must be able to track the progress of their

logistics work in near real time. The U.S. Army uses a number of metrics for evaluation, including operations readiness rates, wait times, percentage of requisitions filled and others. Logistics officers also gather as much information as possible from subordinate Soldiers and other logistics partners in the form of reports and recommendations.

Getting this information can require a change to military culture in which subordinates are empowered to alert commanders to logistics problems as soon as they arise. It also requires commanders to take an active interest in logistics.

“Most of the commanders would have little visibility on the logistics, and this is quite a problem,” Baburam said. “Even when their logistics readiness drops to extremely risky levels, like their equipment serviceability may be around 20 or 30 percent or the stocking levels of essential commodities drops, they don’t have visibility and they’re caught by surprise when they plan the operations and they find that they cannot execute their plans.”

Simplicity: Simple reporting mechanisms ensure the accurate and efficient distribution of information. The logistics plan must be

Top Left: Malian gendarmes stand on the runway after the arrival of a Canadian Air Force C-17 in Bamako to deliver military equipment. Canada offered logistical support to France during Operation Serval in 2013.

Top Right: A French Land Rover is driven off a C-17 cargo plane in Mali.



Ethiopian troops serving in the African Union Mission in Somalia unload food donated to a camp in Baidoa for internally displaced people.

AMISOM

easy to understand and implement. Simplicity is further enhanced by common logistics processes among regions and troop-contributing countries.

Simplicity goes hand in hand with transparency, which assures that resources needed for a security effort are not stolen or diverted. In its logistics plan, the United Nations encourages regular auditing through sophisticated methods such as bar codes or satellite tracking or through simple, paper-based methods.

Experts say the key is to have oversight without creating unnecessary paperwork. "Sometimes you find that there are too many regulations, which, instead of promoting

accountability, actually become a bottleneck to the system," Baburam said. "When looking at issues of oversight, it should be flexible, practical and something that can promote efficiency instead of creating bureaucracies."

Economy: Logisticians try to provide only the sustainment resources that are needed for the mission at the lowest possible cost. They are asked to minimize their "footprint" and their cost. This means sourcing goods from local communities when possible instead of transporting them from a great distance. It also can mean paying contractors to do work as a way of decreasing the number of uniformed personnel.



This interaction with the local community can engender goodwill by aiding the local economy, but it must be carefully monitored to prevent fraud or abuse.

Continuity: The uninterrupted provision of sustainment is achieved through integrated networks that link logistics, personnel services and health service support to operations. The logistics command and control is the nerve center that ensures speed and continuity. There are several models to ensure continuity, including the “hub and spoke” system in which a logistics hub is at the center and traffic moves out in all directions. There is also the more linear “line of communication” model in which supplies are shuttled along a direct route. Either way, it is important for there to be redundancy in the plan and sufficient resources to sustain troops for an extended period.

In multinational missions, this can often be a challenge, Udoaka said, and it begins with each troop-contributing country having adequate resources to sustain its personnel. “Are they able to show up with 30 or 45 or 60 days of supply?” he said. “Are forces postured

to provide full-on support and sustainment beyond 60 days or does this require another ‘ask’ from the international community?”

Pursuit of excellence: The ancient Chinese military philosopher Sun Tzu called logistics “the line between order and disorder.” Logisticians will find that their role requires maintaining some sort of order in the most chaotic environments. This is not a skill that can be learned in a classroom or from reading a book. It is honed over years of experience that allows logisticians to develop almost a sixth sense for forecasting a need that may arise or solving a problem before it occurs.

Those looking for glory and recognition are not likely to find it in logistics. But for those hoping to make an impact and have the satisfaction of a job well done, logistics is a calling.

“Military logisticians are first and foremost members of the profession of arms, and professions by definition are producers of unique work in a field of expertise,” Udoaka said. “While factors like paid salaries, promotions and benefits help retain families, professionals are mostly motivated by duty, honor, camaraderie and the pursuit of excellence.” □

Malian and Western military personnel prepare to unload a U.S. Air Force C-17 carrying equipment in Bamako, Mali.

REUTERS

LOGISTICS DRIVE THE MISSION





A Conversation with Brig. Gen. David Baburam, Former Head of AU Mission Support

ADF STAFF

Retired Brig. Gen. David Baburam served in the Kenya Defence Forces for 36 years. During his career he was commander of the Ordnance Corps, commandant of a military hospital and taught at the defense staff college. He spent four years at the African Union as head of the Mission Support Unit, which handles logistics for AU peacekeeping missions. He spoke to ADF by phone from his home in Nairobi. His comments have been edited to fit this format.

ADF: Logistics are always one of the greatest challenges to beginning and sustaining a peacekeeping mission, and this is particularly true in Africa. Often, the response can be delayed due to the simple difficulty of moving troops and supplies to the isolated regions where a crisis occurs. Is this a challenge you have encountered during your career?

BABURAM: Distance is just one of the challenges in delivering logistics support in the African context. The most critical challenge is mobilizing resources. The AU is entirely dependent on donor support, almost 98 percent. If you look at a mission like the one in Somalia, the AU contribution to the cost doesn't even add up to 2 percent, because it doesn't really have provisions for this type of funding. Most of the funding for the peace support operations is supposed to come from the AU Peace Fund, but if you look at the entire concept behind the Peace Fund, it is not configured to support such a huge mission with high expenditures. The maximum level of the Peace Fund is about \$5 million, which is really negligible in terms of enabling the AU to fund its own mission in any way. This is an issue of mobilization of resources; it makes the AU a nonstarter in most of its endeavors to undertake peace support operations.

Talking about geographical issues — distance, locations — of course, Africa being what it is, most of our infrastructure — seaports, airports, roads — is not adequate. This poses a challenge to the movement of troops and equipment, and it presents a logistics nightmare. We saw this in the Central African Republic and Mali, where some of the areas of operations were a long distance from the area of support. This posed a huge challenge because you could only do aerial transportation of troops to outlying areas, but those air assets were not available at all. So you have a deficit of assets, and the terrain compounds that problem.

A tank convoy rolls through the Lohatla training area in South Africa during exercise Amani Africa II in October 2015 to test the readiness of the African Standby Force.

REUTERS

ADF: How do you overcome this deficit in airlift capacity?

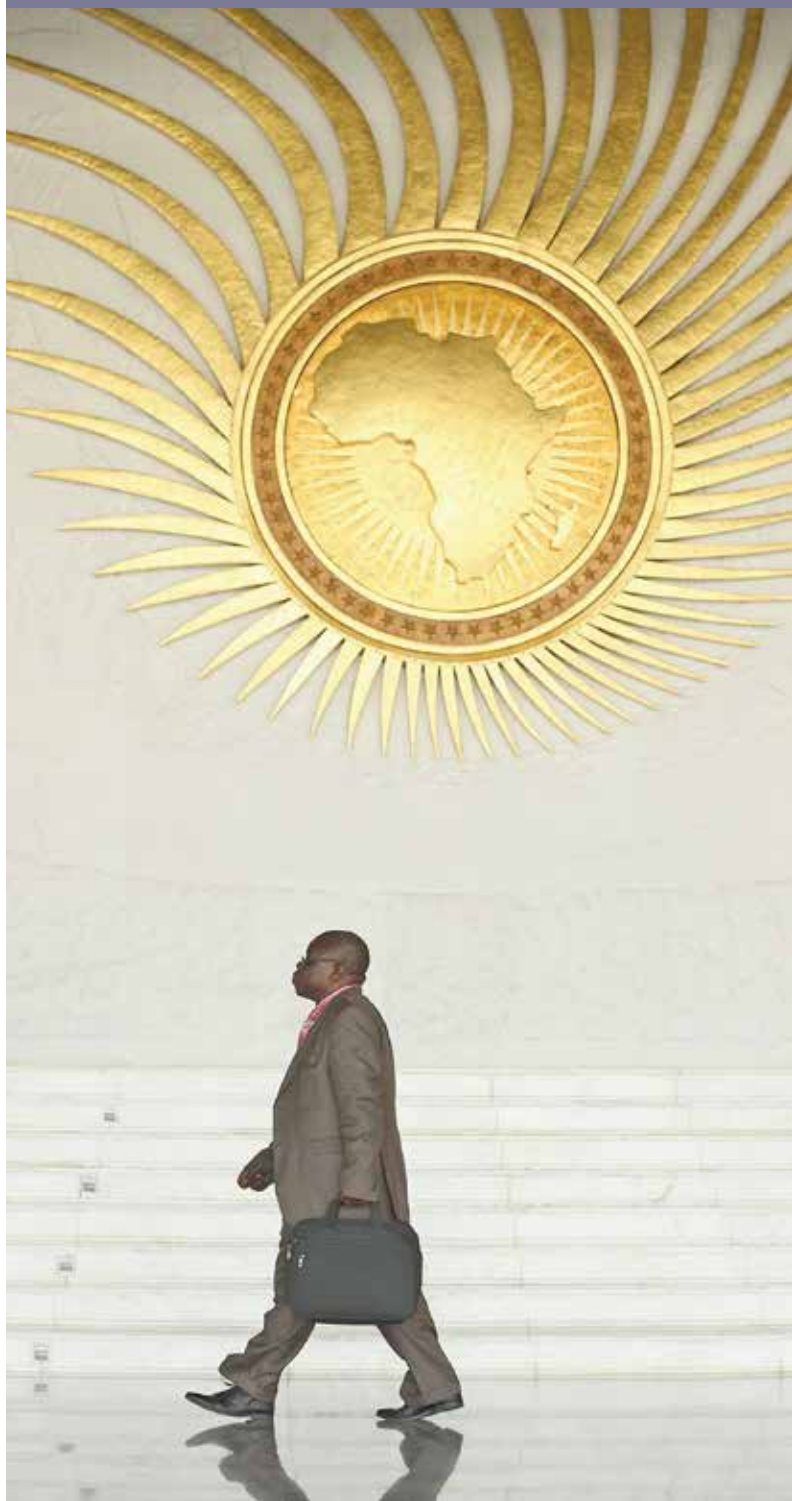
BABURAM: There have been efforts in dealing with this matter. Recently, a Continental Movement Coordination Center was established at the AU to coordinate the airlift and sealift requirements, but it's just a very small cell within the AU Peace Support Operations Division. One of the crucial efforts that has been made has been trying to establish a databank for, for example, airlift capability. From what was gathered so far, it is clear there is very limited ability in terms of assets on the continent. Algeria, South Africa and Angola are well-resourced, but most of the member states do not have any meaningful capacity in terms of airlift. Sealift, there is none at all on the continent. So the main source of sealift would have to be through contracting with civilian vessels. Airlift is crucial because in order to deploy within the mission's timeline, the leading elements, which are about two battalions, must be airlifted. That really is a big challenge that will delay rapid deployment.

ADF: Is the key to get a database of information and get commitments or buy-in from well-resourced countries?

BABURAM: You cannot sign an MOU [memorandum of understanding] with them. Really, this is kind of on a voluntary basis from those countries. They can only offer when a requirement arises. But you cannot bank on them because there is no MOU which commits them to providing those assets, and none of them would like to enter into that type of arrangement. Even their capacity is very limited by international standards. So these offers will come when the situation allows, but you cannot factor them in your planning. You cannot say that Algeria will provide a C-130, for example. The databank would really be to identify gaps and solicit support from advanced militaries.

ADF: With the recent successful completion of the Amani Africa II exercise in South Africa, the African Standby Force [ASF] is now nearly operational. Given the continent's unique history, including the tragic 1994 genocide in Rwanda, one of the important aspects of the ASF is that it must be ready to deploy very quickly, in as little as 14 days in cases of genocide. Is this speed possible from a logistics standpoint?

BABURAM: The logistics issue by itself is quite a bit of a question mark in terms of being possible in 14 days. The key thing is the political matter, the decision-making. The deployment must be authorized in accordance with AU Charter Articles 4(h) and (j). In order to invoke article 4(h), it requires an assembly of heads of state. Now, to get these 52 heads of state in Addis Ababa within 14 days is not possible. So the political issue in terms of decision-making is the first hurdle that needs to be cleared.



A man walks through the main lobby of the headquarters of the African Union in Addis Ababa, Ethiopia. The AU is seeking a permanent source of funding to support the African Standby Force's mission of intervening in crises on the continent. AFP/GETTY IMAGES

In terms of logistics, it would be very difficult to deploy logistics in line with the current ASF support concept. That concept says that troop contributing countries [TCCs] will deploy on a self-sustaining basis for 30 days, and then the AU system takes over. But to put the AU system in place will take almost six months in terms of mobilizing resources. I had mentioned earlier that the

AU is entirely dependent on donor support, procurement lead time [is a challenge] and the Continental Logistics Base is not operational. It may be operational in the near future, maybe two or three years down the road, but at the moment it is not. So, as of now and the way it was tested in Amani Africa, it was a little theoretical.

ADF: So what is the solution?

BABURAM: The only way go around it is to review the policy of self-sustainment for the TCCs and give the TCCs more responsibility to self-sustain. Maybe for 90 days with a pledge from the African Union that they will be reimbursed for any expenditure they have incurred. Maybe bilaterally member states can be enabled to create such capacity of self-sustainment. That is the only way to go around this requirement of rapid deployment in 14 days.

We have this initiative called the African Capacity for the Immediate Response to Crisis, and it will eventually build on those concepts where the member states will shoulder the responsibility of self-sustaining their unit for 90 days. This should be extended to the ASF concept because that is the only realistic way of deploying within those 14 days. Among those member states who volunteer troops and resources for a particular mission, one of them could be selected to be an anchor nation or a lead nation on logistics. A country that has more experience, more capacity and is better resourced could be an anchor to provide certain common logistics issues and build a framework where other countries can pool their logistics resources.

ADF: Looking ahead, where do you hope African militaries focus their efforts?

BABURAM: I think much of the logistics capability will depend on Africa's ability to resource its own requirements without largely depending on donors. That impacts the planning. You cannot plan on resources that are not in your hands. If you have to go to the European Union or the U.S. to support your mission, then that undermines your planning and your ability to deploy quickly, and to address African problems. What is viewed as a solution to a problem in Africa may not be shared by an outside organization like the United Nations. That's why this intervention in Burundi, even though the AU authorized it, never materialized. And that's not the only one; there have been several in the past when the AU authorizes a mission and it never sees the light of the day. When you interrogate the reasons for that, everything goes back to the ability of the AU to resource its own mission. The system must be backed by a strategy on resource mobilization. That is the key thing that the AU must overcome in the future.

We also need to establish sufficient funding within

the AU Peace Fund to sustain a mission for at least 90 days, and that would be in the range of \$50 million. This is achievable. In terms of addressing the future, it's also creating more self-sustaining capabilities within the member states so at least member states can come in and sustain themselves for 90 days until the AU system picks up. And that is doable. There might be a need to do an analysis or assessment of member states to see where they need to improve.

ADF: There are many instances in which African militaries have shown that they can excel logistically. I'm thinking of the abilities of militaries like the Chadians to deploy to extremely austere environments and succeed despite having limited means.

BABURAM: I agree. This brings the issue of trying to simplify matters. The problems of logistics in the African militaries should not be blown out of size. There are ways you can simplify things and make them less costly by addressing the specificity of the African requirements. For example, a kitchen. The field kitchen provided by the U.N. for missions is too sophisticated, too expensive and sometimes it doesn't really meet the requirements of the troops. The same goes for some of the other equipment. So we require simple solutions to problems. We need to create capacity for them to feed themselves and to maintain some basic equipment because maintenance is quite a bit of a problem. Equipment comes in, and because of lack of operators' training, it becomes unserviceable very fast. The equipment life is reduced significantly. You find that within six months as much as 50 percent of the equipment would be unserviceable because basic maintenance is lacking. Those problems need to be addressed by creating capacity for maintenance and building operators' proficiency in handling the equipment. In the Western world that is a nonissue, but in the African militaries if you can solve those issues, that would contribute in a big way.

ADF: Does logistics need to become a higher priority?

