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AFRICA DEFENSE FORUM

Hidden Threats

**Changing Tactics
in the Age of
Asymmetric
Warfare**

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ADF ILLUSTRATION

ON THE COVER:

This photo illustration shows an armored vehicle in the foreground and a bomb blast caused by an improvised explosive device (IED) in the background. Africa has become a training ground for IED warfare and the devices have become the weapon of choice for numerous insurgent groups.

Interstate conflicts have become relatively rare. Militaries today are not often asked to defend national borders from an invading army. The threats of the 21st century in Africa and around the world come mainly from extremist groups, rebels, separatist movements and other bands of fighters.

These groups know they cannot face down a national military in a head-to-head battle. They also know that the majority of the civilian population is not on their side. So, instead of standard warfare, they look to gain an asymmetric advantage. Asymmetric warfare occurs when a smaller fighting force adopts unconventional tactics and strategies to inflict damage on a much larger, better-equipped force.

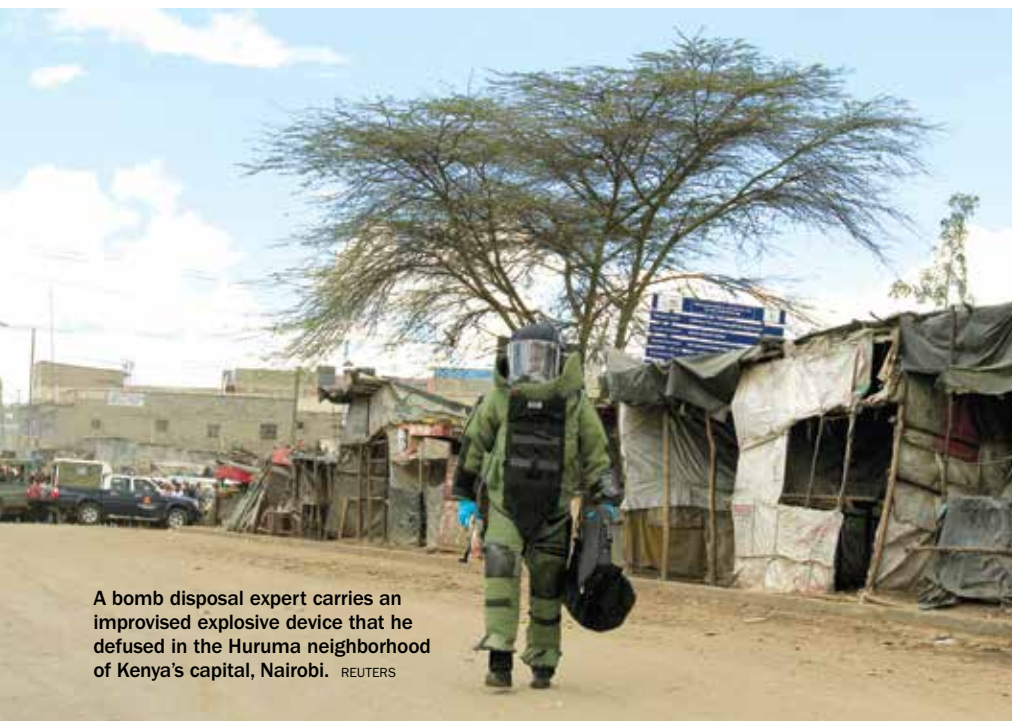
One of the most common tools in this type of conflict is the improvised explosive device (IED), which is used widely in Africa to devastating effect. In 2014 there were 835 IED attacks on the continent, resulting in 2,559 deaths. About half of these attacks were in Somalia, where al-Shabaab bomb-makers are reaching new levels of depravity by devising roadside bombs and suicide vests to maim and kill large numbers of people.

Defeating an unconventional foe requires thinking in an unconventional manner. That's why Africa's militaries are training special units and investing in new equipment to meet these emerging threats. In addition to the necessary skills and technology, situational awareness is required to anticipate the tactics likely to be used by opposing forces.

U.S. Africa Command stands ready to assist. In 2014, we held courses with the Burundi Armed Forces and the Uganda People's Defense Force on countering IEDs. These courses included training Soldiers to move through urban environments, spot likely hiding places for IEDs, and defuse the threats. In January 2015, U.S. Africa Command donated 20 Mine-Resistant Ambush Protected vehicles to these two countries for use in the African Union Mission in Somalia.

Much work remains, but by relying on the technology of the future and learning the lessons from past experience, asymmetric threats can be defeated.

U.S. Africa Command Staff



A bomb disposal expert carries an improvised explosive device that he defused in the Huruma neighborhood of Kenya's capital, Nairobi. REUTERS



Asymmetric Threats

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Counterterrorism *Requires a* Multidimensional Approach



Smaïl Chergui,
commissioner for
Peace and Security of
the African Union,
spoke at the eighth
annual focal points
meeting of the
African Centre for the
Study and Research
on Terrorism in
Algiers, Algeria, on
December 7, 2014.
His speech has been
edited to fit this
format.

In November 2014, a horrific attack was carried out against a mosque in Kano in northern Nigeria, killing more than 100 innocent civilians. It bore the hallmarks of Boko Haram.



In northern Kenya, al-Shabaab carried out two horrendous attacks. On December 2, elements of the group descended upon a quarry near the town of

Mandera, beheading and shooting 36 workers. A week before that, and in the same area, the group killed 28 travelers after forcing their bus off the road.

In Mali, terrorist groups continue to ambush and kill peacekeepers. Since the United Nations first deployed in July 2013, and until early October 2014, 31 peacekeepers have been killed and 91 wounded.

The Sahel region has long suffered the menace of al-Qaida in the Islamic Maghreb. Once more, we witness the destabilizing impact of the events taking place in the Middle East, which have affected not only that region, but also provided inspiration to terrorist groups in Africa and further seduced, with their twisted ideology and false promises, many of our youth to leave home and join their ranks.

In September 2014, a group referring to itself as Jund al-Khalifa, and which had pledged allegiance to the so-called Islamic State (also known as ISIS), abducted and beheaded a French citizen in Algeria. Other groups in Libya and Tunisia have also pledged allegiance to ISIS. It is believed that more than 4,000 Africans are among the ranks of ISIS. They will pose a serious threat should they return to Africa and should we fail to put in place the necessary mechanisms to deal with them according to the law.

It is against this background that the Peace and Security Council held its summit in September 2014. The summit stressed that dealing with terrorism is a multidimensional and multileveled effort that requires serious and continued efforts by member states, regional economic communities and the international community. In this regard the summit expressed concern that, despite the progress made in developing

a comprehensive and operational counterterrorism framework, serious implementation gaps continue to exist that undermine the effectiveness of Africa's response to terrorism and violent extremism.

First, we must strengthen the criminal justice response to terrorism and the rule of law. The African Union and the international community have developed a number of legal instruments that deal with terrorism and related crimes. However, the ratification and implementation rates of these instruments remain low, and our courts, police and intelligence services are poorly equipped and skilled to pursue, punish and deter terrorists.

Second, without addressing the conditions conducive to the spread of terrorism, we will continue to deal with the symptoms instead of the underlying causes. We may not agree on what drives a young man or woman to commit a terrorist act or join a terrorist group, but we can address the conditions that alienate our youth, lead them to lose faith in democratic values and social justice, and confine them to poverty and disenfranchisement.



People gather at the site of a bomb explosion in Kano, Nigeria, on November 28, 2014. The twin suicide blasts hit a mosque during Friday prayers. At least 120 people were killed and 270 others wounded. Boko Haram is thought to have been responsible. THE ASSOCIATED PRESS

Progress has been made, and I commend your commitment to this collaborative effort, but this platform is yet to achieve its full potential. There is still room for improvement, room to strengthen our coordination roles at the national and regional levels, to effectively share information, and to take a more active role in mobilizing national authorities on the implementation of the different aspects of counterterrorism.



A former rebel soldier clears land mines south of Maputo, Mozambique. THE ASSOCIATED PRESS

MOZAMBIQUE STRIDES CONFIDENTLY INTO NEW MINE-FREE ERA

AGENCE FRANCE-PRESSE

Mozambique, once one of the most heavily land-mined countries in the world, is declaring itself free of the deadly scourge.

In 1992, as it emerged from 16 years of civil war, Mozambique was considered — along with Angola, Afghanistan, Bosnia and Herzegovina, and Cambodia — one of the five most heavily mined nations on Earth.

Now, no later than early 2015, Mozambique will be the first of the five to be declared “impact-free.”

Minefields were the deadly legacy of the bloodshed that killed a million people in fighting between the Frelimo liberation movement and anti-communist Renamo rebels. The mines also were lingering scars of long-forgotten conflicts including the 1964-1975 war of independence with Portugal and hostilities along the border with then Rhodesia, now Zimbabwe.

Experts feared clearing tens of thousands of buried weapons would take 50 to 100 years. Instead, it took just more than 20 years.

This rare success story has been achieved thanks to cooperation among the government in Maputo, nongovernmental organizations and international donors such as

Britain, Sweden and the United States.

Demining experts talk of the resilience and courage of villagers who have carved paths through these fields of death by hurling boulders into them to serve as a series of stepping stones.

The United States is the largest single donor to humanitarian demining programs, spending \$2.3 billion across 90 countries since 1993 — or 30 percent of the global total. Of that, \$53 million has gone to Mozambique.

The toll in Mozambique has been heavy. Exact figures are unknown, but the National Demining Institute recorded 2,145 casualties up to 2001 without breaking down the figure between injuries and deaths. In recent years, the number of annual accidents has slipped to single digits.

About 182,000 land mines have been cleared since 1993, of which about 150,000 were safely removed by the HALO Trust, the British NGO championed by the late Princess Diana.

Mozambique also has benefited from some pioneering cutting-edge technology, including sophisticated metal detectors, that helped speed up the work. Perhaps the most unusual innovation is the use of rats. Rats are trained to detect TNT beneath the ground in return for a treat. They can scour an area much faster than humans.

Namibia's POHAMBA WINS MO IBRAHIM PRIZE

AGENCE FRANCE-PRESSE

Namibia's outgoing president has won the Mo Ibrahim Prize for good governance in Africa, the world's richest award that has seen a dearth of worthy candidates.

Hifikepunye Pohamba, 79, is only the fourth winner of the \$5 million annual prize, launched in 2007 to encourage and reward good governance across the continent. Although elections are now the rule in Africa, many leaders try to push through constitutional changes to stay in power, sometimes well into old age, while others die in office or are forced to flee. Pohamba was honored by choosing a different path.

"President Pohamba's focus in forging national cohesion and reconciliation at a key stage of Namibia's consolidation of democracy and social and economic development impressed the prize committee," said Salim Ahmed Salim, chairman of the Mo Ibrahim Prize committee and a former prime minister of Tanzania, during the announcement of the award in Nairobi, Kenya.

The award, founded by Sudanese-British telecommunication entrepreneur and billionaire Mo Ibrahim, is given to a democratically elected former head of state who left office in the previous three years and who demonstrated "exceptional leadership" while abiding by constitutional term limits.

Winners are given \$5 million over 10 years with an additional \$200,000 a year for life — seen as inducement to good behavior by offering enough money that leaders need not indulge in large-scale corruption before retiring.