BABURAM: The priority given to logistics by the commanders and the policymakers is a key issue. Often you think about logistics after, not before. That can undermine the entire operational planning, because you can't plan without considering what logistics you have. I know normally they say operations drive logistics, but I think in Africa, logistics drive operations because the operations must be based on what logistics are available. You can't get the troops to location "A" or "B" if you don't have the means of air transport to take them there. You can't keep troops in the operational area for three months if you can't feed them or provide them with water or with the adequate provision of ammunition. So planning is key. □



Liberians gather in Monrovia in January 2015 after a State of the Nation address by President Ellen Johnson Sirleaf. The country overcame an Ebola epidemic, but flare-ups of the disease are expected to continue in West Africa. GETTY IMAGES



Emerging **EBOLA**

..... ADF STAFF

*As the
African Union
Sifts Through
Lessons and
Challenges,
New Logistics
Approaches
Are Born*

More than two years after Ebola began its deadly march through Guinea, Liberia and Sierra Leone, killing more than 11,300 people, the World Health Organization (WHO) announced what seemed like a miracle: The epidemic was over.

January 14, 2016, marked 42 days since the last Ebola cases in Liberia had tested negative. Liberia's last two patients — the father and younger brother of a 15-year-old victim — were discharged from a hospital on December 3, 2015.

However, the good news did not last. On January 15, Sierra Leone confirmed a new Ebola death. Sierra Leone had been declared Ebola-free on November 7, 2015.

By January 21, Sierra Leone had its second confirmed case. The 38-year-old woman had taken care of her niece, 22-year-old Marie Jalloh, who died of Ebola on January 12, a WHO spokesman told Agence France-Presse. Officials were expecting more cases from among those who washed Jalloh's body during traditional burial preparations. The practice has been identified as a primary mode for the disease's spread.

"It is disappointing, of course, considering the fact that we have gone for over 100 days since we last recorded a case," Sierra Leone's Health Ministry spokesman Sidi Yahya Tunis told AFP on January 21.

Observers were heartened that the patient had been identified as a “high-risk contact” but questioned why she was treated as an outpatient and allowed to come into contact with as many as 27 people. The lessons from the outbreak, it would appear, are still being learned and applied.

Ebola’s persistence in the face of international efforts makes one thing clear: Ebola will continue in Africa. Another outbreak is certain. Sometime. Somewhere. And it is not the continent’s only pandemic threat. There is the Marburg virus, pandemic influenza and cholera, among others.

THE AU RAMPS UP ITS RESPONSE

Ebola mobilized worldwide aid, support and personnel. The United Nations set up the U.N. Mission for



Dr. Benjamin Djoudalbaye, senior health officer with the African Union Commission

PHOTO COURTESY OF DR. BENJAMIN DJOUDALBAYE

Emergency Ebola Response (UNMEER), the U.N.’s first emergency health mission. WHO and Doctors Without Borders mobilized, along with a U.S. military force, Operation United Assistance, which deployed nearly 3,000 Soldiers to West Africa. The United States Agency for International Development (USAID) also responded.

Among them, working hand in hand with all stakeholders,

was the African Union, which deployed 855 people to Guinea, Liberia and Sierra Leone in an effort known as

the African Union Support to Ebola Outbreak in West Africa (ASEOWA). The mission, which officially ended December 31, 2015, now is taking stock of logistical challenges and successes, all while preparing for Africa’s next disease outbreak.

The African Union Peace and Security Council decided in August 2014 to deploy a response force. Less than a month later, ASEOWA teams were on the ground in West Africa. Soon, ASEOWA had grown to include 855 workers. Of those, 740 were medical personnel, including doctors, nurses, paramedics, pharmacists, lab workers and social workers. ASEOWA was intended to last six months but was extended twice through the end of 2015.

Standing up the ASEOWA response was not easy, said Dr. Benjamin Djoudalbaye, senior health officer with the AU Commission. Djoudalbaye, a Chadian doctor based in Addis Ababa, Ethiopia, served as chief operating officer of ASEOWA until March 2015, when he took over as head of mission support. Later he became head of mission, replacing Ugandan Maj. Gen. Julius Oketta.

As the mission ramped up, officials dealt with three major logistical problems: air transportation, accommodations for personnel and ground transportation in the affected countries.

“The number one challenge was on the transportation,” Djoudalbaye said. Planners determined early on that the greatest need was for human resources. “When we had mobilized the people, how do we get them down there?”

Some countries had enacted travel bans to the affected region, so the AU flew people in via charter flights through Morocco. Officials chartered flights through Egyptian Airlines, Askya Airlines and Kenya Airways to get people into West Africa.

“Now, when you arrive on the ground there, the challenge number two is accommodation. There were

Ebola:

THE EPIDEMIC'S TIMELINE

AGENCE FRANCE-PRESSE

The World Health Organization (WHO) reports that West Africa’s Ebola epidemic has left more than 11,300 dead out of almost 29,000 cases, mainly in Guinea, Liberia and Sierra Leone. This is a timeline of how the disease began and spread.



2013

The Epidemic Starts in Guinea

DECEMBER 2013

A 2-year-old boy in southern Guinea dies and is later identified as “patient zero.” The virus remains localized until February 2014, when a care worker in a neighboring province dies.



2014

Ebola Spreads in West Africa

MARCH 31, 2014

Two cases are confirmed by WHO in Liberia, while on May 26, Sierra Leone confirms its first case, to be followed in late July by Nigeria, in August by Senegal and in October by Mali. Senegal and Nigeria are declared free of Ebola in October 2014, and Mali is declared Ebola-free in January 2015.



not enough hotels for our people because you have to put everybody in a secure space where they are safe. Also, when you have the accommodation now, the price went to double, triple — it was just very expensive to accommodate our people there.” Rather than keep people in hotels, ASEOWA approached civilians who had extra houses who would rent them out to workers.

The third major challenge centered on transportation on the ground once ASEOWA personnel arrived in West Africa. Workers

needed cars and SUVs to perform the painstaking work of “contact tracing,” which is when health workers track down every person an Ebola patient has interacted with for evaluation and possible quarantine or treatment. The lengthy practice is central to halting the disease’s spread. Vehicle availability was an issue, and prices shot up with the sudden demand, Djoudalbaye said. In May 2015, UNMEER supplied some cars to ASEOWA.

As a major medical operation, ASEOWA workers got medicines and related supplies

A worker hangs protective rubber boots on wooden racks in December 2014 at the AU-run Magbenteh Ebola Treatment Centre in Sierra Leone.

UNMEER/MARTINE PERRET



Guinea, Liberia, Sierra Leone Cut Off From World

MAY 30, 2014

Ebola is “out of control,” according to Doctors Without Borders. Guinea, Liberia and Sierra Leone declare states of emergency and quarantines. Many neighboring nations close their borders.



A ‘Public Health Emergency’

AUGUST 8, 2014

WHO declares Ebola a “public health emergency of international concern.” Four days later, it authorizes the use of experimental drugs to fight Ebola. That day, a Spanish missionary infected in Liberia dies in Madrid, the first European fatality.



Death in the United States

SEPTEMBER 30, 2014

A Liberian man is hospitalized in the U.S. state of Texas, the first Ebola infection diagnosed outside Africa. He dies October 8.

OCTOBER 6, 2014

A Spanish nurse in a Madrid hospital becomes the first person to be infected outside Africa. She is treated and given the all-clear on October 19.



Staffers don protective gear at the Magbenteh Ebola Treatment Centre in Sierra Leone.

UNMEER/MARTINE PERRET

from global suppliers such as WHO and UNICEF. But other needs, such as gumboots and personal protective equipment, were more of a challenge. “You don’t find them in the local markets,” Djoudalbaye said. “It was really difficult. And with the travel ban that I have mentioned, even if those things are available in the neighboring countries, how do you bring them in?” Workers satisfied the need for certain miscellaneous items by sending people out into local markets to buy whatever was available. A few times, they would contact

merchants who had closed their shops and persuade them to open and sell the items they needed.

From September to November 2014, procurement issues were slow and difficult. But then the chairman of the AU Commission signed a waiver, allowing ASEOWA to speed up procurement despite the AU’s strict procurement policy. It eased the ability to get supplies as well as recruit people. Djoudalbaye agreed that an outbreak is no time for stifling bureaucracy.



2015

Ebola Begins a Halting Retreat

FEBRUARY 22, 2015

Liberia lifts nationwide curfews and reopens borders.

FEBRUARY 26, 2015

The U.S. ends its military mission in West Africa, where it had deployed 2,800 Soldiers to help fight Ebola, mainly in Liberia.



Closing in on a Vaccine

JULY 10, 2015

International donors pledge \$3.4 billion to help stamp out Ebola.

JULY 31, 2015

WHO says an Ebola vaccine provided 100 percent protection in a field trial in Guinea, suggesting the world is “on the verge of an effective Ebola vaccine.”



Hardest-Hit Countries Emerge From Epidemic

MAY 9 AND SEPTEMBER 3, 2015

Liberia is declared Ebola-free by WHO after no new cases are recorded for 42 days, but the virus resurfaces each time.

NOVEMBER 7, 2015

WHO declares Sierra Leone free of Ebola.

LOOKING AHEAD TO FUTURE OUTBREAKS

The AU and WHO are moving forward with plans to prepare for the next, inevitable outbreak, whatever, whenever and wherever it may be. The possibilities are many. The WHO indicates that about 100 “acute public health events” are called in to its African Regional Office each year. The most frequently reported outbreaks are cholera, dengue, measles, meningitis, plague and viral hemorrhagic fevers, such as Ebola.

The WHO, “recognizing the critical role and importance of logistics in outbreak preparedness and response,” in 2015 established the “Regional Logistics Strategic Plan 2015-2018” in collaboration with other partners, including USAID and the U.S. Centers for Disease Control and Prevention.

“Over the past years, the importance of logistics during outbreak preparedness and response has been critical in ensuring that essential supplies and reagents are prepositioned and deployed rapidly to the field in support of outbreak operations,” the WHO plan states. “This importance is emphasized in the WHO Emergency Response Framework which specifies as an essential requirement the provision of administrative and logistic support to ensure an effective and rapid-response system.”

Among the WHO’s six specific objectives are to preposition outbreak supplies and equipment so they are ready to move when needed. To accomplish this, the plan recommends developing storage hubs and a warehouse and inventory management system, among other things.

Prepositioning supplies for future use also is a top priority of the AU, Djoudalbaye said. “For us, it is a straightforward matter,” he said. “We have today the opportunity of having one continental logistics base in Douala, Cameroon. So we are now

trying to have, for instance, arrangements — prearrangements — with providers to preposition our logistics things.”

The AU intends to place cars and mobile homes from donors in Douala. When it comes to electronics equipment, such as laptop computers and tablets,



A man receives a certificate of health from the Elwa clinic, an Ebola treatment center in Monrovia, Liberia, in July 2015. AFP/GETTY IMAGES



Guinea

DECEMBER 29, 2015

WHO declares Guinea’s Ebola outbreak over, six weeks after the recovery of its last known patient, a 3-week-old girl born with the virus.



Liberia

JANUARY 14, 2016

WHO declares that the epidemic is over. The day marks 42 days since the last Ebola cases in Liberia tested negative. Liberia’s last two patients — the father and younger brother of a 15-year-old victim — are discharged from the hospital December 3, 2015.



Sierra Leone

JANUARY 15, 2016

Hours after the epidemic is declared over, Sierra Leone confirms a new Ebola death, according to the BBC. Sierra Leone had been declared Ebola-free on November 7, 2015.

JANUARY 21, 2016

A second case is confirmed in Sierra Leone.

2016



East Africa

Launches Program to Prevent, Control Pandemics

VOICE OF AMERICA

Ebola is not the only disease caused by microbes transferred between animals and humans. As the global population continues to grow, along with demand for food, similar threats are likely to arise.

In January 2016 at a hotel in Nairobi, Kenya, the United Nations Food and Agriculture Organization (FAO) and the U.S. Agency for International Development (USAID) launched the East African component of FAO's Emerging Pandemic Threats (EPT-2) program. It is designed to help detect, prevent and control new "zoonotic" diseases — those that can be passed between animals and humans.

Subhash Morzaria, global coordinator of the EPT-2 program, said these diseases can be transmitted through the air or by touching infected fluids or materials. "Whatever the mode of transmission ... if these infectious diseases persist in our animal populations, then we have a constant risk of this disease potentially becoming pandemic and causing huge, huge outbreaks and morbidity and mortality in humans, and in animals as well," he said.

Other zoonotic diseases are HIV/AIDS, influenza — including those commonly known as avian flu and swine flu — and SARS, MERS-CoV, Marburg and Nipah. An estimated six of every 10 infectious diseases in humans are spread from animals, according to the U.S. Centers for Disease Control and Prevention.

The United Nations predicts the world population will grow to 9.7 billion from the current 7.3 billion in 2050. This rapid increase means the demand for food also will rise.

"Now these production systems will change very rapidly to meet this demand, and it's possible that some very risky practices in the production of livestock might occur, and these risky practices might create an environment for evolution of new pathogens and spread," Morzaria said.

Kenya's director of veterinary services, Dr. Kisa Juma Ngeiywa, said new pathogens can spread further than ever in today's mobile society.

"Let me use the H7N9 influenza, which was in China," Ngeiywa said of the strain of avian influenza. "Now, if you look at the airplanes — Kenya Airways, Ethiopian Airlines, and others — they are going to China and they are coming to Kenya, every day. So, because of that there is a big vulnerability, unless we put measures [in place] to be able to see and stop it from spreading."

Morzaria said everyone has a stake in the process.

"Everybody is at threat," he said. "The virus doesn't distinguish between a poor and a rich person. It goes and infects, and it kills that person if it's highly infectious and pathogenic. So I think this is a global concern."

In October 2015, USAID announced \$87 million in new funding for the program. The money will be used to help governments and veterinary services better understand livestock systems and help conduct surveillance, as well as identify current and potential pathogens.

Etienne Ouamouno, father of Ebola patient zero, stands by the kapok tree where scientists say his 2-year-old son, Emile, might have contracted Ebola from bats in Meliandou, Guinea.

REUTERS

“The mission of the African Health Corps will be to address the priority public health concerns in Africa through prevention, through detection and through response.”

~ Dr. Benjamin Djoudalbaye

rather than buy in bulk and store them for indeterminate periods, officials instead will sign advance agreements with manufacturers in hopes of being able to procure them within 48 to 72 hours, Djoudalbaye said. “So that if there is a need, we can say, ‘Okay, guys, please can you fly 1,000 laptops in this area for us,’” he said. “Those are the things that we are trying to put together now ... so that we have a preparedness plan ahead, a contingency and preparedness ahead so that tomorrow if there is a crisis ... we will be able to overcome the challenges that we have faced with ASEOWA.”

THE AFRICAN CDC

The Ebola outbreak also served to fast-track plans to establish the African Centres for Disease Control and Prevention (African CDC). A coordinating center will be in Addis Ababa, Ethiopia, and there will be five regional centers: one each in Central Africa, East Africa, North Africa, Southern Africa and West Africa.

The African CDC will help authorities speed up detection, preparation and response to outbreaks. Ebola raged in West Africa for months before authorities recognized it as a global health concern. With the regional centers, resources and detection capacities will be closer when outbreaks occur, regardless of the region.

Each area will designate a host nation for the regional center, which then will be assessed by teams from other global CDCs. Nominations for regional centers were to have been made by December 31, 2015. A governing board composed of two Health Ministry officials from each region and an advisory group of technical partners will oversee operations. The long-term goal is for individual countries to have national centers with similar capacities.

Officials hoped to have the coordinating center open in the first quarter of 2016. Regional centers were expected to open later.

AFRICAN VOLUNTEER HEALTH CORPS

The African CDC provides a permanent, regionalized structure for responding to disease outbreaks across the continent. But the AU also is working on another layer of capacity that will improve the ability to respond rapidly during health emergencies. The AU’s Assembly of Heads of State and Government in June 2015 asked the AU Commission to work with development partners and member states to establish an African Volunteer Health Corps (AVoHC).

Officials presented and discussed a draft proposal for the AVoHC during the Evaluation Workshop of African Union Support to Ebola Outbreak in West Africa in Mahe, the Seychelles, in October 2015. The AVoHC will help fill human resource gaps to ensure that epidemics and public health emergencies receive a timely and effective response, using people with varying areas of expertise.



A nurse administers an injection in February 2015 on the first day of an Ebola vaccine study conducted in Monrovia, Liberia. GETTY IMAGES

“The idea is to have a kind of standby workforce to be mobilized at any time,” Djoudalbaye said. “We are going to establish a roster, and the people who will be on the roster, we will call them for training maybe once or twice in a year. But the mission of the African Health Corps will be to address the priority public health concerns in Africa through prevention, through detection and through response.”

All of these developments, either inspired or fast-tracked by the West Africa Ebola outbreak, will serve to put the right people and the right resources closer to every part of the continent, ready to respond whenever a health problem emerges.

“Our motto is now, ‘Earlier, faster, smoother and smarter,’” Djoudalbaye said. “We need earlier detection, faster response, smoother coordination and smarter response. So this is something that we are going to work on.” □

Artists Bring Quirky Fashion Styles to Accra's Streets

STORY AND PHOTOS BY REUTERS



Fashion stylist Daniel Quist, left, and disc jockey Evans Mireku Kissi enjoy time at the Republic Bar in Accra, Ghana.

With music equipment laid out on an ironing board, disc jockey Evans Mireku Kissi waves his drumsticks as he plays his tunes to a small audience on an Accra street. The crowd in the Ghanaian capital watches as he mixes beats and dances around his stand during the show.

Aside from the music, his quirky outfit — shirt and tie tucked into shorts under a waistcoat, thigh-high socks, brogues and a bonnet — also attracts attention.

Kissi, also known as Steloo, is part of a group of artists, musicians and designers in Accra whose unconventional outfits are turning heads on streets where most men wear conservative suits or shirts in traditional prints.

"People say, 'What is this that you are wearing?' People have a funny way of looking at [my clothes]," the 30-year-old said. "But then I like the fact that it is creating drama in the minds of the people."

The men and women in the group say they want to challenge the traditional notions of African fashion, and they take to social media to share their creative outfits.

Ages 19 to 38, they mix tailored jackets, printed T-shirts, vintage dresses and flares in quirky, sometimes eccentric, ensembles more often seen in London than Accra.

Kissi can be regularly seen posing for photo shoots across the city in colorful clothes, usually accessorized with sunglasses and a form-fitting cloth bonnet. Those styled portraits and selfies, often uploaded online, have turned him into a local celebrity, with his clothes as well as music drawing crowds to his parties.

"I have found myself as an artist," he said.

Kissi and his friends regularly meet in an art studio to exchange ideas. They say they look up to the "Sapeurs of Kinshasa," who turned fashion into a polished art form during the times of Mobutu Sese Seko's Zaire. But their unique style has also drawn criticism from the more conservative locals.

"I was told I wasn't going to get a husband," said artist Sena Ahadji, who used to have a Mohawk haircut. "I would be called names on the bus."

Support from others in the group helped her overcome the negative comments.

"A lot of pressure left me," she said. "I am me. I am African. The fabric doesn't make me African. My hair doesn't make me African, but I know who I am."

Fashion stylist Daniel Quist, left, and disc jockey Evans Mireku Kissi ride a motor scooter in Accra, Ghana.



AS ZAMBIA AIR FORCE GROWS, IT PLAYS A REGIONAL ROLE

THE COUNTRY SEES AIR POWER AS A CRUCIAL FORCE
AS IT CHARTS A PATH TO MIDDLE-INCOME STATUS

ADF STAFF

The year 2016 may be a turning point for the Zambia Air Force.

The Air Force will finish taking delivery of six SF-260TW training aircraft, made by the Italian company Alenia-Aermacchi. The Air Force has ordered six Chinese-made L-15 Falcon fighter jets, at a cost of about \$100 million. It also is taking delivery of an Italian-made C-27J transport plane and an undisclosed number of Russian Mi-17 helicopters.

At the end of 2015, Zambian President Edgar Lungu vowed to help modernize the Air Force, and the country has launched a public-private partnership to help build support infrastructure.

Lungu perhaps best summed up the intent of the Zambia Air Force (ZAF) in a speech in December 2015. Lungu said protecting Zambia's airspace creates an "enabling environment" for local and foreign investment in the country, according to the *Daily Mail*. He said modernizing the Air Force meant having a lean, well-equipped, trained organization that would help elevate Zambia to the status of a middle-income nation.

Zambia Air Force jet fighters fly over Embassy Park in Lusaka. AFP/GETTY IMAGES





“The acquisition of new equipment is a long-term investment and a great cost to my government and the people of Zambia,” he said. He urged the Air Force to observe “the highest standards of maintenance and safety.”

The Southern African nation has the potential to grow its military capacity. The country, ranked 22nd among African nations in terms of population, has the continent’s 18th largest economy. Its Air Force, which has in the past included some dated aircraft, is being expanded slowly and carefully. A 2015 GlobalFirepower study concluded that, in terms of aircraft strength, Zambia’s Air Force ranked 11th among Africa’s 54 countries, and 79th among the world’s air forces. It ranks seventh among African countries in terms of training aircraft. The study did not take into account the number of aircraft on order but not yet delivered.

Defense publications reported in early 2016 that the current air fleet includes 12 MiG 21 aircraft, 15 K-8 Karakorum jets, 10 Saab MFI Safari MT-15 trainer planes, 10 MB-326 light jets, seven Z-9 light attack helicopters and some older Chinese-made fighter jets. The new SF-260TW trainers will help relieve the Air Force’s shortage of flying hours and training.

As of January 2016, six Zambia Air Force pilots already had completed training to fly the new L-5 fighter jets, and a team of technicians had been trained to maintain them.

Lt. Gen. Eric Chimese, commander of the Zambia Air Force, said his country’s decades of economic stagnation had left most of the Air Force’s equipment obsolete. At the time, the cost of replacement aircraft was too expensive. Now that has changed.

“The modernization of our air fleet is an ongoing process that should be able to provide us with an increasing capability to respond to the air power needs of our country within the context of our internal security requirements and the regional and global dynamics,” Chimese told *Africa Defense Forum* in a written statement.

The ZAF recognizes that it is only as good as its personnel, and the modernization of the fleet requires more maintenance crew members and pilots. “Our personnel are trained both locally and abroad, and we therefore benchmark with the most advanced air forces in the world,” Chimese said. “We have a very competitive and professional selection process and training that meets required international standards for all our personnel, including pilots.”

HELPING CIVILIANS

The Zambia Air Force is being called upon to do more for the country than defend its borders. With no national airline, Zambia’s Air Force serves as the transport of choice for government officials who need to move around the country quickly. The Air Force is taking on projects that serve more than just its own needs, such as a state-of-the-art hospital at air headquarters in Lusaka that will serve the public and Air Force personnel. The mess at air headquarters also will be open to the public. In the northern city of Mbala, the Air Force has opened its air base to civil aviation.



ZAMBIA AIR FORCE

“THE ZAMBIA AIR FORCE HAS ENSURED THAT IT RETAINS THE REACH TO THE REMOTEST PARTS OF THE COUNTRY AND THE CAPACITY TO TRANSPORT GOVERNMENT OFFICIALS ANYWHERE, ANY TIME.”

— LT. GEN. ERIC CHIMESE

Using the Mbala airport for civil aviation is part of the country’s effort to open up the north to tourism. Zambia has some of the most spectacular scenery in the world, but access is limited. Zambia Air Force officials said the airport can handle large fixed-wing aircraft, including commercial jets.

Zambia is 17th among African countries in terms of area. African countries with remote inaccessible areas often have to deal with the illegal exploitation of resources and the influence of local militias or extremist groups. Without government authority over its entire area, a modern country cannot thrive. That’s where Zambia’s Air Force is critical.

“The Zambia Air Force has ensured that



Zambia Air Force jet fighters perform a flyby at the funeral of Zambian President Michael Sata on November 11, 2014. AFP/GETTY IMAGES



The Air Force trains with other member countries of the Southern African Development Community. ZAMBIA AIR FORCE



Air Force personnel are trained to transport relief supplies during natural disasters, such as the flooding that plagues Southern Africa. ZAMBIA AIR FORCE

it retains the reach to the remotest parts of the country and the capacity to transport government officials anywhere, any time," Chimese said. "This has helped to ensure that no population feels isolated from its government and the rest of the country. There are no 'ungoverned spaces' in Zambia."

He said that with the ongoing modernization, the Air Force will have better access to the entire country and will be able to improve its surveillance.

Giving civilians access to the new hospital is consistent with the Air Force's standard policies. All ZAF clinics on all ZAF bases and units throughout the country are open to civilians and, in fact, attend to more civilian patients than military personnel. The Air Force also makes its facilities available to young people for sports, including football, rugby and volleyball. The Air Force sponsors one of the country's biggest football clubs, the Red Arrows.

Officials told the *Daily Mail* that modern recreational facilities have been built at Air Force Headquarters City Airport, Air Force Headquarters Chamba Valley, ZAF Livingstone, ZAF Mumbwa and ZAF Lusaka.

Chimese said his Airmen train to help civilians in natural disasters, particularly the

floods that have plagued Southern Africa over the past two decades.

"Floods have particularly been endemic in our region and Zambia in particular, resulting in the interruption and destruction of crops, people's dwellings, as well as endangering their lives," Chimese wrote to *ADF* in January 2016. "The Zambia Air Force over the years has been training its personnel to grow and maintain its capacity and competencies to respond to such disasters."

Chimese said that during flooding, his personnel have been called on to assist with search and rescue, medical care, casualty evacuation, and the delivery of food, clothing and other necessities to inaccessible areas. They also provide air transport to medical personnel and government officials.

"In providing all these, reach and speed are of essence in order to save lives," he said. "These are the competencies ZAF train for, equip for, and provide to the people of Zambia and beyond. In providing such disaster assistance, ZAF works closely with the Disaster Management and Mitigation Unit under the office of the vice president."

The Air Force also is involved in national elections, with Chimese stressing that in a democracy such as Zambia, "the election process is of critical importance."



A new Zambia Air Force hospital in Lusaka also will serve civilian patients. ZAMBIA AIR FORCE



Air Force personnel are trained to assist with logistics during national elections. ZAMBIA AIR FORCE

“ZAF facilitates the speedy implementation of this process by providing air transport to election officials, and delivery and collection of election materials to and from remote areas of the country,” he said. “Air transport in this process plays a vital role, as any delay at any stage may be a recipe for conflict in the election process.”

The Africa Center for Strategic Studies says that for Africa’s air forces to be truly effective, they need to build airlift partnerships and pool airlift resources. To that end, the ZAF participates in almost all peacekeeping and humanitarian exercises in the Southern African Development Community region.

“In all these exercises, Zambia has been one of the largest contributors in terms of personnel and air assets,” Chimese said. “In light of modernization and increased airlift capacity, our participation in peacekeeping at the regional and global level can only increase.”

HELPING THEIR COMMUNITIES

The Air Force has other initiatives of a decidedly nonmilitary nature. It is playing an active role in the national Keep Zambia Clean and Healthy campaign, implemented in 2015. The Air Force also has its Air Power Ladies Club, a nongovernmental

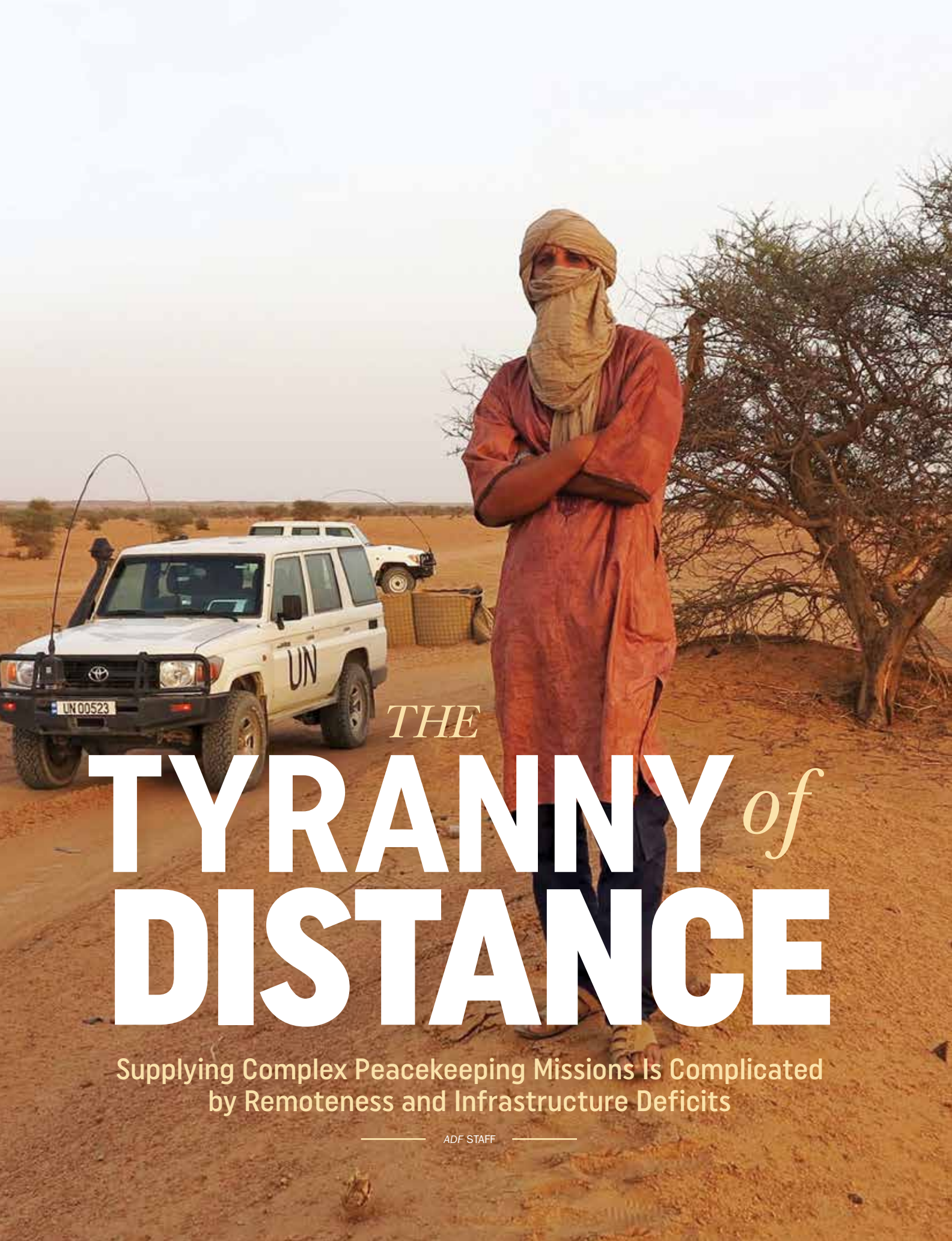
organization made up of female recruits and the wives of male service personnel. The club has come to the aid of the elderly, the handicapped and the underprivileged.

Chimese stresses, however, that the first role of the ZAF is defense.

“As we aspire to be a middle-income country by 2030, what we do as a defense force is aligned to the national vision, that is, within the political, social and economic aspirations of the country,” he said. “We realize as the Air Force that no meaningful commerce or air travel will take place in a place that is not secure. The role of the Air Force in ensuring security through projecting air power for the country is a need in today’s world with such advanced technology.”

The improved Air Force is already paying dividends, he said.

“In the past, there were some illegal flights into the country’s game management areas that went undetected, resulting in the loss of wild game, a resource precious to Zambia’s economy,” he said. “Today, such is no more. Our concerns do not only lie in protecting the airspace during times of conflict, should that arise. They emanate from, and go toward, supporting the political, social and economic aspirations and vision of our national leaders.” □



THE **TYRANNY** *of* **DISTANCE**

Supplying Complex Peacekeeping Missions Is Complicated
by Remoteness and Infrastructure Deficits

— ADF STAFF —



Local residents, such as this man in Kidal, Mali, can be a valuable resource to peacekeepers trying to traverse difficult terrain. REUTERS

Any international peacekeeping mission will present a long list of logistical challenges. Mission settings are inevitably established in areas reeling from recent conflict, often rooted in age-old ethnic or political struggles.

Responding United Nations and African Union forces always are composed of international contingents. Sometimes dozens of countries from all over the world converge in a region, each bringing hundreds of Soldiers, police officers, supplies, weapons and vehicles.