Salim praised Pohamba's "sound and wise leadership" and his "humility" during two constitutional terms. Pohamba did not contest national elections in December 2014 and left the presidency in March 2015.

The soft-spoken Pohamba has been hailed for reconciling with opponents, pushing for gender equality in politics, and increasing spending on housing and education. The prize has only been awarded three other times — in 2007, 2008 and 2011 — due to a lack of suitable candidates. The winners were ex-presidents of Mozambique, Botswana and Cape Verde.



Outgoing Namibian President Hifikepunye Pohamba, left, talks with then-Mozambican President Armando Guebuza during the U.S.-Africa Leaders Summit in Washington, D.C., in 2014. Pohamba is the fourth winner of the Mo Ibrahim Prize for good governance in Africa. AFP/GETTY IMAGES



Lagos Photo Festival Turns Negatives Into Positives

AGENCE FRANCE-PRESSE



ince its inception five years ago, LagosPhoto has become one of the biggest photography

festivals in Africa. The annual event tries to reflect life on the continent through the eyes of Africans, rather than just photographers from elsewhere.

In 2014, organizers turned to fantasy and fiction to encourage artists to go beyond showing the realities of daily life and worries about basic necessities. "The aim is to give Africa, Nigeria, Lagos — the city [and] its people — a voice," said founder Azu Nwagbogu. "We want people to be able to tell their stories."

Photos on vast canvasses held up by bamboo lined the paths of Freedom Park, a cultural center and green space in downtown Lagos. Similar prints were displayed in art galleries, a hotel and a fashion boutique in Nigeria's economic capital.

At the Eko Hotel, in the Victoria Island area, Mary Sibande displayed her work, *Long Live the Dead Queen*, a series of photos featuring a female protagonist called Sophie. Sophie, a voluptuous black woman in a majestic blue Victorian dress and a housemaid's starched white apron,

is shown in fantastical images with grand accessories.

For the South African artist, whose female relatives all worked in service for three generations, the work is a way to ask questions about the role of women in African society.

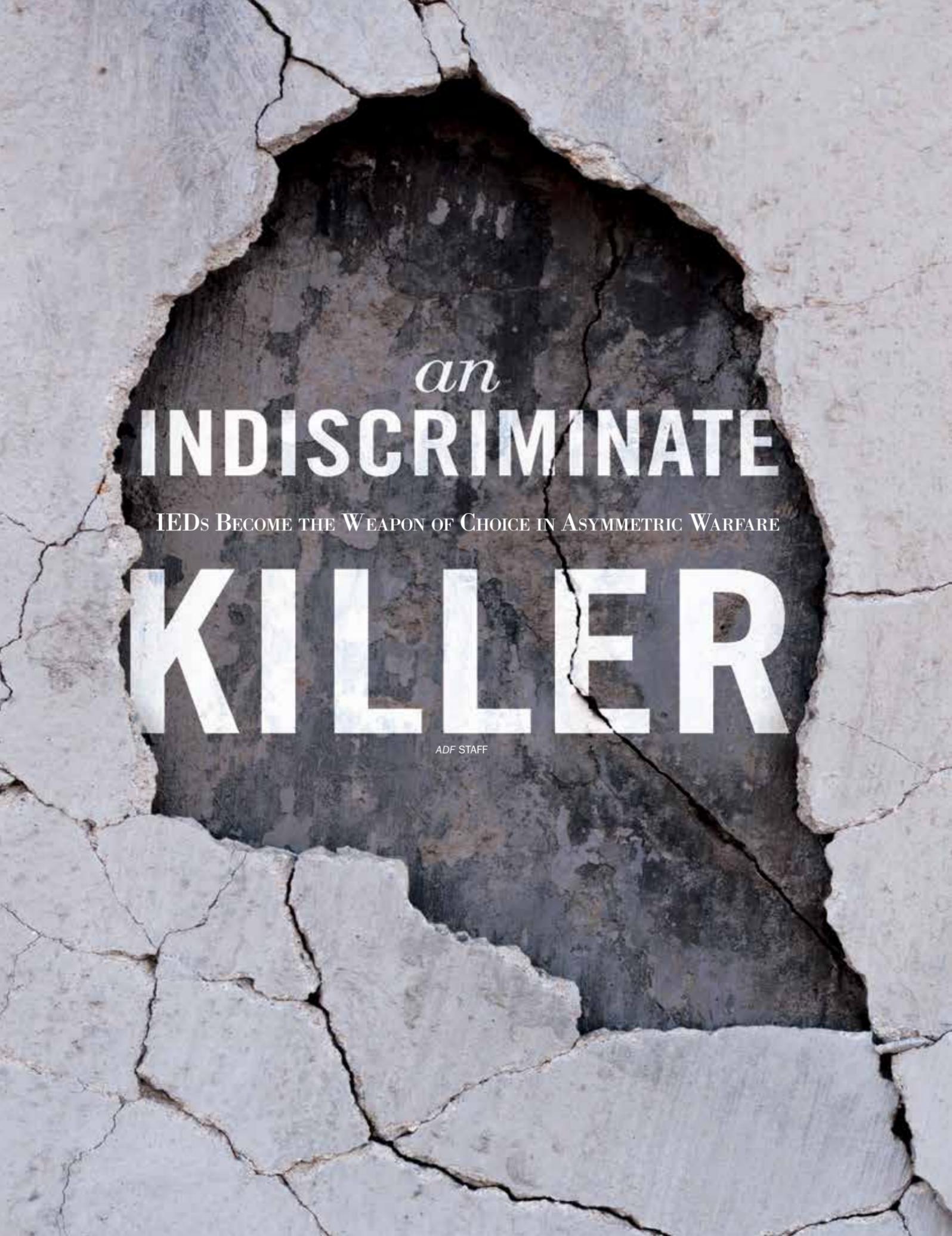
Several Nigerian photographers are among the 40 artists who exhibited in 2014. Ade Adekola explored the belief in reincarnation in the Yoruba culture of the southwest. Jide Odukoya portrayed the life of Africa's super-rich.

For Nwagbogu, who set up the African Artists' Foundation, African storytelling through African eyes is a key driver of the festival that first began in October 2010.

In debates and workshops, young Nigerians have been encouraged to study the exhibits and exchange photos to develop a more critical eye on their own daily life.

"The goal is to keep reclaiming contemporary visual culture, to tell our own stories and to empower more people," Nwagbogu said. "Photography is the most powerful [medium] because everyone can do it; everyone can get involved."

A photograph of a local rapper is displayed in Freedom Park at LagosPhoto.
AFP/GETTY IMAGES



an
INDISCRIMINATE
IEDs BECOME THE WEAPON OF CHOICE IN ASYMMETRIC WARFARE
KILLER

ADF STAFF

On Sunday, December 28, 2014, a sugar cane seller in Potiskum, Nigeria, died when she stepped on a bomb in a school football field. She was 12 years old.

The bomb was planted Sunday to be triggered the next day when the field would be crowded with children. Instead, the girl stepped on it early in the evening, when she was one of the only people on the field.

A few months earlier, a suicide bomber in Nigeria's Yobe state rode a motorized rickshaw to an outdoor venue, where people watched a televised football match. The bomb detonated, killing at least 21 people.

In both cases, the bombers were Boko Haram extremists using improvised explosive devices (IEDs). The group is said to have a substantial quantity of lethal and explosive chemicals since attacking and raiding a Chinese mining factory in May 2014.

This is the world of asymmetric warfare, in which extremists play by no rules, and targets can be anyone. Extremists want notoriety and inspire fear through indiscriminate, random attacks. For them, the higher the body count, the greater the achievement.

Perhaps the most notorious use of IEDs in Africa came in 2010 during the World Cup final. The Somali extremist group al-Shabaab triggered three IEDs in

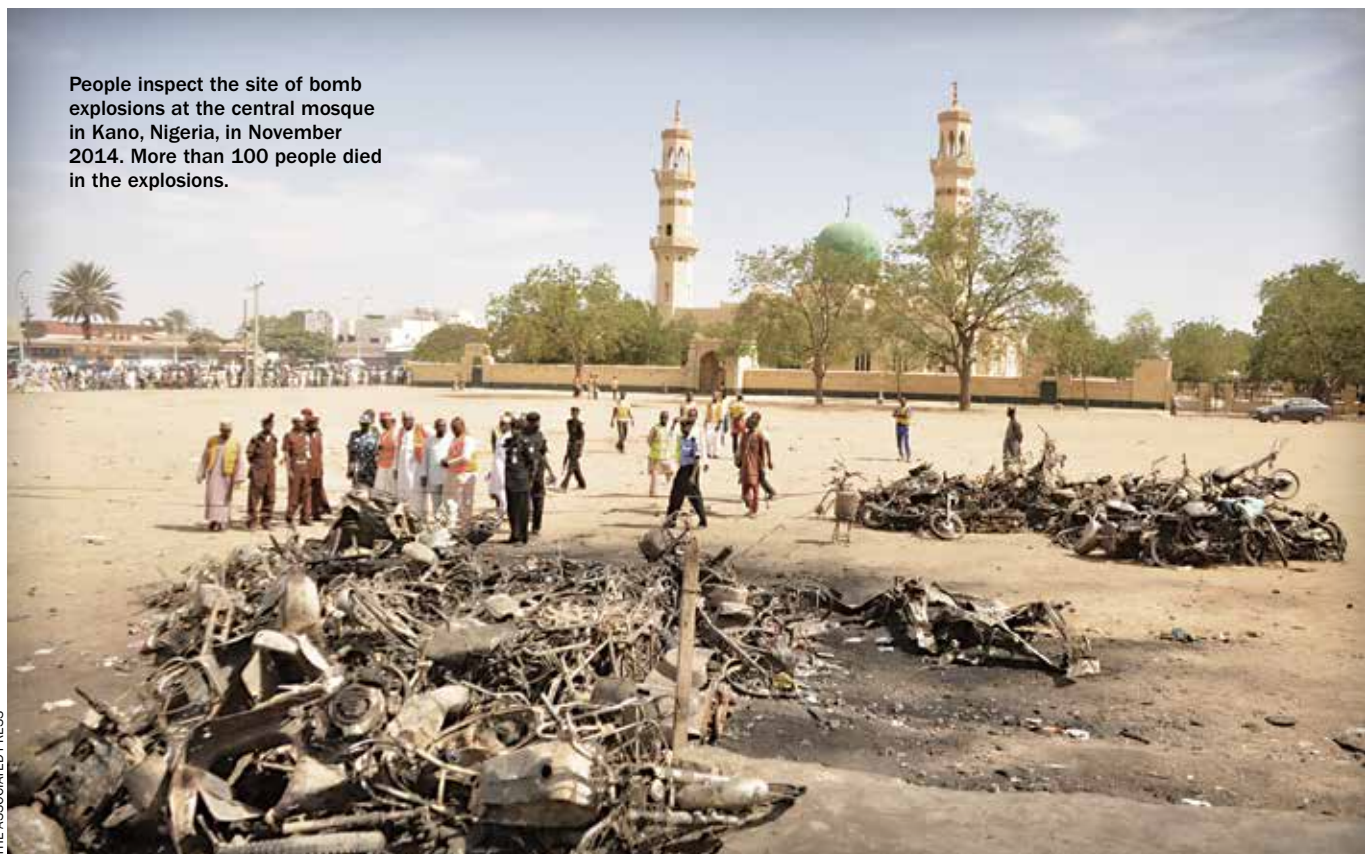
the Ugandan capital of Kampala, killing 74 people and injuring 70. The bombings targeted football fans watching the games on televisions. A Somali man's head was found at one site, leading investigators to believe a suicide bomber triggered the blast.