Once in theater, forces must travel long distances, set up enormous camps and build field hospitals. Reliable supply chains require speed, efficiency and security. So many things can go wrong along the way: Deployments often are delayed, weather intervenes, violence erupts, and challenging terrain stands stubbornly immovable, forcing adjustments and workarounds.

Each kilometer in the chain is one more little burden — a problem to solve, a condition to overcome. Nowhere is that more evident than in Mali.

The United Nations peacekeeping mission there was born in 2013 when the U.N. Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) took over for the AU's African-led International Support Mission to Mali. MINUSMA is mandated for 12,680 uniformed Soldiers, police officers and all that comes with supporting such a force.

In June 2013, Exercise Western Accord in Accra, Ghana, prepared commanders for the mission through a series of command-post scenarios at the Kofi Annan International Peacekeeping Training Centre. It was evident even then to one exercise participant that Mali would present profound challenges.

Nigerian Brig. Gen. Koko Essien, a veteran of peacekeeping missions in

Burundi, Sierra Leone and the former Yugoslavia, considered the geography of Mali. His assessment to ADF at the time was brief and to the point: "It's going to be a logistics nightmare in Mali."

ALL THE WAY TO TIMBUKTU

Timbuktu at one time was an important trade hub and a repository of Islamic thought and scholarship. The ancient city of gold has long been synonymous with remoteness. Colloquially speaking, its name signifies the farthest reaches of the earth. But for forces serving in MINUSMA, the city's remoteness takes on literal meaning.

Like some of its neighbors — namely Algeria, Mauritania and Niger — Mali has a capital, Bamako, situated at one end of a vast expanse of territory where infrastructure, resources and governmental presence are concentrated. Travel from Bamako to Timbuktu and Gao, MINUSMA's headquarters for Sector

West and Sector East, respectively, is time-consuming and arduous, despite distances of just more than 1,000 kilometers. Both cities are roughly half-way between the capital and the



Brig. Gen. Koko Essien of the Nigerian Army ADF PHOTO

northernmost border of the 1.2 million-square-kilometer nation. Saharan sand proliferates in the north, hills and granite rock formations cover the northeast, and savannas are prevalent in the south. The Niger River and other waterways cut through the middle of the country at its narrowest point, providing another layer of logistical challenges.



ADF ILLUSTRATION

MALI: TALE OF THE TERRAIN

"Overcoming Logistics Difficulties in Complex Peace Operations in Remote Areas," a 2014 paper by Dr. Katharina P. Coleman of the University of British Columbia, lists some of the challenges of a mission such as MINUSMA.

Mali, a landlocked country, embodies the problems of "external remoteness" and "internal remoteness." Even before the first boots hit the ground in country, operation organizers must deal with the issue of how to deliver people, supplies and equipment without benefit of a seaport or a high number of large, well-equipped airports.

This external remoteness is time-consuming and expensive, Coleman writes, and can be subject to the political and

bureaucratic caprices of surrounding nations when negotiating transit and over-flight consent.

Essien explained that only Bamako-Sénou International Airport in the capital is capable of accepting large commercial jets. That means that any cargo flown into Mali must be unloaded in Bamako and reloaded into trucks or smaller military transport planes, such as C-130s, to be taken into northern bases in Timbuktu and Gao. But that is only the first hurdle in dealing with internal remoteness. At this point, some of the biggest challenges are just beginning.

GETTING FROM POINT A TO POINT B IN MALI

Internal remoteness refers to the difficulty of accessing primary areas of operations within the mission's host country. "Internally remote regions are often underdeveloped and under-served in terms of national infrastructure, so transport, communications and medical infrastructure may be scarce," Coleman, an associate professor of political science, wrote. "Thus internal remoteness increases the operation's need for air transportation assets, engineering units (including road construction and airfield engineers), and heavy transport companies, all of which the UN often struggles to secure from states (especially in a timely manner) and which are expensive to procure from contractors."

It was some of these very issues that bedeviled Essien's forces in Timbuktu. Air transport was at a premium; some Western nations supplied a few C-130s, but a lot of transport depended on truck convoys traveling from Bamako to Timbuktu, Gao and elsewhere. Convoys of 50 to 60 trucks would make their way north, and about

Essien was commander of Sector West in Timbuktu from August 2013 to August 2014. Just before he left, he commanded a quick-reaction force of 450 troops and three battalions of 850 each. A fourth battalion of 850 had been planned but had not yet arrived. He told ADF that while at Western Accord, he could not have imagined just how many logistical problems Mali would present.

"As a matter of fact, the statement — my thinking at the time was even better than what I met on the ground," Essien said. "Because it was an absolute, absolute logistics nightmare. It was worse than I anticipated."



The Ivorian Transport Company, part of the United Nations Multidimensional Integrated Stabilization Mission in Mali, delivers drinking water to peacekeepers guarding the airport in Gao in May 2014. UNITED NATIONS/MARCO DORMINO



A U.N. peacekeeper stands guard in May 2015 in the northern town of Korioume, Mali, 18 kilometers south of Timbuktu, near the Niger River. Forces must use ferries to get vehicles and equipment across the river. REUTERS

midway to their destination, roads would begin to disappear, giving way to desert. As dust and sand covered routes, the trucks, loaded with large containers, often got bogged down. Sometimes, during rainy periods, routes would flood. Trucks would have to wait until waters receded. Sometimes, Essien said, trucks carrying food would see it spoil after getting stuck for days as they waited for scarce military recovery vehicles for towing, winching and lifting.

As convoys got within 20 kilometers of Timbuktu, one major obstacle remained: crossing the Niger River. This required ferries, and each ferry could take only two to three trucks at a time. With convoys of up to 50 trucks, this stage alone could take up to five days. “Because these are not very sophisticated landing points, loading three trucks to the ferry takes a lot of time,” Essien said. “Offloading them on the other side takes a lot of time. So it’s been an absolute mess.”

The road network — or lack of it — and the problems associated with air transport and river crossings highlight an overall infrastructure problem in Mali, and Africa at large. Only a quarter of Mali’s 22,000 kilometers of roads are paved.

“We had trucks that arrived within five to six days of departing Bamako,” he said. “And we had trucks that arrived after three weeks of departing Bamako.”

WORKING AROUND THE PROBLEMS

Essien and his forces found some ways to overcome logistical obstacles, despite infrastructure problems. One way was by working with local residents and depending

Snapshot: MINUSMA

ADF STAFF

The United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) began in the summer of 2013. Mali’s democratic government fell in a March 2012 coup just after a Tuareg rebellion had begun in the north.

Soon afterward, several factions, including the Tuareg National Movement for the Liberation of Azawad, Ansar al-Dine and al-Qaida in the Islamic Maghreb, began to wreak havoc, capturing cities and threatening to advance south toward the capital, Bamako.

French and Chadian forces intervened in January 2013 in Operation Serval, taking back the cities of Timbuktu and Gao. France began withdrawing troops in April 2013, and troops serving in the African-led International Support Mission in Mali, which had entered Mali in February, began supporting Malian forces.

AUTHORIZED STRENGTH

12,680 TOTAL UNIFORMED PERSONNEL

11,240 MILITARY PERSONNEL, INCLUDING 40 MILITARY OBSERVERS

1,440 POLICE (INCLUDING FORMED UNITS)

STRENGTH *as of June 30, 2015*

10,207 TOTAL UNIFORMED PERSONNEL

9,149 MILITARY PERSONNEL

1,058 POLICE (INCLUDING FORMED UNITS)

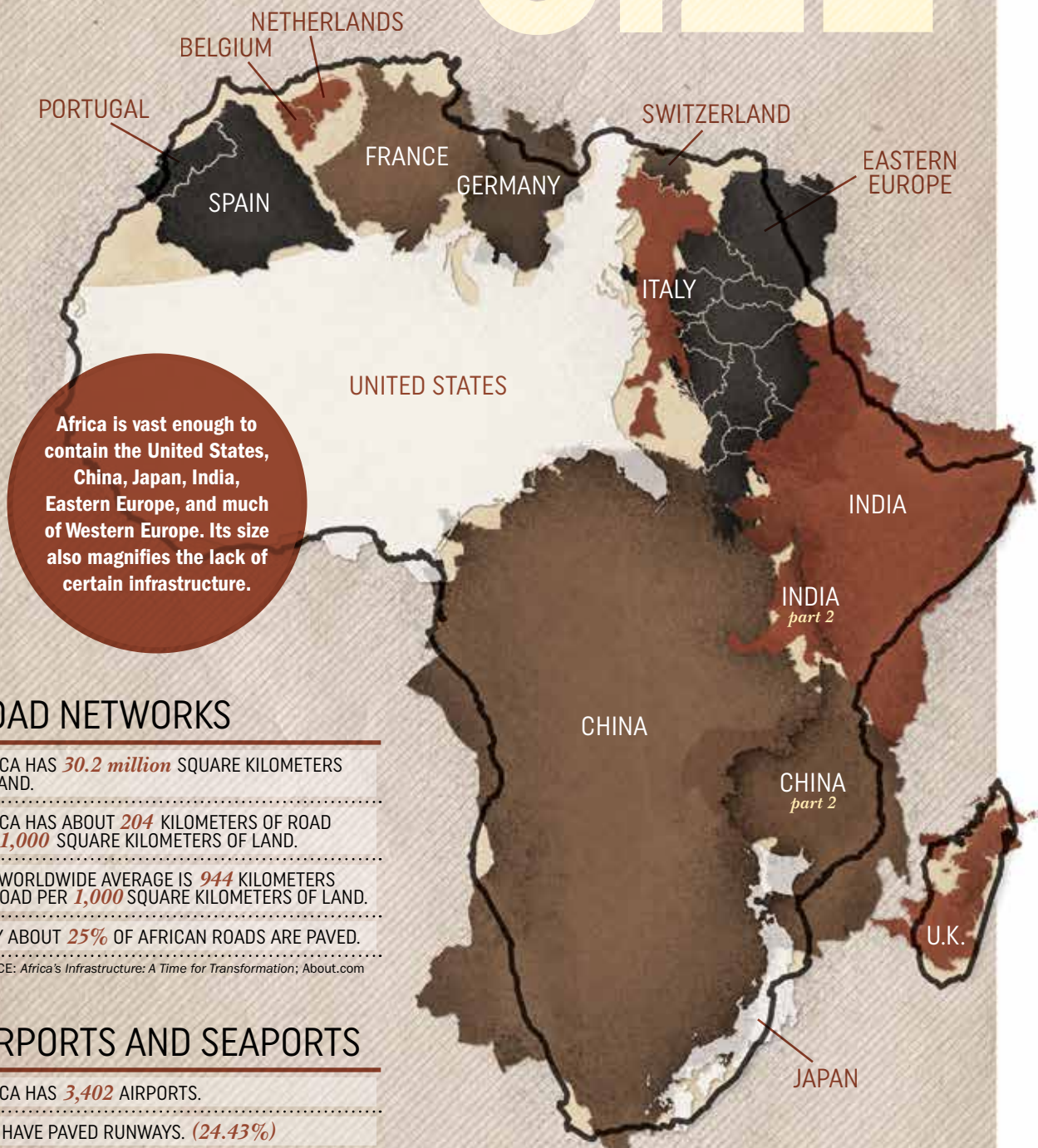
COUNTRIES *contributing military personnel*

Bangladesh, **Benin**, Bhutan, Bosnia and Herzegovina, **Burkina Faso**, Cambodia, **Cameroon**, **Chad**, China, **Côte d’Ivoire**, Denmark, **Djibouti**, the **Democratic Republic of the Congo**, **Egypt**, El Salvador, Estonia, Finland, France, **The Gambia**, Germany, **Ghana**, **Guinea**, **Guinea-Bissau**, Indonesia, Italy, Jordan, **Kenya**, **Liberia**, **Madagascar**, **Mauritania**, Nepal, Netherlands, **Niger**, **Nigeria**, Norway, Portugal, Romania, **Rwanda**, **Senegal**, **Sierra Leone**, Sweden, Switzerland, **Togo**, **Tunisia**, Turkey, United Kingdom, United States and Yemen.

COUNTRIES *contributing police personnel*

Benin, **Burundi**, **Cameroon**, **Chad**, **Côte d’Ivoire**, **Djibouti**, the **Democratic Republic of the Congo**, France, Germany, **Ghana**, **Guinea**, Jordan, **Madagascar**, Netherlands, **Niger**, **Nigeria**, Romania, **Rwanda**, **Senegal**, Sweden, **Togo**, **Tunisia**, Turkey and Yemen.

AFRICA'S SIZE



ROAD NETWORKS

AFRICA HAS **30.2 million** SQUARE KILOMETERS OF LAND.

AFRICA HAS ABOUT **204** KILOMETERS OF ROAD PER **1,000** SQUARE KILOMETERS OF LAND.

THE WORLDWIDE AVERAGE IS **944** KILOMETERS OF ROAD PER **1,000** SQUARE KILOMETERS OF LAND.

ONLY ABOUT **25%** OF AFRICAN ROADS ARE PAVED.

SOURCE: *Africa's Infrastructure: A Time for Transformation*; About.com

AIRPORTS AND SEAPORTS

AFRICA HAS **3,402** AIRPORTS.

831 HAVE PAVED RUNWAYS. (**24.43%**)

2,571 HAVE UNPAVED RUNWAYS. (**75.57%**)

16 AFRICAN NATIONS OUT OF 54 (**29.63%**) ARE LANDLOCKED AND HAVE NO SEAPORTS.

SOURCE: *The World Factbook*



Members of the Ivorian Transport Company from the U.N. Multidimensional Integrated Stabilization Mission in Mali make a delivery to peacekeepers guarding the airport in Gao in May 2014.

UNITED NATIONS/MARCO DORMINO

on their advice on routes to take during inclement weather. Their guidance added a valuable dimension to more traditional global-positioning systems.

Coleman agrees that such civil engagement can be helpful, but she said such contact must be fostered carefully. “There’s certainly, I think, a clear argument that relations with the host populations are critically important to how a peace operation can function on the ground,” she told *ADF*. “The note of caution I think that I would simply sound there is that they need to be managed carefully to ensure that the peacekeepers do not — unbeknownst perhaps to themselves — wind up in relationships that are perceived as either not transparent or biased.”

Furthermore, peacekeeping forces must be careful about how they source things from local vendors, again to avoid bias and to ensure that they do not take away resources from local populations. An example would be a large military force locally procuring water or other items in a way that leads to shortages for residents.

Essien also was able to capitalize on advantages provided by some of MINUSMA’s troop-contributing countries. Burkina Faso, which borders Mali to the southeast, supplied one of the battalions in Timbuktu. Essien said the routes out of Burkina Faso to Timbuktu are not as bad as those coming out of Bamako, so transport from that direction was smoother. Nigeria had a Level 2 hospital in Timbuktu, and Ghana supplied an engineering company there.

“They followed the same routes, bringing their stuff without having to go by sea to Côte d’Ivoire and trucking them through Bamako,” he said. “For instance, when the Nigerians were setting up the Level 2 hospital, they got security clearance from all the countries between Nigeria and Mali, meaning Burkina Faso and Niger, and once they got the clearance, they put the trucks on the roads ... and they came by road all the way from Nigeria to Timbuktu.” Their first major challenge was at the Niger River crossing.

Likewise, Essien said, the Togolese battalion moved its equipment through Togo into Niger, through Burkina Faso and on to Timbuktu.

On the issue of infrastructure, large military missions often face a two-sided challenge. First, they are forced to improvise around weak or nonexistent transit networks, such as ports, airports and roads. Then, even when roads exist, the heavy trucks, recovery vehicles and armored personnel carriers sometimes damage them. The Ghanaian military engineering company was able to perform some minor road repairs to keep vehicles moving in the area.

Essien served as deputy chief of military planning at U.N. headquarters in New York for four years. He said other peacekeeping missions, such as those in Sudan and the Democratic Republic of the Congo, and smaller missions such as those in Burundi, Côte d’Ivoire, Liberia and Sierra Leone, were easier to manage logistically because most of those nations have seaports and most do not have large deserts like Mali.