Boko Haram and al-Shabaab are not the only groups using IEDs on the continent. On January 6, 2014, a police officer was killed while trying to defuse an IED planted near a police station in Giza, Egypt, the news website Aswat Masriya reported. Weeks earlier, an IED exploded on a platform at Cairo's Ramses Railway Station, wounding three people. Such devices have become almost commonplace in Egypt, targeting security forces and public facilities since the ouster of former President Mohamed Morsi. Extremist Islamist groups are behind the bombs, authorities say.

There also were regular reports in 2014 of IEDs being used in Kenya, Libya and northern Mali.

"For bomb makers who use IEDs as a weapon, Africa is now their training ground," said a spokeswoman for the United States Joint Improvised Explosive Device Defeat Organization (JIEDDO). "They can train without being harassed, hide in plain sight, and practice their new skills on local populations, using IEDs against anyone with whom they have a grievance."

People inspect the site of bomb explosions at the central mosque in Kano, Nigeria, in November 2014. More than 100 people died in the explosions.



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At least eight African countries — Djibouti, Egypt, Kenya, Libya, Mali, Nigeria, Somalia and Tanzania — reported IED attacks in 2014.



A Somali Soldier takes pictures of the wreckage of a suicide car bomb attack that targeted a United Nations convoy in Mogadishu in December 2014. The bomb killed three people.

THE ASSOCIATED PRESS

At least eight African countries — Djibouti, Egypt, Kenya, Libya, Mali, Nigeria, Somalia and Tanzania — reported IED attacks in 2014. JIEDDO researchers said, for the 12 months ending in November 2014, there were 835 African IED events, a decrease of 15 percent from the previous year. Casualties, however, increased 41 percent, with 2,559 people killed and 2,010 wounded.

In 2014, more people were killed by IEDs in Nigeria than in any other African country. For the 12 months ending in November, Nigeria had 124 IED incidents, or 15 percent of the African total, but with 2,569 deaths and injuries, or 56 percent of the total for the continent.

BOOBY TRAPS

IEDs, also known as booby traps and roadside bombs, have been around for a long time. Although the first goal is to maim and kill, IEDs also are designed to create an environment of caution and distrust. They are highly effective at slowing troop movements. They have been described as the ultimate devices for psychological warfare.

Nigeria and Somalia are particular hot spots for IEDs. In Somalia, the weapons, probably assembled by members of al-Shabaab, are filled with military explosives such as cyclotrimethylene variants and pentaerythritol tetranitrates. They generally use commercial electric blasting caps. According to the American Terrorist



Rescuers remove a body from the scene of a car bomb attack in Mogadishu, Somalia, in October 2014. The bomb detonated while children were walking by, killing at least five people and wounding others.

A motorcycle is rigged to act as an improvised explosive device. The gas tank has been loaded with ammonium nitrate.

Explosive Device Analytical Center (TEDAC), insurgents usually trigger IEDs with motorcycle alarms or cell-phones. The radio-controlled motorcycle alarms are inexpensive, usually made in China, with tiny, inconspicuous remote controls.

Al-Shabaab tends to use ball bearings in its IEDs. When the devices are triggered, the blast sends the ball bearings out like bullets. More recently, seizures of such ball bearings have forced al-Shabaab to switch to other fragmentation materials, including small pieces of steel concrete reinforcement bars known as rebar.

Al-Shabaab began using anti-armor IEDs in mid-2011. They have been effective against lightly armored vehicles because of the power of the devices and a scarcity of effective countermeasures. The al-Shabaab



U.S. DEPARTMENT OF DEFENSE



U.S. DEPARTMENT OF DEFENSE

IEDs have since been found in Uganda and Kenya as well.

Military bomb expert John Myrick told The Associated Press that the more effective bombs and attacks in Somalia "indicate an increase in logistical support from some of the more sophisticated groups on the continent and also an increase in training."

Investigators say that, compared with IEDs found in other parts of the world, the al-Shabaab IEDs are of relatively poor quality and construction. Instead of the preferred method of wirelessly triggering IEDs, some of the devices use riskier direct wiring. One team of Uganda People's Defence Force Soldiers identified three men

along a road as being in the trigger-man and spotter positions to detonate an IED. They found the IED buried in the road, with 160 meters of wire leading to the triggerman position.

The devices typically are triggered by a pressure plate, often mounted atop a spring so that the weight of a passing Soldier or vehicle will compress the spring, completing a circuit and triggering the device.

IEDs recovered in Africa have been rigged with a variety of crude triggers. They have included pressure plates rigged with metal sheets separated by pieces of paper, pressure plates using saw blades, and bombs rigged with salvaged rocker switches

TAKING PRECAUTIONS WITH IEDS

ADF STAFF

A bomb squad officer approached a suspicious plastic bag in the Nigerian city of Kaduna. Wearing no protective gear, he looked inside the bag, which exploded, killing him. The state-run Nigerian Television Authority recorded the incident.

Experts say this death on February 14, 2012, could have been prevented through better training.

Soldiers have been studying IEDs and land mines for years, searching for ways to survive them. A few precautions have stood the test of time:

- ~ All Soldiers in high-risk areas should have training in the various types of IEDs and how to detect them. For example, during the Vietnam War, Viet Cong fighters noticed that American Soldiers were in the habit of kicking empty soda cans. The Viet Cong rigged empty cans with IEDs that triggered when kicked.
- ~ All Soldiers should have training in first aid. They need to know how injuries are caused by the pressure wave of the primary blast, the multiple types of wounds caused by the secondary blast, and injuries resulting from being thrown by the blast. Training in the treatment of shock is especially important.
- ~ Soldiers in risk areas should wear flak jackets and helmets at all times.
- ~ Vehicles employed in high-risk areas should be equipped with bags of fine sand on their floors as protection. Any material larger than fine sand becomes a missile in the event of an explosion.
- ~ When the situation allows it, passengers in armored vehicles should ride on top, rather than inside. Hatches on armored vehicles should be left cracked open, with the latch pin still in place, to permit the dispersion of the concussion of an IED explosion.
- ~ Any IED incidents should be reported immediately. The reporting should go beyond traditional intelligence channels; the military unit should have an IED/land mine information and coordination unit in place.
- ~ Foot Soldiers should be on the lookout for things that appear too easy — or too interesting. Things that might be considered war souvenirs or valuables are commonly rigged as triggering devices. Soldiers should be trained to be wary. The same is true of a single open door in an otherwise secured building. If it is necessary to occupy an empty building, it should be assumed that the building has been rigged with IEDs.
- ~ The somewhat-cleared foot path through an otherwise difficult-to-negotiate street or field is an obvious place for IEDs.
- ~ Other markers for planted IEDs include footprints that end abruptly, disturbed soil or sand, isolated boxes along a trail, abandoned vehicles and military equipment, and street trash that includes wires, strings, and bits of steel.
- ~ Screening pedestrians and drivers remains a key element of preventing the use of IEDs. In November 2014, security officers were searching pedestrians' bags at the gate of a frequently targeted area in Gombe, Nigeria, when a man tried to charge past. Onlookers overpowered the man, who was found to be armed with IEDs. Nigerian news outlets reported that a crowd burned the man alive on the spot.



A Somali Soldier walks past a building destroyed by a suicide car bomb that targeted a United Nations convoy in Mogadishu in December 2014.

THE ASSOCIATED PRESS



like those found in a house to turn the lights on and off.

SOPHISTICATED TECHNIQUES

Even in cases where extremists use crude IEDs, their tactics, honed by experience, are getting more sophisticated. In March 2013, a bomb disposal unit found IEDs rigged to a motorcycle alarm in the coastal city of Merca in Somalia. The unit reported that one device was buried deeper than usual, probably to prevent detection by bomb-sniffing dogs. It was also unusual in that it had two main charges instead of one. The bomb unit also reported that a second IED was employed as bait, placed in such a spot that

the bomb-recovery vehicle would have been parked directly over the actual IED while dealing with the bait device.

The IEDs assembled in Somalia may be crude, but they are effective. In 2013 and 2014, al-Shabaab IED targets included United Nations workers and facilities, and Aden Adde International Airport. For the year ending October 1, 2014, Somalia had 432 IED incidents with 1,251 casualties.

Somali IEDs usually contain explosives taken from artillery rounds or mines. However, TEDAC investigators have found homemade explosives in some devices, and mixes of military and

commercial-grade explosives.

An IED can be almost anything that has material that can cause injury, and something to make it blow up. The variations are endless, including devices made from existing weapons or “home-made” explosives.

The main charge is often made from military munitions, including the plastic explosives C-4 and PE4, but other materials can be adapted, including the civilian explosive TNT. An explosive can be made from ammonium nitrate, found in ordinary fertilizer. Reactive chemicals and flammables such as gasoline also can be used to make IEDs.



This 13-year-old Nigerian girl was given to Boko Haram by her father. The extremist group strapped explosives to her body to use her as a suicide bomber. When she refused to detonate the bomb, authorities rescued her.

THE ASSOCIATED PRESS

THREE TYPES OF IEDS

Experts generally classify IEDs into three groups:

Package Type IEDs include homemade bombs and devices made from existing weapons and explosives. They are typically thrown at targets or hidden along roads or in buildings. The builders of package IEDs have become quite inventive in disguising them, making them look like such things as construction material or cement blocks. The IED container can be almost anything, from an empty soda can to an animal carcass.

Vehicle-borne IEDs, or VBIEDs, use a vehicle as the package or container that delivers explosives to the target. The vehicles can range from large trucks down to donkey-drawn carts. The larger the vehicle, the larger the amount of explosives that can be moved. In 2011, a van packed with explosives was driven to the United Nations building in Abuja, Nigeria, where it was detonated, killing 23 people and injuring 76. It is believed to have been Nigeria's first VBIED.

Suicide bomb IEDs are designed to

have a high-explosive or fragmentary effect. Although the person wearing the bomb typically dies, the goal is to take out as many Soldiers and civilians as possible. The person wearing the bomb usually detonates the device using a hand-held switch or button. When a suicide bomber is discovered, deadly force is generally the only option. Soldiers trying to stop a suicide bomber should fire their weapons from a protected position or from as far away as possible.

Al-Shabaab has used suicide vests for years. TEDAC reports that there are some signature designs common to some of the vests, such as a particular type of knot used to secure wire connections, or nine-pin male-female quick-connect devices such as those used in car stereos, or white plastic rocker switches.

Regardless of the type of IED, they have common designs, including a switch trigger, a fuse, a main charge, a power source for the trigger and a container.