“I think Mali presented the U.N. with a logistics challenge that probably was unprecedented.” □

GETTING THERE IS HALF THE BATTLE

The African Union Has a Logistics Plan to Quickly Put
Troops Where They're Needed Most

ADF STAFF

The African Union was created in 2001 with great hope, but also a heavy burden of responsibility. Member states were still reeling from the failure to rapidly intervene in the 1994 genocide in Rwanda, and they hoped that an African Standby Force (ASF) could offer a solution.

The AU developed the idea for the ASF in 2003 and founded it on two principles:

- Never again would African countries allow mass atrocities to occur on the continent without swiftly interceding.
- Interventions would be led by African countries on their own terms. The phrase "African solutions to African problems" has been widely repeated.

The ASF set a goal of intervening within 14 days in the event of a mass killing, one of the most aggressive peacekeeping timelines in the world. By contrast, the United Nations waits for a cease-fire and then gives itself 30 days to set up a traditional peacekeeping mission and 90 days to set up a multidimensional mission.

During the long process of creating the ASF, this noble goal has run headlong into reality. Leaders discovered that the will to intervene can be hampered by the challenge of moving troops swiftly to a conflict and sustaining them once they

are in theater. Without dependable logistics and airlift options from Africa's Regional Economic Communities (RECs), they found that good intentions are meaningless.

With the completion of the AU field exercise Amani Africa II in November 2015 and the establishment of the ASF, the AU Peace Support Operations Division is moving forward with a strategy to overcome its logistical support and air mobility challenges. *ADF* spoke by phone with retired Col. Mor Mbow of Senegal, head of the AU Mission Support Unit, and other experts about their hopes for the future.

Mbow said the 14-day deployment timeline is achievable, but the real work must be done ahead of time.

"We put a lot of effort in what we call force preparation," Mbow said. "We just don't wait until the mandate is given, and then you are under pressure to deploy in 14 days. I think if you prepare everything, if you have our continental logistics base established, the regional economic communities and the regional forces ready, we have prepositioned logistics, communications is established, we have a database on the strategic lift capabilities, then I think the 14-day timeline is achievable. It's a matter of being ready."



An Army officer from Burkina Faso arrives at exercise Amani Africa II at the South African Defence Force training camp in Lohatla.

AFP/GETTY IMAGES



“We put a lot of effort in what we call force preparation. We just don’t wait until the mandate is given, and then you are under pressure to deploy in 14 days.”

— Retired Col. Mor Mbow,
head of the AU Mission Support Unit

STRATEGIC LIFT

Building airlift capacity has long been a challenge in Africa. Aircraft suitable to perform the Rapid Deployment Capability of the ASF are expensive to purchase and to maintain. For example, an Antonov An-124 capable of carrying more than 136,000 kilograms of cargo costs \$30 million or more and requires a large, reinforced airstrip and a team of trained mechanics to keep it airworthy.

But when it comes to the transportation of troops for a timely intervention, air movement is essential.

To address this need, the African Union has developed a strategic lift concept and established a cell within its Peace Support Operation Division called the Continental Movement Coordination Center (CMCC). The CMCC oversees REC-contributed airlift, short-term contract airlift, commercial sealift and land movement for peace-keeping operations at the strategic level. Additionally, the AU has begun to compile a database of continental air assets available through member nations to see where gaps and opportunities exist.

The work is already paying off. During Amani Africa II, a C-130H transport plane from Nigeria in the Economic Community of West African States region fulfilled an emergency airlift requirement by carrying 100 Soldiers and materiel from the Eastern African Standby Force. This example of airlift support negotiated by the CMCC in Addis Ababa, Ethiopia, demonstrated that, in the future, the AU Peace and Security Council can use this process to provide the ASF with resources from within the continent.

“What this concept is saying is that, as much as we can, we should use the African resources first and mutualize resources for strategic lift, which could be complemented by partner support,” Mbow said.

The ability to use continental resources was further affirmed during Amani Africa II when troops were flown in to South Africa by the air forces of Algeria and Angola.

Some have proposed the creation of something similar to the Movement Coordination Centre Europe (MCCE), which has 27 member nations that share air transport capabilities by purchasing space on the planes of partners when needed. This makes air resources available on short notice and ensures that nations with highly developed air forces are compensated for their contributions. U.S. European Command and U.S. Africa Command have recently negotiated an agreement to use the MCCE program for U.S. logistical support.

Col. Uduak Udoaka, a U.S. Air Force logistician who has extensively studied African airlift challenges, said African nations also could set up a Civil Reserve Air Fleet. This arrangement, which exists in the United States, is basically an agreement between the Department of Defense and the commercial air sector to provide airlift at a time of need and at an agreed-upon cost. During Amani



Armored vehicles are loaded onto a boat as the Angolan military leaves Guinea-Bissau in 2012 after a peacekeeping effort.

AFP/GETTY IMAGES

Africa II, the CMCC coordinated the use of an Angolan commercial airplane to move troops to South Africa. Similarly, the CMCC could make use of national airlines to transport troops for peacekeeping missions.

"I think there are solutions; there just needs to be a willingness to explore them and expend the resources," Udoaka said. "It takes a regional approach for stuff like that to happen. The MCCE works because a bunch of countries signed on and said this is a smarter and more efficient way for us to get the airlift that we need."

CONTINENTAL LOGISTICS BASE

A concept first devised in 2009, the Continental Logistics Base (CLB) was intended to be a

permanent storehouse of everything needed to launch an ASF mission, ranging from radio equipment to vehicles and tactical gear. Additionally, there would be regional logistics hubs in each of the continent's five geographic regions.

Retired Brig. Gen. David Baburam of Kenya, former head of the Mission Support Unit at the AU, said this initial plan was a bit too much like "Cold War thinking" and needed to be scaled back. Now the CLB is envisioned to store "strategic deployment stocks," which are items necessary for the establishment of a mission headquarters and for rapid deployment. Baburam said the CLB may also store donated equipment such as vehicles, generators and tents given by partner nations.

A Soldier operates a tank during the African Union's Amani Africa II exercise in South Africa.
AFP/GETTY IMAGES



Progress is being made on the project. The AU signed a memorandum of understanding with Cameroon to host the CLB in the coastal city of Douala. Additionally, after a November 2015 technical assessment in Douala, the government of Cameroon agreed to improve facilities to meet AU needs. The CLB will have space at the Douala Air Force Base, a container terminal at the port, and a headquarters at the military engineering corps.

"In terms of preparation and setting up the base, we are quite close to the target," Mbow said.

C3IS/TRAINING

Timely logistics are not possible without effective communications. That is why the AU is setting up an integrated and interoperable command, control, communication and information system (C3IS). In a partnership with the European Union that began in 2013, the AU is installing a

satellite communications system that allows ASF elements to send secure data, voice and video messages from the AU headquarters in Addis Ababa to peacekeeping mission headquarters and to regional headquarters. The system will include an IT component for mapping, sending orders to troops in the field and generating reports.

Mbow said Amani Africa II revealed some lingering communications problems, and he called for an exercise dedicated exclusively to command-and-control communications. He also highlighted the need for greater logistics training at the operational level at some of the continent's centers of excellence, and tactical training inside the armies of each of the AU member states.

"We're going to use the opportunity and the occasion of the African Logistics Forum, which will be organized in April [2016], to press upon the member states to really assist in focusing on increased logistics training," Mbow said.



Military helicopters were used as part of the exercise. AFRICAN UNION



Vehicles assemble as part of Amani Africa II. AFRICAN UNION

FUNDING

The biggest barrier to the AU's peacekeeping efforts is the lack of consistent internal funding. The annual budget of the African Union Mission in Somalia (AMISOM), for example, is \$500 million to \$600 million, and only about 2 percent comes from the AU.

"The lack of a reliable source of funding really constrains you in the way you can plan," Baburam said. "Because you can always say, 'I want so much,' but you cannot say how you are going to resource the requirement."

The AU is supposed to pay for ASF missions through its Peace Fund. That is financed partially from the AU budget and partially on a voluntary basis and is "chronically underfunded," according to Baburam.

Baburam said the goal should be to have a consistent fund of \$50 million, which would allow the AU to support the first 90 days of a peacekeeping mission. In 2013, a high-level AU panel chaired by former Nigerian President Olusegun Obasanjo proposed a \$10 tax on air travel and a \$2 tax on hotel stays to help fund the AU's effort. In 2015, 54 leaders agreed to the new taxes at the AU Heads of State Summit.

In January 2016, Dr. Nkosazana Dlamini-Zuma, the AU chairwoman, appointed Dr. Donald Kaberuka, a Rwandan economist and former president of the African Development Bank, as the AU's high representative for the Peace Fund, with the primary objective of finding consistent and reliable support for the fund.

LOGISTICS IN AN AFRICAN CONTEXT

Although it is common to hear complaints about the planes, hardware and funding that African militaries lack, little time is spent appreciating the areas in which African militaries excel logistically. Time and time again in recent decades, peacekeepers have deployed across difficult terrain to austere climates and sustained themselves with limited means. In 2012, for

example, contingents from the Chadian military drove 3,000 kilometers to Mali to fight al-Qaida-linked terror cells in one of the most desolate places in the world, the Adrar des Ifoghas Mountains. Observers remarked that few militaries could move that far that fast and withstand such harsh conditions.

Dr. Cedric de Coning, a South African security expert and advisor to the African Centre for the Constructive Resolution of Disputes, said the advantage of African peacekeeping forces is their willingness to deploy quickly and without all the frills and niceties that U.N. missions require. He believes AU logistics should strive to preserve this advantage. "The reason that the African Union or the African troops can deploy faster than the United Nations is because they don't have all the standards and rules and bureaucracies in place that the U.N. or the EU has," de Coning told *ADF* in a 2015 interview. He added: "The comparative advantage of the AU and all the African countries is that they can deploy fast, and they're willing to be more robust."

Mbow also stressed the need for the AU logistics plan to fit a uniquely African style. "When it comes to the scale of support and standards, we should have our own standards, which may not be the same as the U.S. or European countries," he said.

He pointed out that, in the case of Chad, the logistics had to match the mission and the speed of the fighting force.

"If you look at the operational tempo and the way they fight against terrorism, you need to have logistics that is adapted to that type of operation. So adaptation is extremely important," he said. "How we deliver water, fuel, how we do our maintenance to adapt to the high operational tempo [is important]. I can tell you actually that all the operations that we are conducting like AMISOM or other peace support operations in Africa are high-intensity operations." □



MILITARY OUTSOURCING OFFERS SAVINGS, EXPERTISE

Contractors can be a real asset to today's armed forces. But military oversight must continue after the contract is signed.

ADF STAFF
PHOTOS BY THE ASSOCIATED PRESS

The core responsibilities of militaries all over the world include protecting civilians, rescue work during natural disasters and securing borders. But these same militaries must expend time and energy on the mundane tasks any large organization must deal with, such as payrolls, vehicle maintenance and laundry services.

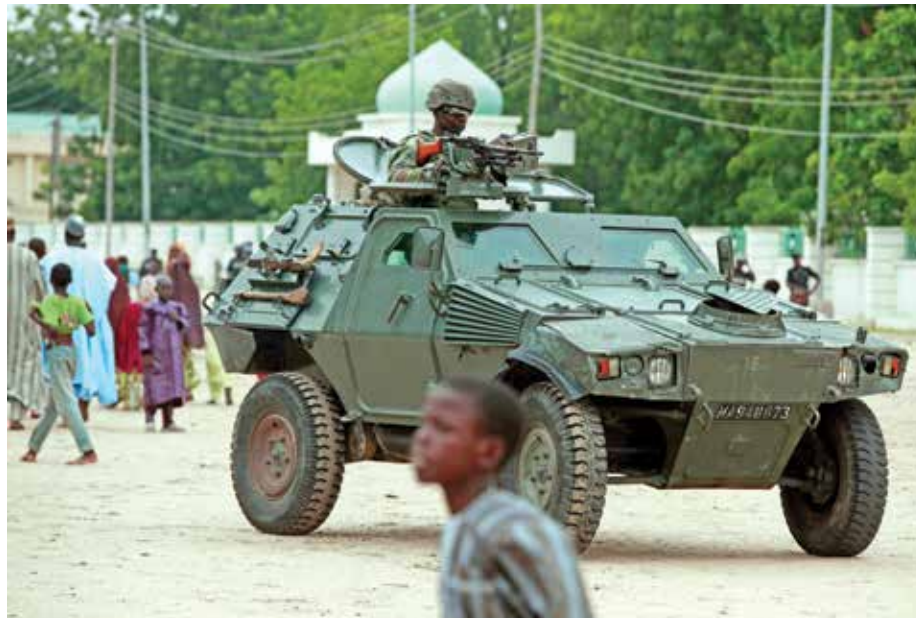
That's where contractors can help. They can take on the non-core functions of a military, leaving Soldiers to focus on training and peacekeeping. Jobs such as facilities and vehicle maintenance, technical training, laundry, cleaning, and food service can easily be delegated to private contractors. Such businesses often can do these jobs better and cheaper.

Modern militaries are using contractors in a variety of ways, including for consulting, threat analysis, war-gaming and simulations, software development, weapons and vehicle maintenance, the clearing of firing ranges, and computer technical support.

However, outsourcing any service or task comes with some caveats. Service quality must be maintained, and the

military must exercise control over the contractor. Denis Chamberland, a specialist in global defense contracting, wrote about outsourcing for *National Defense* magazine. He said successful outsourcing "is about finding just the right balance of control over the contractor but in a way that allows it the flexibility to perform those tasks for which it has been entrusted."

Nigerian Soldiers ride in an armored vehicle in Maiduguri, Nigeria. Some armies contract with private companies to help maintain vehicle fleets.



Armored vehicles from South Sudan and Uganda patrol a street in South Sudan.



The military is constantly adapting to changing situations and missions and needs to adjust its contracts accordingly. Contracts need to include language requiring the contractor to work with military leaders when changes are needed.

Contractors are subject to rules and conditions that militaries never face. Armies are monopolies and are not subject to financial competition. Putting certain tasks and services up for bids to contractors encourages competition and can result in lower prices, better service and innovation. Typically, Chamberland said, competition for such services can reduce costs by about 20 percent.

Political scientists Allison Stanger and Mark Williams said it is critical for military organizations to keep a close eye on outsourcing costs. They said studies have shown that outsourcing alone, without competitive bidding, leads to disappointing cost savings. They also said contractors often get little oversight from their military bosses after contracts are signed.

Outsourcing contracts must leave no room for misinterpretation. Economists say that management procedures must be clearly defined and stated. They say military authorities often fail to provide enough qualified people to make sure the contract is maintained without cost overruns. It also is important to note that the military's job is to oversee the contractor, not the contractor's employees.

Outsourcing can address shortcomings that are inherent to some types of organizations. Defense Industry Daily, an online trade publication, said many governments and militaries throughout the world, including some in Africa, do not have cultures that encourage equipment maintenance and repair. In such situations, outsourcing can be the solution.

"Maintenance and support contracts may seem boring," the publication reported. "But you can tell a lot about the readiness and state of a country's military by watching the contracts that take place" after major equipment purchases. A military's recognition that it needs outside help can be an indication of its professionalism.

Equipment contracts typically include provisions for maintenance, repair and overhaul; engineering support; spares inventories; and technical upgrades as needed.

Handling some maintenance contracts can be tricky. Some new weapons and military technology are so complicated, they come with contracted support staff as part of the package. And even though the contracted maintenance workers have noncombat roles, they may be needed near the field of battle. They may face the same risks as Soldiers.

"Even maintenance personnel in the rear are subject to the same risks that more forward deployed personnel will be subjected to," a veterans advocate told CNBC. "So having contractors anywhere within a theater of operation puts them at risk of being killed or injured.



Ugandan troops load supplies in the hunt for Lord's Resistance Army leader Joseph Kony in the Central African Republic. Private contractors have been used in the Kony search.

And my question is whether contractors will continue to show up after the first wave may have been killed by a Scud missile or nuclear or biological weapons."