There are basically two types of triggering devices — electric and manual. Electric firing devices are almost limitless in their variations, but they always require a power source, usually a battery. If the battery fails, the IED cannot be deployed.

Manual triggering devices are more basic and less varied. Mechanical triggers require pressure, pressure release, a pin removal or trip-wire activation.

TECHNIQUES TO LOOK OUT FOR

The very name of IEDs — “improvised” — shows how varied these devices can be. GlobalSecurity.org says there are some practiced techniques to look out for:

Coupling is the linking of one explosive to others, usually with a detonating cord. When the first explosive is detonated, it detonates the linked explosives. This technique is used to disable anti-mining equipment.

Rolling is as much a tactic as a technique. A vehicle will pass safely over an initial explosive device, but set off a second fused explosive, directly under the vehicle or the one behind it. This second explosive will then set off the first. When this tactic is used with directional fragmentation mines, the results can be devastating.

Boosting is when mines, often salvaged, are buried in stacks. Only the bottom explosive, the one buried the deepest, is fused. This makes the stack difficult to detect and, when detonated, increases the force of the explosion.

Daisy chaining involves linking small

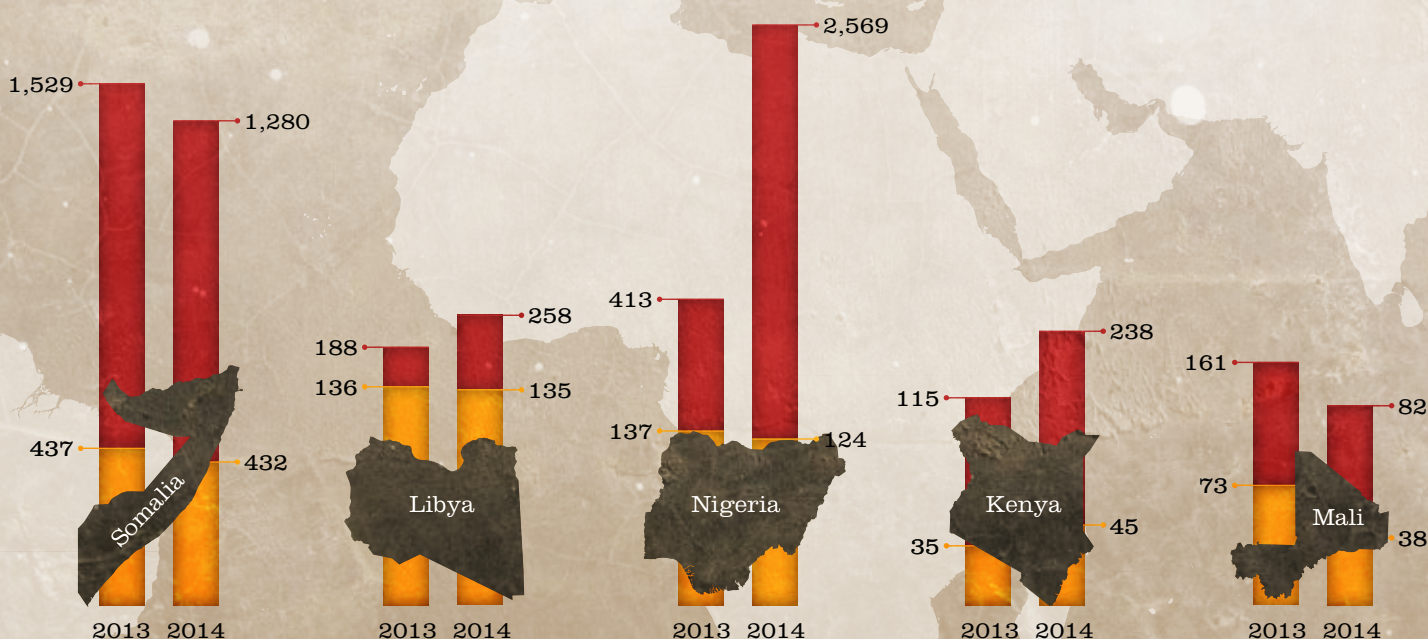
IED CASUALTIES IN AFRICA

The United States Joint Improvised Explosive Device Defeat Organization keeps track of IED incidents throughout the world. These are the IED incidents in Africa in recent years. The figures are for 12-month periods ending in November, not calendar years.

| Year | Number of incidents | Fatalities | Injuries |
|------|---------------------|------------|----------|
| 2012 | 865 | 1,223 | 2,120 |
| 2013 | 978 | 1,189 | 1,642 |
| 2014 | 835 | 2,559 | 2,010 |

IED HOT SPOTS ON THE CONTINENT:

Incidents Casualties



ADF ILLUSTRATION

anti-personnel mines and equipping them with trip wire or a detonating cord. When one mine is tripped, the rest of the mines also detonate, creating a large, lethal area.

Anti-tank mines are designed to be detonated by the weight of tanks, not Soldiers. **Sensitizing** nonmetallic anti-tank mines involves cracking open the pressure plate that triggers the device, and removing the spring, greatly reducing the pressure needed to detonate a device powerful enough to take out a tank. Removing the pressure plate entirely from metallic anti-tank mines has the same effect. Or, a small anti-personnel mine can be rigged to trigger a much larger anti-tank mine.

HAND GRENADES AS IEDs

Extremists have been converting hand grenades to IEDs for decades. Ordinarily, grenades are tossed into buildings or from bridges. But when they are rigged as booby traps, Soldiers have to take special precautions.

The **grenade in a can** was one of the first adaptations as an IED. A grenade's safety pin is removed, its safety lever is compressed, and the grenade is put in a metal can or other container. A string or trip-wire is rigged across a path or tied to something such as a doorknob. When the string is pulled, the safety lever is released, detonating the grenade.

The **glass jar grenade** is nothing more than removing the safety pin of a grenade and putting the grenade in a heavy glass jar that holds back the safety lever. The grenade will then only detonate when the glass is broken, making it ideal for dropping from heights, or putting in the path of vehicles.

The **rubber band grenade** is fire-activated. The safety pin of the grenade is removed, and the safety lever is tied down with a strong rubber band. The device is placed in an area that is expected to be burned by the enemy or in an area where the bomber can start the fire. When the rubber band burns away, the grenade ignites. □



A DEADLY QUEST



EXTREMIST GROUPS SEEK CBRN WEAPONS, BUT WHAT IS THE LIKELIHOOD OF AN ATTACK?

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Instability in the wake of the Arab Spring and a new crop of aggressive terrorist organizations, including the Islamic State of Iraq and Syria (ISIS), have prompted some to announce that we are entering a new era of extremism. This means it is necessary to look at old threats from new angles, such as the use of chemical, biological, radiological and nuclear (CBRN) weapons by terrorist organizations.

Has extremism changed to a degree that contemporary terrorist groups may pursue CBRN? Previously reluctant groups could overcome what counterterrorism researcher Adam Dolnik calls “motivational constraints” to using CBRN weapons due to the allure of media attention and a desire to prevail in competition with other terrorist organizations. They also might take advantage of changes in CBRN weapon availability, method of delivery and degree of complexity. To examine the threat, it is important to look at the three main aspects of a terrorist attack which have been defined by terrorism expert James Forest as intention, capability and opportunity.

A police officer takes part in a chemical, biological, radiological and nuclear field exercise in Hong Kong. REUTERS

TERRORIST MOTIVATORS

Media attention

Terrorists use violence as a form of communication to influence their audience. Therefore, media attention is a central goal of many terrorist organizations. The media are most attracted to high-casualty terror incidents, such as aircraft hijackings and attacks against targets associated with Western countries. Conversely, attacks in places such as Iraq and Afghanistan are perceived as normal and receive less international media attention and public interest.

To maintain or regain media attention, terrorists “must heighten the threshold for the spectacular assault,” according to Robert Kupperman of the U.S. Arms Control and Disarmament Agency. This helps to explain the tendency of terrorists to focus on maximizing the number of victims by acting indiscriminately against civilian

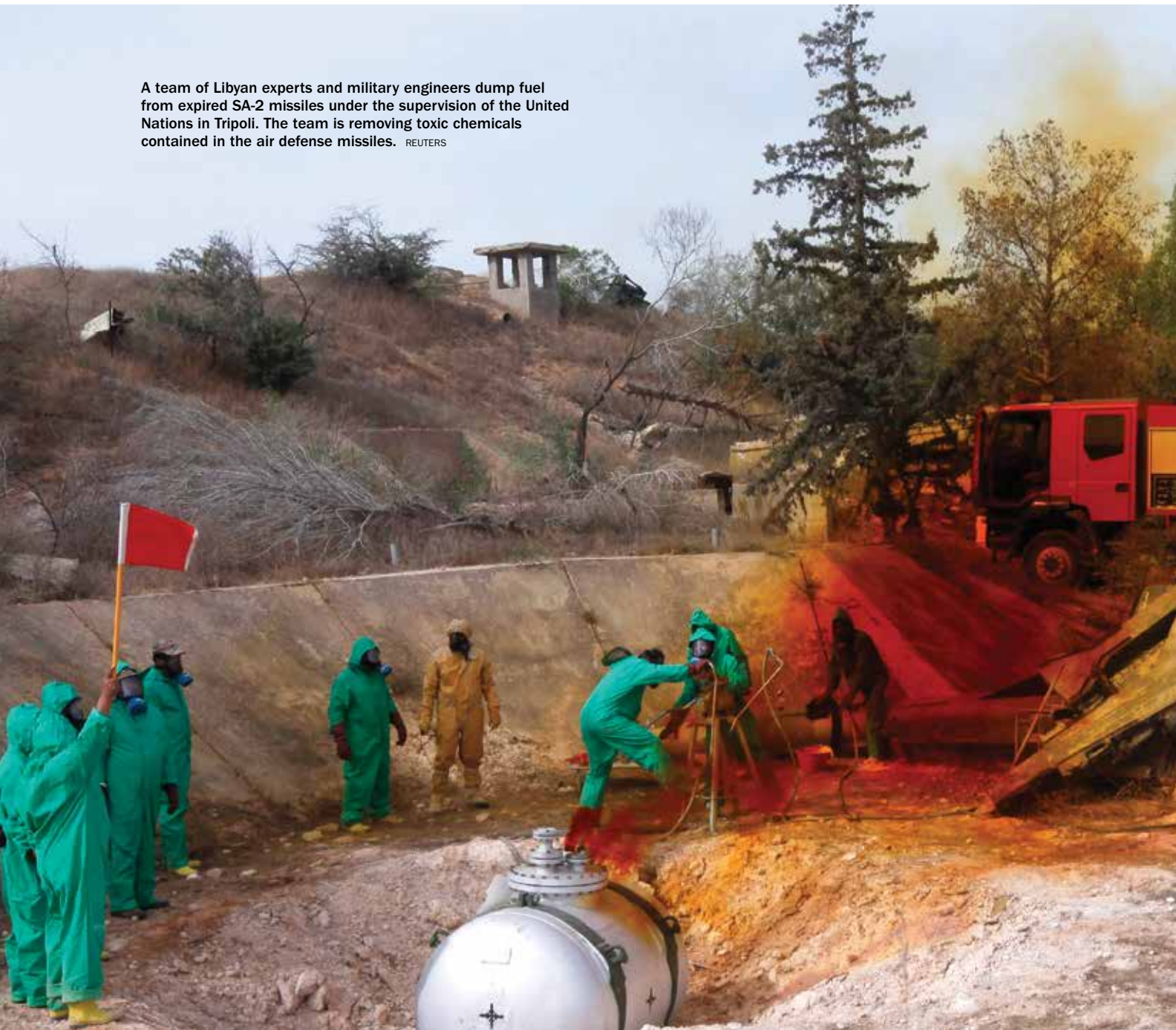
targets and by increasing the use of suicide attacks.