CONTRACTORS AS PEACEKEEPERS

In recent years, contractors have been hired to augment armies' fighting and peacekeeping forces. Countries including Angola, the Democratic Republic of the Congo, Liberia, Senegal, Sierra Leone and Sudan have hired contractors. Political scientist P.W. Singer said such contractors can be divided into three subgroups:

- Military provider companies offer services on a battlefield's front lines. They engage in actual combat, often working alongside a country's regular armed forces. They also can provide surveillance services.
- Military consulting companies offer strategic advice, training and operational services. They are similar to business management consultants.
- Military support companies offer traditional support services, including maintenance, transportation and catering.

Using contractors as peacekeepers or Soldiers has several benefits, at least on paper. Such contractors allow for policy flexibility in politically sensitive areas. They can give a country more military agility; a country can hire services as needed instead of maintaining a

large military. And, as with most contractors, they can reduce costs.

But outsourcing traditionally military roles can have considerable downsides. Using contractors as Soldiers or peacekeepers reduces an army's transparency and accountability. It can encourage counter-moves by other countries. Hired Soldiers can be "loose cannons," committing criminal acts. As recent history has demonstrated, hiring civilians to do the work of Soldiers can lead to major cost overruns.

There also are some gray areas where contractors are hired to take on traditionally military tasks that do not involve combat. Armed forces in recent years have hired private contractors to fly spy missions, including over parts of Africa. As surveillance drones become more common, contractors almost certainly will be hired for training, maintenance and even piloting the devices.

Chamberland has a simple rule about when to outsource and when to keep a task in-house.

"While the main drivers behind traditional outsourcing are typically focused on the economic motivators, outsourcing military services can involve a mix of economic, political and military necessities," he said. "The common credo of outsourcing is that non-core functions can be outsourced, while core functions — those that define the *raison d'être* of the organization — should never be outsourced." □

Simulations Enhance MILITARY TRAINING

ADF
STAFF





Technology Saves Money and Protects Soldiers and Equipment

South African Soldiers react to a smoke grenade in an ambush simulation during Shared Accord 13 in Alicedale, South Africa. SPC. TARYN HAGERMAN/U.S. ARMY AFRICA



consider the typical tank used in combat. Tanks are a key component of modern ground warfare, but their use comes at a price. They are expensive to buy and expensive to operate. They guzzle fuel. Their tracks wear out. Tanks can be unreliable and difficult to repair. And tank training is destructive.

"If you use a tank for a week in the field, I think you know what the result is," said a military training specialist from Saab, the Swedish aerospace and defense

company. "A tank levels everything in its path."

That's where simulated training comes in. Simulated training, also known as modeling or M&S, allows militaries to train their personnel without mechanical and human wear and tear. It also keeps training costs down.

When people think of simulated training, they generally think of flight simulators, computer war games and sophisticated shooting galleries. But simulated training dates to 5,000 years ago, when military leaders used colored stones and grid systems on a board to map out strategies.

The advantages of simulated exercises are well-documented. Time is reduced. New equipment and tactics can be field-tested. Militaries can work together in joint operations, ironing out problems before taking

modern simulations, including up-to-date flight simulators. A 2015 simulator census published by *Military Simulation & Training* magazine showed that only two African countries had a significant number of fully equipped flight simulators: South Africa had 11, and Algeria had 10.

Modern flight simulators should not be mistaken for a computer running the latest version of Microsoft Flight. "Environment" flight simulators are huge devices, capable of training entire flight crews simultaneously. The defenceWeb news portal describes one such trainer at the Air Force base in Ysterplaat, South Africa, which replicates the fuselage of an aircraft for training systems operators, navigators and other crew members. It can accommodate eight students at a time.

"The simulator provides full training from briefing to post-mission debriefing," defenceWeb reported. "By using the simulator instead of actually flying, it has saved 60 percent of actual flying hours, resulting in huge cost savings."

Full environment simulators also are used for training crews for submarines, helicopters, strike craft, tanks and armored vehicles.

THREE KINDS OF SIMULATIONS

Live simulations consist of real people, real or dummy weapons and blank ammunition. A typical scenario will have Soldiers in the field wearing sensors on their shoulders or helmets so their exact locations can be monitored. This type of simulation provides a learning environment as close to reality as possible.

Live simulations have obvious advantages, including getting Soldiers in the field accustomed to wearing and traveling with their gear. It is an excellent way for Soldiers to provide feedback to their

trainers. Soldiers trained with live simulations tend to retain their training longer than with other types of simulations.

Virtual simulations occur when real people are placed in simulated environments. Flight trainers, which date back to World War II, are perhaps the original virtual simulators. Virtual simulation can use off-the-shelf components that also have industrial and civilian uses.

Virtual simulation is accepted, and even welcomed, by young Soldiers who grew up playing video games. It is highly adaptable. Armies use virtual simulation for training individuals and teams. An entire crew can be trained at the same time, in one facility. As one trainer described it, "Some types

MODERN SIMULATIONS ARE SO DETAILED THAT THEY CAN INCLUDE SUCH COMPONENTS AS STAGED PRESS CONFERENCES WITH SOME PARTICIPANTS PLAYING THE ROLES OF REPORTERS.

to the field. The environment is preserved. Safety for all personnel is all but guaranteed. Costs are greatly reduced, and perhaps most important, training objectives can be accurately measured.

Military leaders now regard simulation as a necessity, although it does not replace hands-on training. One South African official estimated that 30 simulated military exercises can be funded for the same price as one traditional brigade exercise.

The South African Centre for Conflict Simulation conducts 25 to 35 simulations each year, with about half involving warfare and one-third for peacekeeping operations. About 10 percent are for disaster management, and the rest are for general training.

African countries are still relatively new to



Cpl. Ashraf Plaatjies of the South African National Defense Force renders simulated medical aid during Shared Accord 2013 in South Africa.
ADF PHOTO

of virtual simulation are basically people sitting around playing video games.” Virtual simulation provides the best possible scenario for instructors to give students instant feedback on their performances.

Constructive simulations, also known as tabletop simulations, are purely hypothetical, allowing countless “what if” scenarios. The aforementioned military leaders of 5,000 years ago were engaged in constructive simulation with their rocks and maps.

In constructive simulations, everything is simulated — people, equipment and terrain. Constructive simulations are used for pure war-gaming — using computer modeling to move imaginary Soldiers through various field scenarios, including combat.

Modern constructive simulations have become incredibly sophisticated, with computers fed such data as troop types and numbers, weather, locations of enemy troops, strength and types of armaments, and field conditions. Invasions, rescue operations and other field maneuvers are then “played” repeatedly to see which approaches give the best results.

Regardless of the type of simulation, designers divide such military training into three levels.

The **tactical level** is used to develop, improve and evaluate basic military plans and maneuvers.

The **higher tactical level** is used to test the effectiveness of plans that already have been developed. Participants can develop an intelligence picture and evaluate contingency plans.

The **operational level** aligns strategic objectives according to realistic timelines. At this level, operators can allocate correct numbers and types of forces for specific tasks, in real time and on carefully mapped playing fields.

STAGED PRESS CONFERENCES

Lt. Col. Hugh Evans of the British Armed Forces told *ADF* that modern simulations are so detailed that they can include such components as staged press conferences with some participants playing the roles of reporters.

Evans has worked with Botswana, South Africa and Zambia to stage tabletop simulations. The simulations involve a fictional African country that has just signed a cease-fire with troops being sent in to maintain the peace. The variables include weather, malnutrition, disease, terrorist factions who have not signed the peace agreement, internally displaced people, and refugees.

“The students get a book which tells them all about the country itself, where the ports are, the forces at work, ethnic backgrounds, religious distribution,” Evans said.

A Cape Verdean Soldier secures a captive during a simulated training exercise off the coast of Cape Verde.

U.S. NAVY/PETTY OFFICER
1ST CLASS FELICITO RUSTIQUE



Although the exercise is computerized, a large part of it involves discussions and negotiations.

“The exercise is broken down into a civilian planning cell in the various strands, a military planning cell, which is deliberately quite small, and a mission support cell, which is police and [nongovernmental organizations],” Evans said. “The Soldiers playing the roles of civilians are actually dressed in civvies. One year, they all turned up in uniform, which didn’t work. If they are playing the role of civilians, you have to get them to dress like civilians, so that they will think like civilians.”

The exercise takes a week. By the end of the week, the participants have produced a full detailed plan to maintain the peace.

“You’re trying to get people to look at a problem from a different point of view,” Evans said.

GAMES FOR TRAINING

Some countries have established “games for training” programs. One popular platform is Virtual Battlespace, which provides a large simulated area for warfare. Battles can be viewed from any perspective, and recorded movements can be reviewed later. Users of such games can create custom models and objects. The programs can be networked, allowing multiple players. Virtual Battlespace, for instance, can network up to 256 players at the same time. It is particularly useful in training forward observers and forward air controllers.

Customizable programs such as Virtual Battlespace have the added advantage of being affordable to just about any organization. “The increasing use of commercial off-the-shelf equipment is making simulation much cheaper,” a Saab official told defenceWeb. “The cost of simulation is coming down dramatically.”

Simulated training has some downsides. Sometimes the technology is beyond the capabilities of its users. And virtual players forget what they have learned faster than Soldiers who have participated in field training.

Some militaries are studying augmented reality technology — a method of overlaying simulated images onto the real world, using goggles or a tablet computer, to create a detailed training environment. A typical system includes a laptop, software, a battery pack and a helmet-mounted display, *National Defense* magazine said. American Marines began testing the equipment in 2015.

“Instead of just having their imagination to visualize what may be occurring there, they can now use simulation and actually see events and effects occurring on top of the real environment,” Peter Squire of the U.S. Office of Naval Research told the magazine. The technology is so new, researchers are monitoring participants for such things as motion sickness and whether the simulations are realistically bright.

One test of the new technology involved virtual tanks on a field being attacked by virtual fighter planes with simulated weapons. A virtual environment can be created almost anywhere — including a parking lot.



Nigerien Adjutant-Chef Moussa M. Maiguizo explains the layout of a medical civil action program in Agadez, Niger, during Exercise Flintlock in 2014. “Rock drills” such as this date back 5,000 years, when military leaders used stones and grids to map out strategies. ADF PHOTO

Soldiers and police officers from Botswana, South Africa and Zambia participate in the Combined Joint African Exercise, a weeklong computer simulation.

DEFENCE ENGAGEMENT, JOINT FORCE DEVELOPMENT AND DEFENCE ACADEMY

Another relatively new development is autonomous robots used for weapons training. *Military Simulation & Training* magazine reported in 2015 that the target robots, mounted on wheels, “look, move and behave like real people,” significantly improving marksmanship training. The “smart targets” are much less expensive than building a moving-targets rifle range. Any firing range can be converted to a state-of-the-art moving firing facility in a single day. One operator can handle 20 or more of the robots at the same time.

The robotic ranges include “civilian” robots to teach Soldiers to be discriminating in their shooting. Officials said use of the “civilians” has become a key component of the training, as a means of reducing civilian casualties in the field.

The robots can be programmed to carry out specific tasks. One scenario has the robots “attacking” a firing position, with little operator participation. The aggression of the attack can be adjusted and can change automatically as targets are hit. As one operator noted, the robots can even “conduct an orderly withdrawal — or a panicked retreat.” □



MALAWIAN PRISONERS PUT PAIN TO MELODY

AGENCE FRANCE-PRESSE

Malawi's Zomba Prison Project band has the distinction of being nominated for a prestigious Grammy Award. Its 20-track record *I Have No Everything Here* was nominated in the Best World Music Album category for 2016.

Beninese singer Angelique Kidjo won the award, her third Grammy, and the second consecutive one in the World Music category.

Musical talent at the Zomba maximum-security prison was discovered in 2013 when U.S. producer Ian Brennan spent two weeks working with 60 inmates and guards to make the album. Six hours

of recordings were edited down into the final selection of songs, featuring 16 of the prison's musicians, singing mainly in the local Chichewa language.

Elias Chimanya, 46, who is serving a life term for killing a man in a quarrel in the 1980s, wrote and sang the haunting ballad *Jealous Neighbour*, the album's fifth track.

"I am a reformed person, and music has helped me to be cool and deal with the situation of being incarcerated for life," he said. "I hope to not die in prison and instead to be released to take up a music career outside."

More than two years after the recording sessions, news of the award nomination came as a surprise to inmates. "We are baffled because we didn't expect prisoners could be nominated," said Nyerenda, the 34-year-old guitarist, who expects to be freed in 2017 after serving a 10-year sentence for house burglary.

The prison already had an all-male band that tours local schools to spread HIV prevention messages.

The Grammy-nominated album includes other inmates — and half the songs are by female prisoners living in a separate part of the prison, where they have no instruments except hand drums, buckets and pieces of pipe.

"The nomination alone has inspired us and already made us famous both in Malawi and abroad," said Binamo, the prison guard who wrote the lyrics for a song called *Please. Don't Kill My Child*.

"We teach vocals, keyboard, drums and guitar until they become musicians," Binawo said. "Play music can bring relief to them. Many people have a negative attitude towards the prison authorities. They think we only punish convicts."

Brennan, who has worked regularly in U.S. prisons, said he was amazed by how music sessions in the Zomba prison "did not have any rigid boundary between guards and prisoners."

He defended the album, which was released in early 2015, against accusations that it celebrated criminals. "This is not about glorifying anyone — it is about humanizing, and everyone should be humanized," he said.

Brennan said the prison, built in the 1930s, was in poor repair but that the prisoners appeared to be relatively well-treated. The prisoners were paid a small fee for the recording, and any profits will be shared among them — including several who have since been released.

Malawi's Zomba Prison Project band, which includes prisoners and prison workers, recorded an album that was nominated for a prestigious Grammy Award.

AFP/GETTY IMAGES

Nigerian is Scrabble WORLD CHAMPION

BBC NEWS AT BBC.CO.UK/NEWS

Nigerians are congratulating countryman Wellington Jighere, who became the first African to win the English-language World Scrabble Championship.

The 32-year-old beat Englishman Lewis MacKay 4-0 in the final in Australia in November 2015. Nigerian President Muhammadu Buhari was among those to congratulate him, saying he has "done the country proud." Jighere said on his Facebook page that he felt he was playing with the "whole continent" behind him.

He added that it baffles him that he managed to win, given how tired he felt because he had not slept well in about a week. He told *The Guardian* newspaper that he had training to deal with the fatigue from the jet lag, but he also had to cope with 32 rounds of matches in four days before getting to the final in Perth.

Jighere and the five other members of the Nigerian team arrived in Australia only the day before the tournament started, so they had little chance to get over the 20-hour flight or the seven-hour time difference. Buhari phoned him in Perth to celebrate the performance and pass on his congratulations to all the players, who finished the competition as the best team.

The champion won \$10,000. He had recently finished his national service after his graduation from university, but he took a few months off from looking for work to prepare for the championship.

The president of Nigeria's Scrabble federation, Sulaiman Gora, told the BBC that Jighere is a quiet person whose "greatest strength is humility."

Gora, who also heads the Pan-African Scrabble federation, said the "whole country and the whole of Africa is celebrating this success."

In 2008, Ivorian Elisee Poka won the French-language Scrabble World Championship, and in 2015, Schelick Ilagou Rekawe from Gabon reached the final of that competition. He lost to New Zealander Nigel Richards, who does not speak French.

Nigeria's Wellington Jighere holds his English-language World Scrabble Champion award in Lagos on November 10, 2015.

AFP/GETTY IMAGES



Ethiopian is Female Athlete of the Year

BBC NEWS AT BBC.CO.UK/NEWS

Genzebe Dibaba of Ethiopia won the International Association of Athletics Federations female athlete of the year award for 2015. Dibaba, 24, set a new 1,500-meter world record of 3 minutes, 50.07 seconds, at the World Championships competition in Beijing in August 2015. She also won the 1,500-meter gold and 5,000-meter bronze.

Ethiopia's Genzebe Dibaba displays her gold medal in the 1,500-meter competition at the World Athletics Championships in China in 2015.

THE ASSOCIATED PRESS

Dibaba's family is something of an athletic dynasty. Her older sister Tirunesh is a celebrated athlete who won more than 19 major medals, including five Olympic medals in the 2008 and 2012 games. Another older sister, Ejegayehu, won the silver medal in the 10,000 meters at the 2004 Summer Olympics. Her cousin, Derartu Tulu, won the 10,000 meters in the 1992 and 2000 Olympics.