Compared to conventional terrorist tactics, CBRN attacks would provide the needed stimulus to attract media attention. Weapons of mass destruction (WMD) have been called “weapons of mass disruption” due to their wide-ranging impact on society.

WMD use by terrorists is the highest threat to the security of the West and is its greatest fear. Therefore, it may be enough for terrorist organizations to simply threaten to use such weapons. For example, on December 24, 1998, Osama bin Laden stated in an interview with *Time* magazine that “acquiring weapons (WMD) for the defense of Muslims is a religious duty,” a statement that drew the attention of global media organizations and Western governments.

One could argue that the use of CBRN weapons would discredit a terrorist group, especially when people identify

A team of Libyan experts and military engineers dump fuel from expired SA-2 missiles under the supervision of the United Nations in Tripoli. The team is removing toxic chemicals contained in the air defense missiles. REUTERS



with the victims. But extremist groups believe the intense media coverage and massive audiences are worth that risk. An attack would facilitate the spread of fear and bring a net increase in customer interest enabling perpetrators to broadcast their message on an unprecedented scale.

A desire to stand out amid the steady flow of terrorism reporting is a strong potential motivator for contemporary extremist organizations to use CBRN weapons.

Competition between extremist organizations

When al-Qaida issued a statement on February 2, 2014, that it had no connection to ISIS, it was a sign that the fight for the world's top position among the extremist organizations had reached a new level of intensity. Al-Qaida's fear of losing global influence and credibility among extremist followers and affiliated groups like

al-Qaida in the Arabian Peninsula and al-Qaida in the Islamic Maghreb, which are favoring ISIS, could be regarded as a potential motivator to stage another spectacular terror attack. Al-Qaida could use the publicity it would gain to demonstrate its capabilities to a global audience and reclaim its leadership position among extremist organizations. To achieve the needed psychological impact and harm the greatest number of victims, al-Qaida is now more likely to attempt a CBRN attack than in the past. It will assess the feasibility of CBRN in this context. Most analysts agree that such an event would likely bear al-Qaida's signature of simultaneous and well-coordinated suicide attacks on multiple targets associated with the West.

CBRN TERROR POTENTIAL

Acquisition of chemical weapons

The acquisition of ready-to-use military-grade chemical weapons in a quantity that would allow for an effective terrorist attack and of the necessary delivery systems would be possible only for nonstate actors under three circumstances: (1) through transnational organized crime channels (TNOC); (2) through a rogue state in possession of chemical weapons, as could happen with Hezbollah and the Syrian Assad regime; or (3) by forcefully seizing weapons from state-owned stockpiles, as may have already happened during the Syrian insurrection, or during the ISIS seizure of the disused Iraqi chemical weapons complex in Muthanna.

The development and manufacture of chemical weapons in an adequate quality and quantity would most likely be too complex and expensive for most terrorist organizations, as demonstrated by Aum Shinrikyo, the group that released the nerve agent sarin into train cars on the Tokyo subway in 1995, killing 12 and injuring about 6,000. It is easier to acquire toxic dual-use chemical substances meant for industrial or agricultural applications than military-grade chemical weapons.

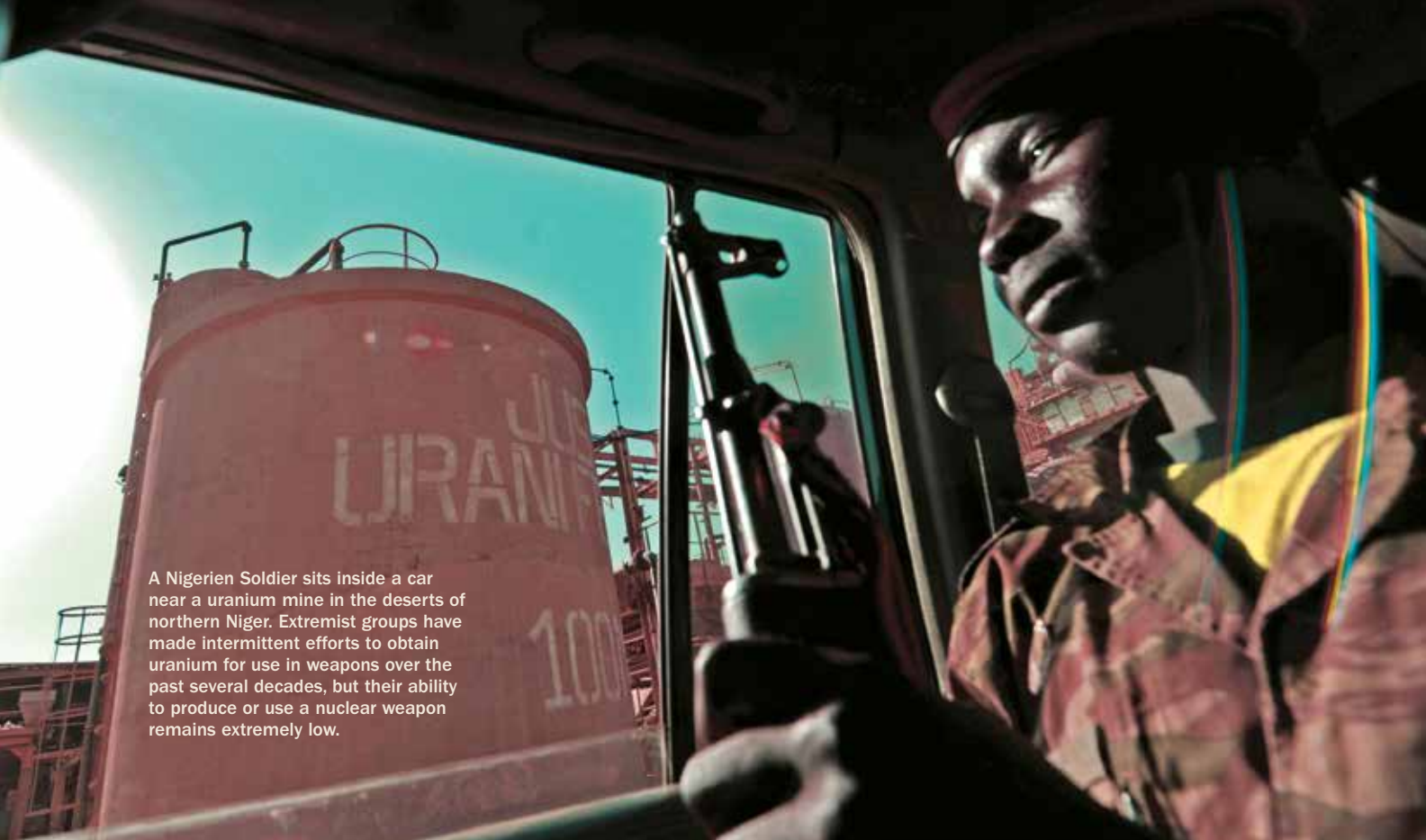
Usability of chemical weapons

The simplest method of chemical weapon delivery is to release chemical agents in the target area, as was done in the 1990 attack by the Liberation Tigers of Tamil Eelam on a Sri Lankan military base in East Kiran. Extremists could also use a structure's heating, ventilation and air-conditioning system to disperse the chemical.

Improvised chemical weapons made from conventional explosives and dual-use chemicals, such as toxic industrial chemicals or pesticides, are the most likely type of CBRN weapon for terrorism. The low degree of complexity and widespread availability of the necessary components make this kind of chemical weapon attractive to extremists with budget constraints.

The 2004 al-Qaida plot to use chemical weapons against official buildings in Amman, Jordan, and the 2003 al-Qaida New York City subway plot, both involving dual-use chemicals, show that terrorist organizations have already explored such methods. Another possible CBRN





A Nigerian Soldier sits inside a car near a uranium mine in the deserts of northern Niger. Extremist groups have made intermittent efforts to obtain uranium for use in weapons over the past several decades, but their ability to produce or use a nuclear weapon remains extremely low.

AFP/GETTY IMAGES

terrorism scenario would be the release of toxic substances through an attack on, or sabotage of, an industrial installation containing toxic chemicals situated close to the intended target area. A terrorist attack of this kind could have the same impact as the 1984 Bhopal, India, industrial gas leak that killed thousands and injured half a million.

Acquisition of biological weapons

The pathogens necessary to construct a biological weapon could be harvested in nature, acquired through TNOC networks or stolen from medical research facilities. Although terrorist organizations could produce pathogens themselves, the process would involve high-tech production facilities capable of turning out adequate quantities and the proper means of storage, transportation and delivery of the specific agent. Aum Shinrikyo, for example, was unable to successfully develop and utilize biological weapons, despite massive investment, and decided to use chemical weapons instead.

Usability of biological weapons

Biological pathogens can be dispersed through a ventilation system, the food or water supply, through objects like the mail, or can be placed in an improvised explosive device (IED). The problem with the IED method is that up to 50 percent of the pathogen is destroyed by the dispersal explosion, according to Forest's research.

There is less risk of biological weapons use in contemporary terrorism because of the inherent complexity of acquisition, storage, transport and delivery. In addition,

once the problems of identifying the specific agent are overcome, its effect on human targets can usually be medically mitigated, according to research by Edward Hoffer.

The high degree of complexity related to development and delivery, in comparison to other types of CBRN weapons, and the lack of instant impact on the target population due to the pathogen-specific incubation time, make biological weapons a poor choice for a contemporary terrorist group, according to Forest.

Acquisition of radiological weapons

Several highly radioactive elements suitable for the construction of radiological dispersal devices (RDD) or radiation-emitting devices (RED) are widely obtainable because of their use in medicine and industry. Terrorists can acquire these materials through criminal networks or by stealing them from unsecured medical or industrial facilities.

Although the construction of a radiological device is a rather simple mechanical process, personnel risk exposure while handling radioactive substances during the acquisition of the materials, the construction of the device, and its storage, transport and delivery.

Usability of radiological weapons

RDDs can be constructed in any form currently used for conventional IEDs. The radiological substances would increase the secondary effects of the IED, such as contamination of the target area and radiation poisoning of victims and first responders.

Despite increased security measures and built-in safety mechanisms against direct and indirect attacks for nuclear power plants worldwide, a terrorist attack on such a facility to turn it into a huge RDD should not be ruled out.

REDs are delivered by placing a radioactive substance where radiation will affect many people, such as a subway station or airport, an indoor stadium, a church, a government center or an office building. The 1995 Moscow Ismailovsky Park incident, which remains the only known attempt to use radiological weapons, demonstrates the potential of a RED. Radiological weapons will most likely cause widespread fear and panic, especially when the target population becomes aware of the contamination. "The psychological effects would be the most devastating, mainly because of the automatic association of the word 'radioactive' with the word 'nuclear' in the minds of the majority of the world population," Adam Dolnik wrote in 2008 when he was director of research programs at the Centre for Transnational Crime Prevention in Australia. "In reality, however, more people would probably die in stampedes and car accidents resulting from the panicking population's desire to leave the affected area immediately, than from direct effects of radiation."

Because of the high psychological impact on the target population, the use of a radiological weapon in a terrorist attack is possible. This type of CBRN weapon could be used for a large-scale, high-impact terrorist attack by a well-funded extremist organization.

Acquisition of nuclear weapons

After the breakup of the Soviet Union, there was concern that terrorists might acquire nuclear weapons or weapons-grade material from one of the former Soviet republics. Al-Qaida made several attempts to acquire weapons-related materials and knowledge from elements in former Soviet republics, Pakistan and sources in Africa, according to Rolf Mowatt-Larssen, a former director of Intelligence and Counterintelligence at the U.S. Department of Energy.

Besides the risk of nuclear proliferation posed by the arsenals of Pakistan and India and the weapons programs of North Korea and Iran, TNOC networks remain the most likely sources for nuclear weapons, components and radioactive materials.

The Umma Tameer-e-Nau, run by Bashiruddin Mahmood, or Abdul Qader Khan's network, are two examples of TNOC networks that were active in this field before being shut down.

Usability of nuclear weapons

The United States and other nations consider a nuclear armed terrorist group to be the worst-case scenario. Al-Qaida has obviously also recognized this potential since it is known to have run a nuclear weapon program under Abdel Aziz al Masri since 1999, though it has not pursued this type of weapon recently, Mowatt-Larssen wrote.

The use of nuclear weapons as a terrorist weapon is very unlikely. It's generally assumed that nonstate actors don't have the capacities to acquire weapons-grade material in the required quantities, manufacture the weapons parts in isolation, construct a working device from these parts, and maintain the device properly during storage to keep it operational.

Extremist organizations intend to acquire CBRN weapons of all types to a certain degree. The capability of an organization to acquire or construct CBRN weapons depends on the specific group and the type of weapon. The CBRN capabilities of an established, well-funded, experienced group such as al-Qaida are higher than those of less established groups in Africa or parts of the Middle East.

Intent to acquire and use biological and radiological weapons is comparatively low. Extremist organizations can acquire or produce biological weapons, but they are severely limited by the complexity and costs. Acquiring materials and components for radiological and nuclear weapons was easier after the breakup of the Soviet Union, but opportunities are limited today. Although al-Qaida displayed the intention to acquire nuclear weapons in the 1990s and early 2000s, it seems to be less of a priority now.

The nuclear capabilities of nonstate actors, including extremist organizations, can be regarded as very low to nonexistent.

There is no evidence of a significant change in capabilities for any of the different CBRN technologies in recent years. The acquisition and use of chemical weapons seems to be of a higher priority than other types of CBRN weapons. The agents and materials for chemical weapons are generally more affordable, easier to acquire, and safer and simpler to construct, handle and deploy. The ongoing war in Syria, where there are still military-grade chemical weapons, has undoubtedly facilitated the acquisition of such weaponry.

There have been several cases in recent years in which extremists attempted to acquire and use chemical weapons, usually toxic dual-use chemicals, that are easier to obtain and less complex to use in improvised weapons. The case of ISIS seizing the unused Iraqi chemical weapons complex in Muthanna is an alarming indicator for this trend.

As a result, the most likely extremist CBRN terrorism scenario involves improvised chemical weapons attacks. There is incentive and opportunity to use this affordable and unsophisticated type of CBRN weapon to gain the attention of international media in an attempt to establish dominance in the current extremist infighting and power struggles. Considering all the above, the use of certain types of CBRN weapons by contemporary extremist organizations has become more likely. □

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Defending Hard-Won Gains >

**A Conversation with the
AMISOM Force Commander**

PHOTOS BY AMISOM



AMISOM Force Commander Lt. Gen. Silas Ntigurirwa inspects African Union Soldiers before his departure from Somalia on December 15, 2014.

Lt. Gen. Silas Ntigurirwa was the force commander of the 22,000-person African Union Mission in Somalia (AMISOM) from December 2013 to December 2014. The first Burundian to hold the post, he arrived in Somalia after a long military career during which he specialized in overseeing complex disarmament, demobilization and reintegration processes in Burundi. The 46-year-old officer is married with four children. He has held numerous posts in his home country, including command positions at the platoon, company and battalion levels. He also served in Côte d'Ivoire as chairman of security sector reform and the transformation of defense and security. Ntigurirwa spoke with ADF by phone from Mogadishu in December 2014. This interview has been edited to fit this format.

ADF: One of AMISOM's recent successes was Operation Indian Ocean, in which forces were able to retake a large amount of coastal territory held by al-Shabaab, kill key commanders and draw al-Shabaab defections. Could you describe this operation, including its planning and lessons learned?

NTIGURIRWA: Operation Indian Ocean was very successful and was done mechanically. Each sector, for example, had its own objectives to capture. It was planned in a manner where many front lines were opened by sequence, and al-Shabaab terrorists encountered many problems from one front to another because of the tactics we used. This operation was also announced by several media houses — local and international — and all objectives were well-known by al-Shabaab and AMISOM forces. This means that all forces were ready and prepared. So this international coverage participated in the success of the operation because when they were announcing the information, all the world was informed and it was a psychological fight against al-Shabaab.

ADF: These coastal towns had been key economically because they financed al-Shabaab — is that correct?

NTIGURIRWA: This is very correct. The capture and the liberation of these coastal towns such as Baraawe from al-Shabaab command weakened them because these ports were used by al-Shabaab to export charcoal and to import ammunition and some arms. So we don't have any doubt that this situation where we captured all these coastal towns from al-Shabaab will financially weaken them. We are sure that the liberation of these coastal towns will push the supporters of al-Shabaab in the local population to withdraw their support and join the Federal Government of Somalia.

ADF: What is the structure of AMISOM?

NTIGURIRWA: AMISOM is structured into sectors. Sector 1 is under the Ugandan contingent, reinforced by a part of the Burundi contingent. Sector 2 is under the Kenya Defence Forces; Sector 3 is under Ethiopia National Defense Forces; Sector 4

is under the Djibouti contingent and reinforced by one battalion from the Ethiopia National Defense Forces; Sector 5 is under Burundi National Defense Forces; and Sector Kismayo, which is a multinational sector, is under command of Sierra Leone. Also, this Sector Kismayo is composed of troops from Burundi and Kenya Defense Forces as well.

In AMISOM, there are three components. We have a civilian component, military component and police component. The civilian component normally supports the military component and the police component, and they work very closely with the Federal Government of Somalia.

ADF: With so many nations contributing troops, how have the AMISOM forces overcome interoperability problems?

NTIGURIRWA: AMISOM is a multinational mission composed of several contingents from countries like Burundi, Djibouti, Ethiopia, Kenya, Sierra Leone and Uganda. These are the contingents that have troops on the ground, militarily, but there are also some countries that have staff officers in AMISOM. So the

issue of the language barrier is a common problem for all of the contingents, particularly when we want to communicate to the Somalis, who don't speak English or international languages. So to overcome the issue of a language barrier, we normally use interpreters. AMISOM recruits Somalis who know English well and the local languages. The second challenge is in terms of tactics and doctrine, because there are different considerations and differences in several countries. There is common pre-deployment training for all contingents. This pre-deployment training is organized by ACOTA [Africa Contingency Operations Training & Assistance] and other partners. It's the same in Uganda and Kenya, so this training is a common vision for these peacekeepers in the Somalia mission. As long as we have this common vision and the same mandate to liberate Somalia from al-Shabaab ideology, there is not much of a problem of interoperability. Another key point is at the command level because when we have a joint meeting with all the sector commanders, we have the same vision and the same objective. When each sector commander has to ask the question which is his concern, the response and the solution is agreed by all of them. So this is a good strategy, which we

use to overcome differences which sometimes make the mission complicated.

ADF: What is the status of the Somali National Army? How close is it to providing security for the country?

NTIGURIRWA: The Somali National Army for now is at the stage that it cannot work alone; it needs to be supported by AMISOM. This is one of the reasons that we conducted the joint operation. These forces face logistical problems and lack professional training at the command level. This is why AMISOM and our partners have worked to train the Somali National Army and to support them in terms of logistics and technical capabilities. Actually, AMISOM has already trained 17,950 troops, for example, with a human rights course. So we hope with this training there is a significant level of progress that is observed in joint operations. For instance, we relied on the Somali National Army more in Operation Indian Ocean than in the last one, Operation Eagle, so we hope that with these joint efforts with AMISOM and other partners, the Somali National Army will achieve its goals as soon as possible.

ADF: In recent days, al-Shabaab has launched a number of brazen attacks, including detonating a car bomb near a United Nations convoy close to the Mogadishu airport on December 3, 2014. What do you make of these attacks?

NTIGURIRWA: Al-Shabaab has changed tactics, and now they are using asymmetric warfare. These tactics are guerrilla tactics, and sometimes they are using young people in some communities that are supporting them. The militants go among the population. So what AMISOM is doing in order to overcome the threat is to particularly collaborate with Somali national institutions and security institutions in order to be supported by all the population. In this regard we don't have any doubt that these asymmetric tactics will be weakened and defeated, because we will look to work with the Somali population and use other means to collect information to know [the hideouts] of al-Shabaab. We also undertake cordon and search operations jointly with SNA, particularly in Mogadishu, in order to avoid any infiltration of al-Shabaab in the capital and also in the liberated towns. These tactics help us to capture some IEDs, some guns and ammunition,

“al-Shabaab is now weak. There is no doubt. But we have to continue to reinforce the strong message against al-Shabaab in order to push them to destroy themselves.”

– Lt. Gen. Silas Ntigurirwa



AMISOM Force Commander Lt. Gen. Silas Ntigurirwa of Burundi, center, and Somalia Chief of Defence Forces Maj. Gen. Dahir Aden Elmi, left, are briefed about a failed attack on the Somali Parliament building in May 2014.

and we have caught many materials that al-Shabaab uses to build IEDs. This was one of the effective tactics, particularly in the towns.

With Operation Indian Ocean, we've made so much progress. Now, 80 percent of the territory is under AMISOM control and control of the Federal Government of Somalia, except for some small pockets that need to be addressed in the near future. Probably [this will be addressed in 2015] in order to liberate all of Somalia.

ADF: It seems that the shifting strategy by al-Shabaab toward using more asymmetric tactics indicates it doesn't think it can hold territory anymore. There have been 26 towns liberated by AMISOM over the past year. Do you think AMISOM will continue to consolidate its gains in 2015?

NTIGURIRWA: Al-Shabaab is now weak. There is no doubt. But we have to continue to reinforce the strong message against al-Shabaab in order to push them to destroy themselves. Now they are out of options except asymmetric warfare. They are not able to make a frontal attack on our forces. We have to continue to reinforce our security measures against them. AMISOM has paid a very big sacrifice, including the loss of lives.