"After narrowly missing out on this award one year ago, I am very proud to be recognized by the fans and experts of our sport," she said.



The Husky A-1C aircraft

GERMANY HELPS TANZANIA'S EFFORTS TO COMBAT POACHING

DEFENCEWEB

The German government donated two Husky fixed-wing light aircraft to the Tanzania National Parks and Tanzania Wildlife Authority to help combat wildlife poaching.

The aircraft were donated through the Frankfurt Zoological Society to be used to monitor Tanzania's elephant hot spots, including the Selous Game Reserve and Serengeti National Park. Pilots will patrol for poachers, help rangers coordinate forces on the ground, and carry out wildlife censuses and habitat monitoring.

The aircraft were handed over in November 2015 at Arusha airport in a ceremony attended by Serengeti Chief Park Warden William Mwakilema; Alan Kijazi, director of Tanzania National Parks; and Martin Loibooki, director of the newly established Tanzania Wildlife Authority.

The Frankfurt Zoological Society gave a Husky to Zambia in early 2016 and provided support to the Zambia Wildlife Authority. It will be used to monitor that country's elephant and black rhino populations.

The Husky A-1C is a two-seat light aircraft manufactured by U.S. company Aviat. It features dual controls and has a high-wing design, making it ideal for observation and patrol. It has been widely used for these roles, including by the U.S. Department of Agriculture and the Kenya Wildlife Service to monitor elephant herds.

Tanzania lost about 85,000 elephants to poaching between 2009 and 2014. Conservation groups blamed "industrial-scale" poaching.

U.S. DONATION to Boost Cameroon's BOKO HARAM FIGHT

DEFENCEWEB

The U.S. government donated 18 Toyota pickup trucks, a trailer truck, a front-end loader and other equipment to Cameroon's military, which will use it to fight Boko Haram.

Some of the other equipment includes seven 1,500- to 3,000-liter water tanks and six generators. U.S. Ambassador to Cameroon Michael Stephen Hoza handed over the equipment and vehicles to Cameroonian Defence Minister Joseph Beti Assomo in Yaoundé in December 2015. Hoza said the U.S. hopes that the new equipment will enhance the Army's mobility and extend its operational capabilities.

Hoza said the donation is a symbol of the strong partnership between both countries. "We know violent extremism. This is violence on a terrible scale," he said. "We want to see a bright future for Cameroon. We are happy to partner with you. We will be here till the end of the fight."

Cameroon joined Chad, Niger and Nigeria in contributing troops to the Joint Multi-National Task Force, a Lake Chad Basin regional military force that was formed in 2015 to fight the extremist group Boko Haram.

Assomo said the donation is the latest in a number of recent U.S. security assistance packages that included six armored personnel carriers in October 2015. "This donation falls within the framework of support to the fight against terrorist sects, notably the jihad-terrorist sect, Boko Haram," Assomo said. At least 300 U.S. Soldiers arrived in Cameroon in October to provide intelligence and training support to Cameroonian forces.



A member of Cameroon's elite Rapid Intervention Battalion stands guard on a bridge in Fotokol, northern Cameroon. REUTERS

KENYA, FRANCE, PARTNER FOR CLEAN WATER

THE STAR, KENYA

Kenya is working with France on a project to give communities around Lake Victoria access to clean water and improve security in some of the nation's slums.

France has given Kenya a \$43 million grant that will cover 27.5 percent of the project. In the deal, signed in 2015, the Lake Victoria Water and Sanitation project was allocated \$5.4 million and the slums upgrade project received \$38 million.

French Ambassador Remi Marachaux said 21 floodlights will be erected in slums in Nakuru, Eldoret and Mombasa. Another 27 floodlights are under construction in Machakos, Nairobi and Naivasha, he said.

The water and sanitation project is part of a bigger regional plan involving Uganda and Tanzania. That project seeks to help communities around Lake Victoria meet certain goals related to clean water access, sanitation, solid waste management and drainage services.

"Lake Victoria is an important national and regional resource which not only supplies water to farms around the lake, but also has great potential

for the development of regional lake transport and tourism," said Henry Rotich, Kenya's treasury secretary.

The World Bank, through the International Development Association, will provide 60.5 percent of the total project fund, Rotich said.

REUTERS



Workers install floodlights in the Kibera slum in Nairobi, Kenya, in 2014. Lights are to be added in Eldoret, Machakos, Mombasa, Nairobi, Naivasha and Nakuru.

Kenya and France are working with other donors to offer clean water and sanitation services to communities around Lake Victoria. THE ASSOCIATED PRESS





SOUTH AFRICAN NAVY COMMANDER MAKES HISTORY

Lt. Cmdr. Zimasa Mabela stands aboard the Umhloti, the South African Navy minehunter that she commands.

AGENCE FRANCE-PRESSE

AGENCE FRANCE-PRESSE

Zimasa Mabela grew up under apartheid in a South African village just two hours' drive from the ocean, but it wasn't until age 18 that she first saw the sea.

Now 38, she is the first black woman to command a South African naval vessel. Lt. Cmdr. Mabela recalled that her first visit to the beach coincided with the end of white rule in 1994 — and she caught the historic wave of change that followed.

"I wasn't terrified of the water," she said, gazing out from the bridge of her sleek minehunter, the SAS Umhloti. "In my village there was a swimming pool at the church where us kids could swim."

Mabela's desire for a life at sea came later, when she was at university studying for a degree in education. She attended a presentation by the Navy and was captivated by the slogan: "Join the Navy and see the world."

"I thought, where else would I get the opportunity to see the world?"

She signed up in 1999 at age 22 as a radio operator, and the Navy has so far lived up to its promise. She has traveled to places as diverse as India, Uruguay, St. Helena island and Canada. The ship she took command of in August 2015 is berthed in Cape Town's historic Simon's Town harbor, South Africa's main naval base.

Men make up the bulk of the ship's crew of 54, but Mabela says her gender has not been a problem. "They have accepted me very well. If I give an order, it is an order," she said with a warm smile and a glint of steel in her eyes.

SIERRA LEONE — Adds Boat to Halt — ILLEGAL FISHING

DEFENCEWEB

Sierra Leone commissioned a new patrol boat to monitor fishing vessels and poachers in its territorial waters.

President Ernest Bai Koroma presided over the ceremony on November 11, 2015, in Freetown. The boat, Fisheries Patrol Vessel Sorie Ibrahim Koroma, is named after a former vice president.

In his address, Koroma said poachers pose serious challenges to the fishing industry, which contributes to the nation's healthy living, employment and economic activity. He said the government has increased revenue generation in the fishing industry from \$1.5 million in 2007 to \$6.5 million in 2014, adding that managing it well will further increase revenue. Sierra Leone estimates it loses \$32 million every year to illegal fishing.

Koroma noted that the government is regulating and strengthening the fishing industry to help local fishermen. "Only those with licenses will be allowed to fish, and those with licenses must ensure they fish in the proper areas with the required fishing nets," Koroma said.

Capt. Momodu Alieu Pat-Sowe, minister of fisheries and marine resources, said the new boat will help authorities intercept, fine and combat illegal fishing. The boat cost \$5.93 million and was built by Damen in the Netherlands. Sierra Leone has a small Navy, including one Shanghai III class vessel, one Swiftship patrol boat, one landing craft utility, and several inshore patrol craft and harbor cutters.



Sierra Leone's Fisheries Patrol Vessel
Sorie Ibrahim Koroma

EMBASSY OF SIERRA LEONE, WASHINGTON, D.C.

ECOWAS COUNTERTERROR POLICIES

VOICE OF AMERICA

A senior official at the Economic Community of West African States (ECOWAS) said the group's policies to combat violent extremism in the region are worth replicating elsewhere.

Remi Ajibewa, ECOWAS director for political affairs, said member nations have been sharing intelligence and information to combat numerous terror organizations, including the Nigeria-based extremist group Boko Haram, whose attacks in Cameroon, Chad, Niger and Nigeria have killed thousands.

Speaking during a panel on violent extremism at United Nations headquarters in New York, Ajibewa said the ECOWAS bloc's rich body of counterterrorism experience includes national and regional counterterrorism strategic training, along with strengthening and coordinating legal frameworks in member states.

Ajibewa said all ECOWAS members have established financial intelligence units to control cash flows and monitor illicit financial transactions that fund violence.

His remarks came shortly after terrorists attacked a hotel in Mali's capital, Bamako, in November 2015. Ajibewa called for a focus on the root causes of terrorism, adding that ECOWAS' conflict-prevention framework seeks to resolve issues that often lead to violent extremism.

"It includes early warning, preventive diplomacy, disarmament, peace and

development," he said. "It also involves the ECOWAS Standby Force, education and [promotion of] democracy."

He described root causes of terrorism as traceable to social inequality and "grievances that have been forged out by some of these people who believe that they have been marginalized."

"We have what we call the committee of [military] chiefs of staff of member states and the committee of police chiefs; these are some of the lessons that other regions can learn from these committees," he said. "They have the sharing of information."

He also cited specific lessons learned by member states, describing Nigeria's counter-extremism program as evolving to meet the needs of the country.

"In Nigeria, they are not only looking for the palliative measures," he added, touching on the development of a social reintegration program for the deradicalized in Abuja, the nation's capital. "The issue of reintegration is another point; Nigeria has already set up a center. So, all major partners from other countries have been focusing on the military perspective, ignoring the victims as well as even those



Lt. Gen. Kenneth Minimah, right, meets detainees being set free after being accused of being Boko Haram extremists in Maiduguri, Nigeria. AFP/GETTY IMAGES

that have left that terrorist enclave."

Ajibewa said ECOWAS is cooperating with the neighboring regional bloc, the Economic Community of Central African States, in the fight against Boko Haram and other violent extremists groups.

"Their member states share information with the ECOWAS region — not only intelligence reports; they also communicate and do what we call lessons learned so that we will all be able to improve," he said. "That is why we have the [multinational] task force, which has been assisting in that area."

NIGERIA PUTS 'EYE' ON GULF OF GUINEA

THE MARITIME EXECUTIVE

The Nigerian Navy is using an Israeli-designed, United Arab Emirates-built Falcon Eye mass surveillance system to track activity in the Gulf of Guinea.

The waters off the coast of Nigeria are notorious for piracy, especially kidnappings and oil theft, and the technology is intended to help the country's Armed Forces combat maritime crimes. Rear Adm. Raphael Osondu said piracy is a persistent threat to Nigeria's economy and that countering it is a military priority.

Falcon Eye's six electro-optical stations allow for the monitoring of aircraft, vessels and offshore oil infrastructure. The system has a range of up to 35 nautical miles from the coast, well beyond the 12-nautical-mile limit of Nigeria's territorial seas.

Osondu added that the new system covers "the blind arcs which we experience in some parts of our territorial waters



with the Regional Maritime Awareness Capability (RMAC) system." RMAC is a coastal surveillance system that uses the Automatic Identification System and ground-based radar to track maritime traffic. It was deployed in the Gulf of Guinea in 2011.

"The Falcon Eye will aid the Nigerian Navy with a better and more accurate system to monitor and conduct activities in [the] Nigerian Maritime Domain and her EEZ (exclusive economic zone)," he said. The Nigerian Navy's training center for the system has already trained about 70 people to operate Falcon Eye.

In addition to the Nigerian military's shore-based surveillance systems, the Nigerian Maritime Administration and Safety Agency has said that it is considering the acquisition of drone aircraft for maritime domain awareness.



AFP/GETTY IMAGES

COMMON DRUG MAY STOP MALARIA'S SPREAD

VOICE OF AMERICA

Scientists may have hit on a way to prevent the transmission of malaria with a drug originally developed to treat parasitic illnesses. The drug, whose creators were

honored with a Nobel Prize, is called ivermectin, and it's being tested in parts of Africa.

Ivermectin has completely revolutionized the treatment of worm diseases such as river blindness and elephantiasis and could lead to their eradication if it's used effectively.

Now it appears ivermectin may be effective against the spread of malaria. Vector biologist Brian Foy of Colorado State University in the United States led a study in Burkina Faso that found a reduction in childhood malaria when the drug was given to adults in the region. The ongoing trial involves giving a single dose of ivermectin once every three weeks to the majority of people in four villages. Small children didn't receive the drug, but the treatment blocked transmission of malaria in 16 percent of the children, the disease's main victims.

Foy says ivermectin, even at low levels, is toxic to disease-carrying mosquitos. The drug's unique action targets the mosquito, not the parasite that causes malaria. For this reason, researchers in the United States and Thailand believe ivermectin might help control transmission of a drug-resistant form of malaria in Southeast Asia.

For now, Foy is cautious about claiming that ivermectin holds the key to stopping malaria transmission. He says more studies are needed. Since the late 1980s, an estimated 1 billion doses of ivermectin have been distributed around the world.

AU Wants to STOP CHILD MARRIAGES

VOICE OF AMERICA

Confidence was just 14 when her aunt married her off to a 42-year-old man. The now-22-year-old Zimbabwean says the experience shattered her. Her husband was abusive, as were his other wives.

"After two years of marriage, life was so difficult for me that I tried to kill myself by drinking rat poison," she told Human Rights Watch researchers. The group, in highlighting the issue, released several girls' accounts but omitted their last names.

"Child marriage ruined my life," Confidence said. "Now I do not work and cannot find a job because I stopped going to school."

It's stories like this that prompted the African Union to convene a summit in Zambia in late 2015 in hopes of ending child marriage. The assembly pledged to establish 18 as the minimum legal age for marriage across the continent.

The gathering accompanied a new United Nations report that

revealed a shocking statistic: If current trends hold and Africa's population continues to grow at its expected rate, the number of child brides in Africa will more than double in the next 35 years, to 310 million.

Unless things change, by 2050 almost half the world's child brides will be in Africa. The majority of Africa's 23 million child brides are in Nigeria, the continent's most populous nation, which has a minimum marriage age of 18.

Marriage before age 18 is actually already against the law in most African countries, although some countries allow teenagers to marry with parental consent. But that hasn't stopped more than 125 million girls from being robbed of their childhood by being married below that age in traditional or customary unions. Most of the children affected are girls. Child grooms exist but are rare.

AU Chairwoman Nkosazana Dlamini Zuma said cultural norms that undervalue girls and women are largely to blame.



THE ASSOCIATED PRESS

Tanzanian President

'BULLDOZES' WASTE, CORRUPTION

VOICE OF AMERICA

Tanzanian President John Magufuli is going full throttle in the fight against waste and corruption.

Tanzanians say they like his take-charge approach, though it is not new for him. Magufuli was nicknamed "The Bulldozer" for similar efforts during his 15 years as minister of works.

On his first day in office in November 2015, Magufuli made a surprise visit to the Finance Ministry, where he castigated civil servants who were not at their desks. Magufuli has banned foreign travel for most government officials. He cut a bloated delegation for the Commonwealth Heads of Government meeting in Malta from 50 to just four.

Photos of Magufuli cleaning up garbage in the streets have been all over social media. He canceled lavish Independence Day celebrations in November 2015 and instead ordered that the funds be used to fight a cholera outbreak that had killed dozens of people and sickened nearly 5,000 more.