ADF: Now that many of these towns have been liberated, is AMISOM seeking to open supply routes so humanitarian aid, commercial goods and aid workers can get in?

NTIGURIRWA: This is a very key issue because when we are liberating towns, first of all we have to separate the innocent people from the terrorist groups. We know that most of them run away, and when we capture the town, most of the population comes back. These activities help so much to win the hearts and minds of the local population because when they come back, they find AMISOM forces and SNA forces ready to receive them and provide the basic help they need. This creates good will between the local population, the SNA and AMISOM. Also, you remember that under al-Shabaab control, the population was suffering due to high taxation and sometimes forced marriage. So when they see our forces respecting human rights and giving them the ability to express themselves, they feel very well, and this creates acceptance of our forces.

Civil-military projects make a quick impact in the local communities and bring their hearts and good will to our forces. Of course there is some of that in terms of humanitarian support. We had to

secure the main supply roads, and al-Shabaab used a lot of IEDs and we cannot secure the entire long road. So we have made a program to escort the humanitarian assistance to the population. But it has been a very big challenge; this is why AMISOM and its partners have to train the Somali police to be able to provide security and order in all of Somalia. Because this is police activity.

ADF: How does your background as a Burundian affect how you view the AMISOM mission?

NTIGURIRWA: As a Burundian, I don't have any doubt that my country can be an example to Somalia, not only in Somalia but in other African countries. Burundi suffered many years ago in a civil war and, you know, in Africa all crises, all civil wars, are similar. So I think my country can be an example and help Somalia. They need to come up with a united Somalia policy and Somali national institutions. The Somali people need to abandon the clan dynamics and come up with a patriotic mindset. Every conflict, every crisis, has its roots, its base. In Somalia there are these clan dynamics that create a lot of difference between the communities. So as a Burundian and a general officer who contributes to

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– Lt. Gen. Silas Ntigurirwa

my country in order to bring peace and stability, I encourage all Somalis to work for a good future for the new generation. Also, I advise them to have good political will. It is important that the parties to the conflict have a common focus on the national interest. Because, at the end of the day, Somalia as a country is for all Somalis.

ADF: Do you have any final thoughts?

NTIGURIRWA: According to the lessons learned during my tour of duty as AMISOM force commander, it is very important that this mission is an African mission. Yes, we can support each other, and the support from our partners is very important. Without our partner support, AMISOM alone cannot be able to operate. The other lesson is that Africa is encouraged to defend vulnerable populations because sometimes they intervene after the crisis is fully opened. I think it is important not to wait until countries are devastated, like Somalia. Now, Africa is able to solve some of its own problems. I can say we are progressing toward African solutions to African problems. Finally, it is very important to say that the African Union can put in place a strong strategy relating to a peace support operation in order to be able to intervene any time there is a necessity. □



AMISOM Force Commander Lt. Gen. Silas Ntigurirwa briefs the media after AMISOM and Somali forces recovered a large cache of weapons in a cordon and search operation in Mogadishu in August 2014.

NEW LIGHT, LIFE FOR NAIROBI'S KIBERA

ADF STAFF

Kenya's government is bringing some light — and hope — to Kibera, a sprawling slum on the outskirts of Nairobi. Population and area figures differ from source to source, but at least 200,000 people are believed to live there.

Crime is no stranger to Kibera. Carolyn Njoroge recalls a terrifying evening in late 2007, when she became a victim of violence that erupted as a result of national elections. "My next-door neighbor kicked my door in, shouting that he wanted to kill us for us electing the president," Njoroge told *The Telegraph* in 2013. "I hid under the bed while people with machetes and other weapons stole everything of value — the chairs, the plates, our clothes. My children spent nearly six hours hiding in a pit latrine as gangs looked for Kikuyus," members of a prominent Kenyan tribe.

In late 2014, workers began erecting an array of high-powered lights and offering other new amenities and services.

In December, President Uhuru Kenyatta announced the Community and Street Lighting Project during a rally of Kibera residents. Kenyatta said there was no justification for why the area had been denied government services since independence more than 50 years ago. "From independence, this is the first time government has reached Kibera, and we promise that it is here to stay," he told the crowd of thousands, according to Capital FM.

Workers in November 2014 began installing 21 light masts, each 30 meters tall with nine lamps. The nation's Rural Electrification Authority oversaw the \$976,000 project, which was completed by the end of the year.

According to Capital FM, the government is undertaking several projects to benefit Kibera, including:

- Paving a road to ease transportation.
- Opening clinics to offer free medicine.
- Announcing that a youth sports stadium would be built where the rally was held.
- Planning free WiFi for the area.
- Having the National Youth Service build toilets and clean up sewer systems.

"The majority of Kenyans do not live in Muthaiga [Country Club], they live in slums," the president said. "This project will be replicated in all the slums so that we change the face of Nairobi."

“THIS PROJECT WILL BE
REPLICATED IN ALL THE
SLUMS SO THAT WE CHANGE
THE FACE OF NAIROBI.”

~ President Uhuru Kenyatta

The finished lighting
masts are 30 meters
tall and have nine lamps
attached to the top.

REUTERS



ASYMMETRIC

THREATS + RESPONSES

AT SEA

BY FRANCOIS VREÏ

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Case Studies from IRAN, SRI LANKA AND SOMALIA

*This article was adapted from a paper the author wrote while on exchange to the
faculty of the Royal Danish Defence College, Copenhagen.*

Asymmetry can be used to describe several types of conflicts, but it's a mistake to associate asymmetry exclusively with irregular opponents fighting conventionally structured military forces. Another mistake is to focus only on land-based asymmetry.

Asymmetry is generally understood as the outcome of a process in which weaker actors look for ways to blunt or minimize the effect of superior power employed by a stronger opponent. Superior technological capabilities, for example, can be countered with lesser technologies employed creatively. Asymmetry of actors involves an inferior opponent using a different or unexpected approach. This leads to the view that asymmetry is either a given circumstance or an option exercised by an actor who must decide how to respond or not to respond. Actors can decide to prepare for and employ asymmetry or merely harness it to survive within a given scenario. In some cases asymmetry may well be a cultural aspect emanating from historic ways of operating when confronted by aggressors, as found in the confrontation between Russian forces and Chechen rebels.



An Iranian Revolutionary Guard Corps Navy (IRGCN) boat attacks a larger vessel during a military drill in the Persian Gulf in 2010. The IRGCN had just launched an “ultrafast” boat capable of causing high destruction.

AFP/GETTY IMAGES



The following discussion turns the attention to three asymmetric threats that complicate and add to the busy schedule that modern navies face to uphold order at sea. Of particular relevance to Africa is that the asymmetric strategies form a general backdrop to African armed threats, and it is possible that irregulars could extend their asymmetric capabilities creatively as a strategy to inflict damage upon current and upcoming African navies, as well as Africa's emergent maritime infrastructure at sea.

Team members from the guided-missile cruiser USS Vella Gulf use rigid-hulled inflatable boats to approach suspected pirates in the Gulf of Aden. REUTERS

THE IRANIAN REVOLUTIONARY GUARD CORPS NAVY

As one can distill from the U.S. Navy Office of Naval Intelligence report "Iran's Naval Forces, From Guerilla Warfare to a Modern Naval Strategy," the Iranian Revolutionary Guard Corps Navy (IRGCN) poses a threat to a superior navy by combining asymmetry

and revolutionary zeal. The latter attribute forms an important catalyst for swarming and suicide missions against superior forces. The threat plays out in the Persian Gulf and the Strait of Hormuz, which has an estimated 17 million barrels of oil passing through it every day. The Iran-Iraq War (1980-1988) and the Tanker War that played out simultaneously in the Persian Gulf attested to the then-inferior position of the Iranian naval forces, which had to tolerate the dominant presence of other big navies (the U.S., Britain, France and Russia). These navies traversed the Persian Gulf to protect their interests, and so limited Iranian leeway to bring pressure upon Iraq by controlling shipping in the Gulf. The Iranians subsequently restructured to form a parallel second and smaller navy alongside the conventional Iranian Navy. The smaller navy was staffed, trained and equipped exclusively for asymmetric warfare.



THE SYMBOLISM OF MODERN NAVAL VESSELS BEING SUNK BY FLEXIBLE INSURGENT FORCES IS A PARTICULARLY POWERFUL IMAGE OF SUCCESS AND THUS ENTICING TO INSURGENT FORCES.

Bringing together revolutionary zeal, speed and firepower in a maritime theater well-suited for smaller vessels appears to be a practical combination against opponents who have to respond within the confines of conventional doctrine using standard naval vessels. In 2014, the Iranian naval threat in the Persian Gulf remained a parallel revolutionary navy that had readied itself for more than 25 years for an asymmetric confrontation. Western powers have acknowledged the physical and emotional dangers posed by mines, small submarines, coastal batteries and numerous heavily armed small craft.

The IRGCN is primarily directed at opposing naval forces in the Persian Gulf and, in this way, brings asymmetry to any navy-on-navy confrontation, but it may also be used against commercial shipping. Here the IRGCN demonstrates asymmetric capabilities through tactics and naval hardware further infused with a religious and ideological drive with the Persian Gulf as its primary area of operations.

Although the Iranian case reflects a state-driven regular-irregular profile, the lesson for African decision-makers and naval officials is twofold. First is a general lesson on the utility of an irregular naval capability to offset a regular opponent, but also of naval asymmetry to deal with an irregular opponent at sea. Second, and even more important, the asymmetry at sea crafted by opponents is particularly dangerous for African navies that are prone to be confronted by such asymmetry first, rather than naval warfighting of a traditional kind.

THE SEA TIGERS OF THE LTTE MOVEMENT IN SRI LANKA

The Liberation Tigers of Tamil Eelam (LTTE) separatist movement fought the Sri Lankan government from 1983 to 2009 on land and at sea. According to “A Guerrilla War at Sea: The Sri Lankan Civil War” in *Small Wars Journal*, establishing the group’s naval arm known as the Sea Tigers was a significant matter for political and military decision-makers. The insurgent

force achieved successes against the conventional Sri Lanka Navy (SLN), which was unprepared for the offshore shift of counterinsurgent operations. However, the SLN adjusted over time to successfully oppose the asymmetric threat from an insurgent foe.

Initially, the SLN was ill-equipped to deal even with the basics of the irregular threat at sea posed by the Sea Tigers. The Sea Tigers managed to inflict significant damage on the SLN — especially on the Israeli-built Dvora fast-attack craft; they managed to sink about eight during skirmishes at sea. The impact of the Sea Tigers’ asymmetric tactics made the waters around Sri Lanka dangerous. In effect, the LTTE insurgents successfully challenged the maritime jurisdiction of the official Sri Lankan authorities for quite some time and seriously threatened the order at sea.

The maritime shift by the LTTE movement depended on key elements. The first was its construction of small fast boats with sufficient range and in significant numbers for suicide attacks through swarming tactics. The second was the acquisition of mother ships (civilian freight vessels) that remained on the open ocean and, when required, shipped crucial supplies under armed escort by the Sea Tigers to the LTTE through Sri Lankan territorial waters. Their training and indoctrination provided for suicide attacks at sea performed by the Black Sea Tigers (a special unit of the Sea Tigers), which even managed to sink an SLN patrol vessel. In this way, the LTTE established insurgent sea control over a sector of the northern territorial waters of Sri Lanka. Much of the success of the Sea Tigers was a result of the lack of readiness of the SLN in terms of equipment, training and doctrine, and the general inability of a conventional navy to fight a de facto asymmetric military threat in its territorial waters.