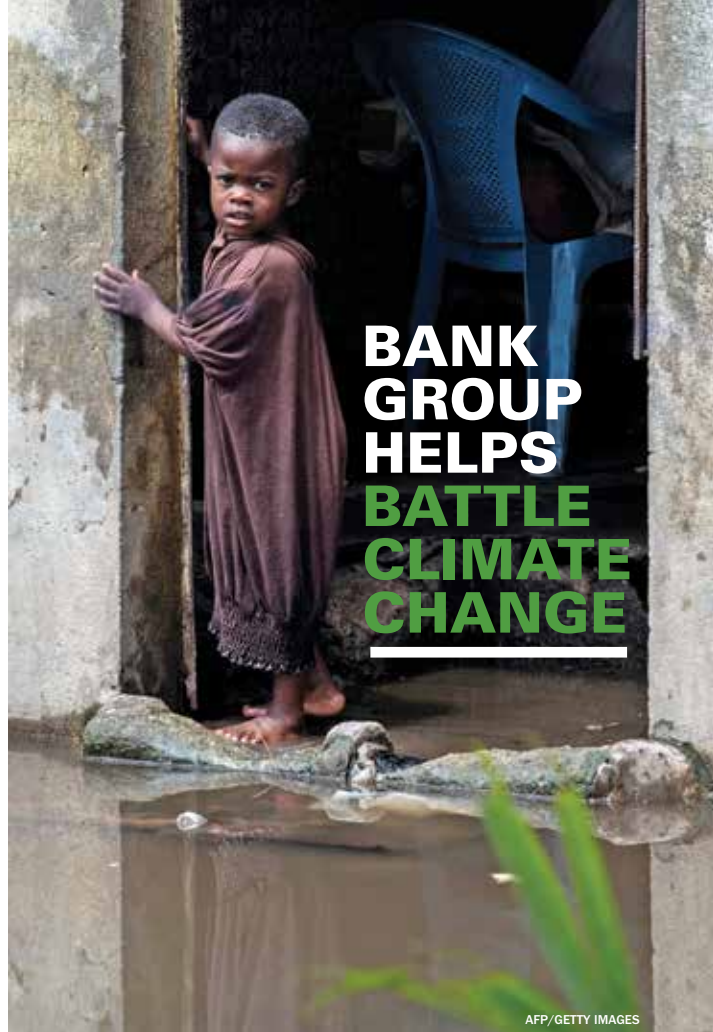
Tanzanian President John Magufuli joins a cleanup event outside the State House in Dar es Salaam on December 9, 2015. AFP/GETTY IMAGES

Evidence of official corruption had been on the rise. In 2014, a scandal broke revealing that government ministers using escrow accounts had allegedly stolen \$180 million from the Central Bank. Magufuli suspended the commissioner general of the Tanzania Revenue Authority on suspicion of abetting corruption and tax evasion at the Dar es Salaam port. That official is now under arrest along with five others.

Abdulrahman Kinana, secretary general for the ruling party, praised the move, saying that "this will regulate the various sources of income to ensure that all loopholes are sealed and everyone pays tax to the government so as to enable us meet our targets."

Senkai Kilonzo of the Tanzanian Policy Forum, which deals with governance issues, noted that Magufuli was drawing from his experience.

"The president has been a minister for about 20 years. He would have seen what the issues are, and he would have been very concerned about wastages, outright corruption, outright theft of the public coffers," Kilonzo said. "He would have been very uncomfortable in all those years, and I assume perhaps he's now been given the opportunity to make amends, and that's what he's trying to do."



BANK GROUP HELPS BATTLE CLIMATE CHANGE

AFP/GETTY IMAGES

UNITED NATIONS NEWS SERVICE

Noting the significant impact climatic activities have on Africa, the World Bank Group announced a plan to increase climate resilience and low-carbon development.

"The consequences of climate change for Africa are devastating and threaten to push millions of people into extreme poverty by 2030, largely due to lower crop yields and higher food prices, and negative health impacts," said Benoit Bosquet of the World Bank in late November 2015.

The new blueprint, "Accelerating Climate-Resilient and Low-Carbon Development: The Africa Climate Business Plan," aims to bring attention to and help fund climate-resilience programs and low-carbon plans in the region.

According to the plan, the primary climatic factors affecting the continent are: unavoidable levels of warming owing to past emissions of greenhouse gases; further warming that will have disastrous consequences, such as heat extremes; and considerable uncertainty on what the warming impact will be on local weather patterns and hydrological cycles.

The World Bank said the plan focuses on boosting the continent's natural, physical, human and social capital. It includes increasing low-carbon energy sources in vulnerable societies.

The plan estimates that the near- to medium-term implementation will cost \$6.1 billion to be raised by 2020, of which \$5.7 billion is expected to come from the International Development Association and the rest from other sources.

The plan notes that further results could be achieved by 2025 at a cost of about \$21 billion.

'MADE IN GHANA' VEHICLES GO ON SALE

A Kantanka SUV is displayed at the Apostle Safo Technology Research Centre in Gomoa Mpota, Ghana.

STORY AND PHOTOS BY AGENCE FRANCE-PRESSE

A Ghanaian inventor and church leader who started out trying to make voice-controlled television sets is telling the world's auto giants to move over. Kwadwo Safo Kantanka — nicknamed "Apostle" because he also runs a network of churches — has realized his dream of developing and marketing cars "Made in Ghana."

"It's been in the pipeline since 1971," said Kwado Safo Jr., one of the inventor's sons. "It started with the old man, so it's been a long time coming."

Kantanka's electric sport utility vehicles and pickup trucks have got Ghanaians talking on social media, thanks in part to an advertising campaign using local movie and music stars. The sticker prices of the vehicles run from \$18,000 to \$35,000, out of the range for most people in Ghana. But a cheaper version is expected to go on sale in 2016.

The locally made vehicles are entering a tough market, going up against established brands in a country that sees about 12,000 new and 100,000 secondhand cars imported every year. But the inventor's son, who is chief executive of the Kantanka Group, is confident the demand is there and the company can hold its own in the competition.

Ghanaian President John Dramani Mahama has been pushing his compatriots to buy locally to boost a sputtering economy hit by inflation, a depreciating currency and high public sector debt.

In 2014, he showed off a pair of Ghana-made shoes during his annual State of the Nation address and criticized the lack of appreciation of locally made goods and the overreliance on imports.

He noted that \$1.5 billion was spent in foreign currency on items such as rice, sugar, cooking oil, tomatoes and fish — all money that "could have gone into the pockets of Ghanaian entrepreneurs," he said.

For Kantanka, some key components such as glass, tires and brake calipers are imported. But local sourcing is a key component of Kantanka's vehicles, whose radiator grilles feature Ghana's five-pointed star emblem.

Wood from Ghanaian forests is used to make dashboards, and the cream-colored leather seats in some

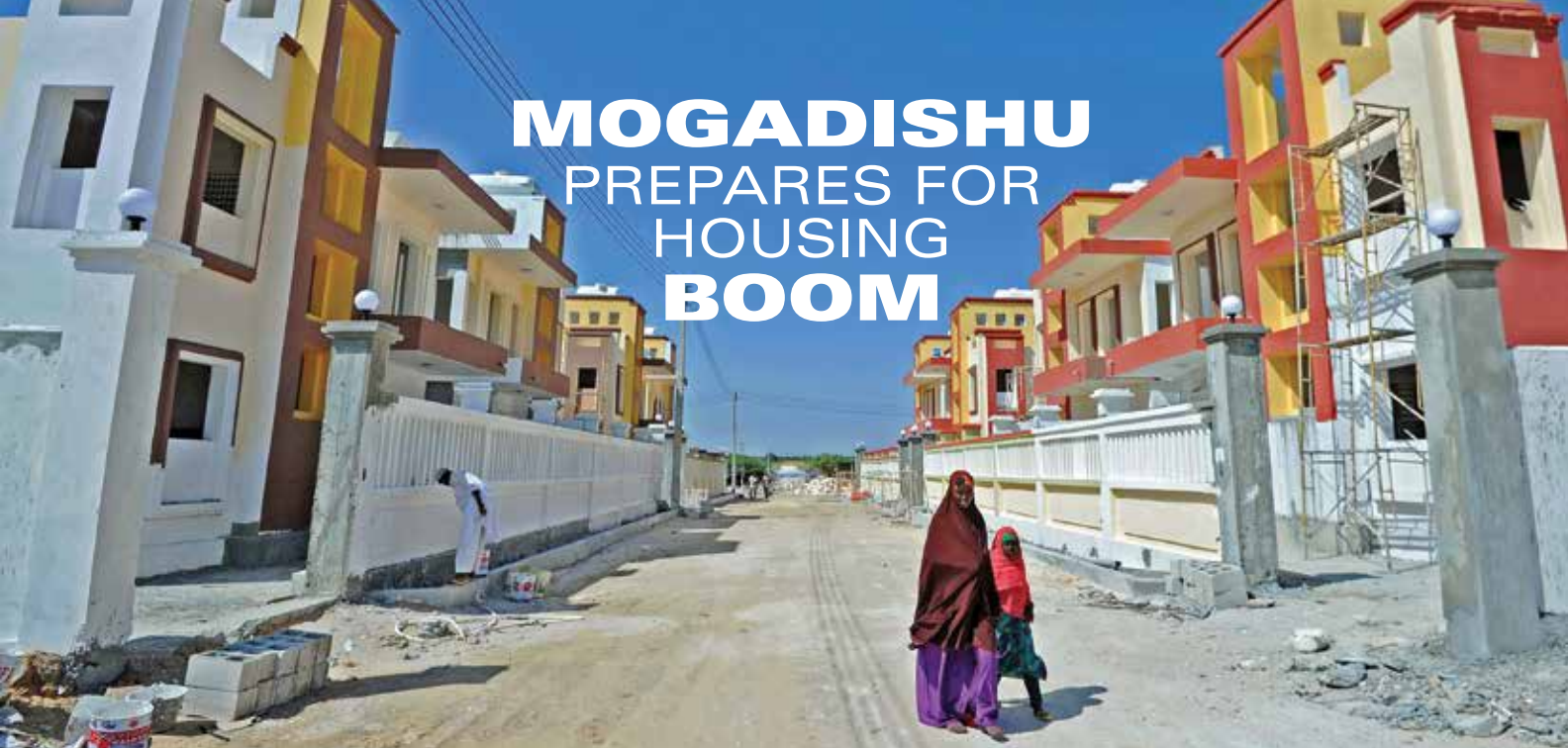
vehicles are made in the country's second-biggest commercial city, Kumasi.

Kantanka's son is adamant about the uniqueness of the cars, which all have been approved for safety by Ghana's Drivers Vehicle Licensing Authority. The Made in Ghana label means that "if you have any problems with the vehicle, you wouldn't have to import from India or China or America," he said. "All the parts are right here, and we have a 24-hour service."

In early 2015, Ghana's police service received one of the pickup trucks, potentially paving the way for other government agencies to place orders.



MOGADISHU PREPARES FOR HOUSING BOOM



AGENCE FRANCE-PRESSE

AGENCE FRANCE-PRESSE

Somalia's elegant colonial villas were left in ruins by two decades of street fighting among warlords, and the seaside capital Mogadishu was dubbed the most dangerous city in the world.

But now new housing estates are being built amid an economic boom as Somalis return from abroad and newly wealthy businessmen

capitalize on the relative peace in the city. Seven kilometers outside Mogadishu in a formerly rural area, new homes are springing up, with almost 50 houses now ready on an estate, builders say.

Mohamed Abdullahi Ali of Salaam Somali Bank said it was a "great honor" to back the estimated \$20 million project. Construction began in early 2015, and the project was touted as offering commercial

returns and helping rebuild the nation.

"It is a new neighborhood for all Somalis to buy affordable homes, by leaving the densely populated neighborhoods of Mogadishu, and to come and stay with families here," Ali said.

"According to our plan, we are going to build 500 homes that can cover the residential needs for 500 families in the first stage, and then we will construct more houses."

Mauritian President CALLS FOR SCIENTIFIC INNOVATION

MEDIA CLUB SOUTH AFRICA

She is already a scientist, biologist and president of Mauritius. Now Ameenah Gurib-Fakim can add another role to her list. She has been appointed vice chairman and trustee of the Planet Earth Institute (PEI), an international nongovernmental organization striving for the scientific independence of Africa.

"Mauritius has a proud track record of investing in scientific excellence and developing research," she said. "In the future, science, technology and innovation will be vital in creating jobs and prosperity for our citizens in Mauritius and across the mainland African continent."

In November 2014, PEI opened an office in Mauritius to run science, technology and innovation programs. The organization's headquarters are in London; it also has an office in Luanda, Angola. PEI said Africa's scientific output is among the lowest globally. "As a continent of over a billion people and more than 50 nations, it has been producing roughly the same amount of scientific research as the Netherlands



Mauritian President Ameenah Gurib-Fakim speaks at a United Nations conference on climate change in Paris on November 30, 2015.

AGENCE FRANCE-PRESSE

for the last 20 years," the institute said.

Science is underrepresented and overlooked by Africa's students, with only about 1 in 10 choosing science, technology, engineering or mathematics as university concentrations. As a result, Africa continues to look elsewhere for scientific knowledge and expertise.

The PEI wants to change that. "Scientific independence is not and could never be scientific isolation — collaboration and co-operation is at the heart of scientific progression — but scientific independence for Africa means ultimately Africa can take better control of its resources, its people and its future," the organization said.

Dr. Álvaro Sobrinho, chairman of the PEI, said it is time for scientific and technological output to catch up with economic growth on the continent. "If we want to ensure that sustainable development is a reality for all, we must make greater investments in science and technology, and equip our next generations with the skills they need to compete in a globalized, 21st century workplace."

KING JAJA *of Opobo*

ADF STAFF

Jubo Jubogha started out as a slave and ended up a king in what is now southern Nigeria. Along the way, he became one of the richest men of his time. Today he is remembered as one of the master strategists of the 19th century.

Jubo, later named Jaja, was born in 1821 in a village in what is now Nigeria's Imo State. As a boy, he was sold into slavery and sent to Chief Madu of the Anna House, one of the two royal family houses in the Bonny coastal region.

In the 19th century, the Niger River Delta was a trade hub with Europe and America. Delta communities shipped Western goods to the region's interior and returned with palm oil for export. In the delta, with its swamps, rivers and creeks, the canoe was the engine of commerce.

Canoes and their operators were organized into "canoe houses," led by wealthy merchants, along with relatives, workers and slaves. Some of the houses had hundreds of canoes and thousands of members. In this competitive society, status was based purely on merit and accomplishments. Although a slave could never become a king, a hardworking, ambitious slave could become the leader of a canoe house.

Young Jaja started off with the lowest status in the Anna House — an imported slave, considered inferior to a locally born slave. He worked as a paddler, and even as a boy, he demonstrated a rare affability combined with honesty and genuine business sense. As a young man, he made the uncommon transition from paddler to trader, and he prospered.

In 1863, the leader of the Anna House died, leaving behind staggering debt. The established chiefs refused to take over the house because of the money owed. Jaja accepted the debt and reorganized the house, using his business talents to forge tight relationships with palm oil buyers and sellers. As he prospered, struggling canoe houses asked to consolidate with him. His empire grew.

His trading rivals were consumed with jealousy, and

one, Oko Jumbo, wanted to destroy him. In 1868, he got his chance when a terrible fire swept through Bonny. Jaja's canoe house took the worst of it. Seeing his rival's financial empire crippled, Oko Jumbo went to war with him the next year.

Jaja was outmanned in the battle and retreated from Bonny. He demanded an end to the fighting, with British officials stepping in to handle negotiations. What Jaja actually was doing was stalling for time — time to reorganize and move his empire north to lands along the Imo River — a spot

ideal for trade with palm oil producers and a safe distance from his rivals. The location was perfect. Historians wonder whether Jaja might have been planning to move there all along.

In 1870, Jaja named his new settlement Opobo and proclaimed himself King Jaja, something he could never have done in Bonny. Such was his magnetism and intelligence that 14 of the 18 canoe houses of Bonny moved to Opobo to be ruled by the new king. In defeat, Jaja had found total victory.

Jaja blocked British access to the interior, giving him a trade monopoly. His financial domination of the region came largely at the expense of the Bonny region — and the British.

The British merchants had ambitions. Despite acknowledging Jaja as king, they wanted his territory. In 1887, a consul sailed to Opobo on a fighting ship and demanded a meeting, insisting that Jaja would be free to leave after their discussion.

The consul had lied. Instead of releasing Jaja, he was deported to what

is now Ghana. There, he was convicted of breaking a treaty with Britain and blocking free trade. He was exiled to the West Indies. In 1891, he was given permission to return to Opobo, but he died en route.

He remains today a subject of fascination for historians, mostly for his courage in standing up to the British. But, as *This is Naija* magazine noted, he also is studied for his "remarkably high quality of economic wizardry and entrepreneurship."



King Jaja rose from enslavement to become one of the richest men of 19th-century Nigeria.

CLUES

1.

This town is East Africa's oldest and best-preserved Swahili settlement.

2.

Buildings were constructed with traditional Swahili techniques using coral, lime and mangrove poles.

3.

This community has been continuously inhabited for more than 700 years.

4.

Seafront buildings are known for their arcades and open verandas.



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