One of the ways the SLN adapted to the asymmetry was by developing its own use of small boats. The SLN could thus expand its presence over the northern coastal waters of Sri Lanka to counter the relative freedom of the Sea Tigers. The SLN eventually effected its own



The European Naval Force's Operation Atalanta is one of three major multinational naval efforts formed to curb Somali piracy. GETTY IMAGES

swarming upon the Sea Tigers with its rapid small-boat building program. It also used larger naval craft to establish a reaction capability and a permanent presence at sea with a better mix of vessels and specially trained crews more attuned to the asymmetry they faced. The mobilization of SLN vessels and commercial oceangoing liners led to the eventual destruction of LTTE mother ships. Combined with a determination to bring in better equipment and well-trained crews and response units, the SLN systematically blunted the asymmetric threat and shut down the freedom enjoyed by the Sea Tigers. This contributed to the eventual military defeat of the LTTE on land in 2009.

For African naval decision-makers, the SLN case demonstrates the hotly debated topic of military change by showing how a regular navy can adapt to fighting an asymmetric but existential threat at sea. The adaptation has a negative consequence in that the navy later must readjust its training, equipment and objectives back to that of a regular navy, but this is perhaps a second-order challenge that is much easier.

SEA PIRATES OFF THE HORN OF AFRICA

The IRGCN and the Sea Tigers constitute asymmetric threats in pursuit of a political agenda, but piracy off the Horn of Africa is reflected in *Characterizing and Exploring the Implications of Maritime Irregular Warfare* by the Rand Corp. as a transnational crime with a financial incentive. The piracy weakens the Somali state and is linked to prominent actors in Somalia and its neighboring countries. The significance of the piracy threat comes primarily from

its disruption of shipping in an international sea route. In response, international and national naval task forces now patrol this stretch of ocean. However, the naval contingents found that stemming the piracy threat is complex and requires a significant effort at sea and on land by multiple parties to establish security for the safe passage of maritime traffic. This land-sea interface of responses to an asymmetric threat composed of local and transnational interests brought about an unprecedented international counterresponse.

The anti-piracy effort has brought together an extensive profile of countries and organizations. The naval intervention could not quickly suppress the piracy threat due to different or ill-understood rights and rules of engagement that constrained operations. For a period, asymmetry benefited from international rule constraints for one party and the culture of no self-regulation by the other (the pirates).

The United Nations, in partnership with nongovernmental organizations and industry, did much to muster the desired intergovernmental cooperation at sea. Of particular significance are the U.N. Security Council resolutions that have emerged since 2008 and temporarily lowered the Somali maritime sovereignty barrier to offer foreign navies more leeway to engage pirates, called for naval cooperation to protect aid flows to Somalia, and for international assistance with prosecution. The counter-piracy patrols protected merchant shipping and convoys bringing food into Somalia by apprehending pirates or preventing them from attacking ships. Incidents gradually declined by 2014, and the drop is attributed to a combination of an international willingness to respond, significant naval interventions, and merchant shipping adopting best-security practices for its own protection.

The naval response was complicated by inappropriate domestic legislation and the risk of asylum demands if prosecution was not successful, as well as arduous arrangements to get suspected pirates to host countries and into court. Good intentions initially foundered upon the ill-prepared institutions in East Africa to extend maritime security governance. An asymmetric threat posed by a criminal grouping also made the tasks of the naval forces difficult. Pirates could shift their activities into the Indian Ocean and avoid the naval concentrations or make additional deployments too expensive. The global anti-piracy response nonetheless demonstrated the strengths and shortcomings of international cooperation. Cooperation by responding through numerous agencies slowly constricted the pirates' free rein. On the negative side, the asymmetry of the piracy threat allowed many to avoid prosecution and shift their operations to waters where U.N. resolutions lost their impact. This shift stretched the available naval forces to the maximum by increasing costs.

The slow progress to overcome the asymmetric advantages embedded in the piracy threat had several consequences. It endangered merchant shipping through delays, detours and costs. Food shipped to the Somali

people remained threatened, exacerbating the crisis on land. The threat precluded a quick solution, which also had regional implications for neighboring countries and island states like the Seychelles that were drawn into costly prosecutions, attacks and responses in their own waters. Since early 2011 the South African Development Community began to patrol its eastern waters in a sector roughly demarcated by Mozambique, Tanzania and Madagascar to prevent the maritime insecurity from spilling farther south.

Events off the Horn of Africa (HOA) present African decision-makers with three important lessons. First, piracy became the most prevalent African maritime threat when governments let irregular foes exploit ungoverned spaces at sea. Second, given the turn of the African Union toward recognizing the importance of Africa's surrounding oceans, deliberate or tangible responses at sea by way of maritime agencies are indispensable. Third, fighting piracy off the HOA offers a primary knowledge hub for African naval leaders to draw upon in responding to extremist threats such as the Islamic State in Libya, which expands so rapidly into any weakly governed spaces on land and at sea.

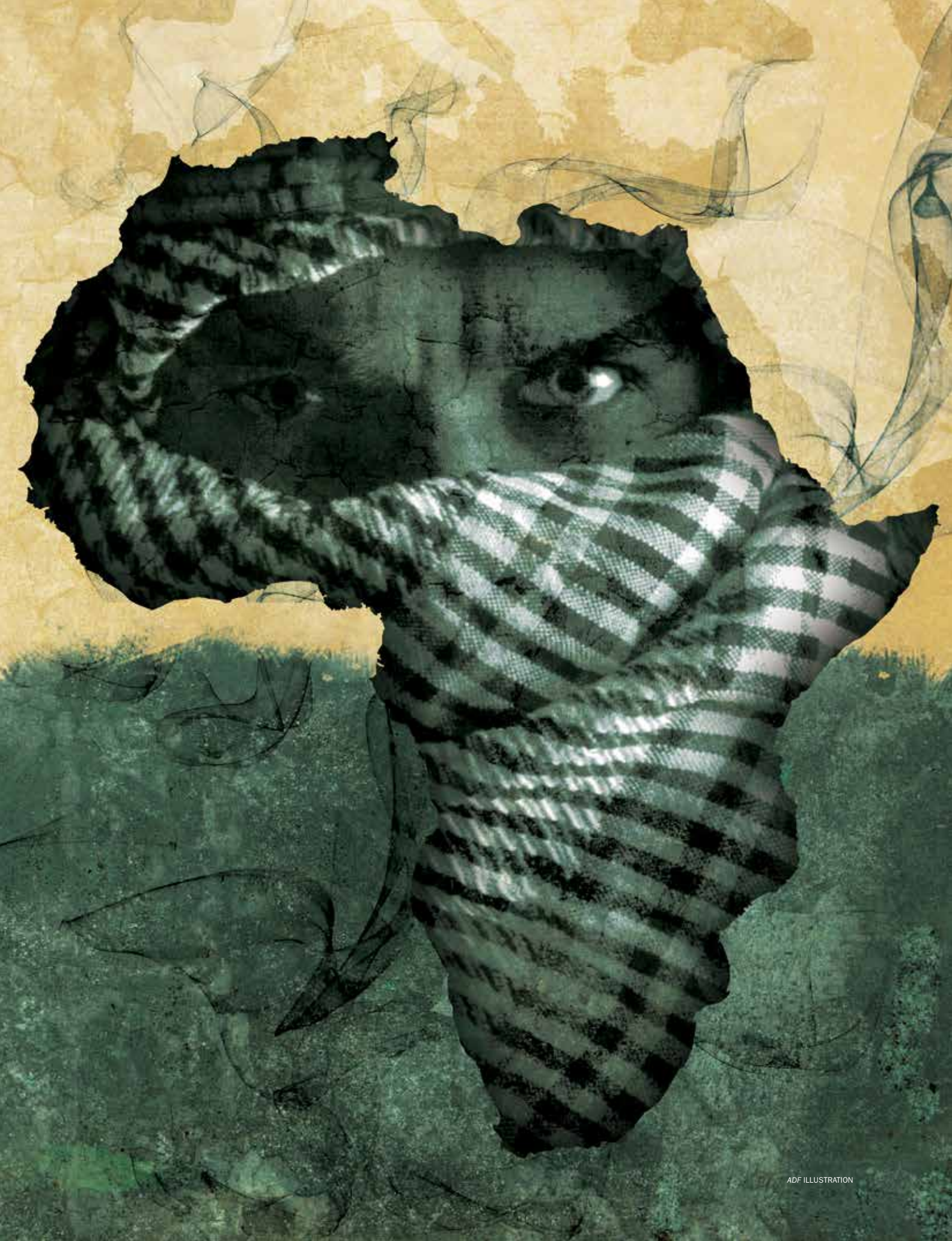
CONCLUSION

All three cases show how asymmetric threats find their way into the maritime security domain along conventional, insurgent and criminal pathways. The Iranian case demonstrates the reality of introducing asymmetry alongside a conventional navy to offset the advantages

held by the blue water navies of powerful governments. However, Iran must now essentially maintain and employ two navies, since each is based upon a fundamentally different culture, platform and doctrine. The case of Sri Lanka shows that insurgent movements can mimic at sea the traditional asymmetry on land that regular forces so often fail to subdue. Navies are not immune to irregular threats at sea and, as demonstrated by the Sea Tigers, become primary targets. The symbolism of modern naval vessels being sunk by flexible insurgent forces is a particularly powerful image of success and thus enticing to insurgent forces. The SLN, however, demonstrates that a navy can adapt when insurgents shift operations offshore by temporarily prioritizing the irregular risk over the symmetry (navy-upon-navy) preferred by conventional naval culture. Finally, the Somali case breaks the military-on-military mold because it depicts the specter of transnational criminal threats from the sea requiring almost disproportionate international responses. In all probability, the Somali case demonstrates a learning curve for what African decision-makers must prepare for in their maritime domains. Causes of Somali piracy, its outfall and responses form complex clusters of variables. The single-most important lesson stems from the impact of coordinated cooperation between multiple agencies and countries as the best practice to contain the effects of bad maritime governance. In the end, the problem requires astute leadership — a phenomenon that still has to mature on land, but shows more progress at sea. □

The Sri Lanka Navy had to embrace small boats as a way of countering similar craft used by the Liberation Tigers of Tamil Eelam separatist movement. THE ASSOCIATED PRESS





ISIS

MOVES INTO AFRICA

*IN NORTH AFRICA, EXTREMISTS WHO
FOUGHT ALONGSIDE ISIS ON THE
BATTLEFIELD ARE RETURNING HOME.*

ADF STAFF

At the beginning of 2015, an estimated 31,000 fighters in the self-proclaimed Islamic State of Iraq and Syria, or ISIS, had tightened their grip over a vast swath of land. Thousands of those fighters were African. And as ISIS tries to expand into new territory, African fighters have begun to return to their home countries. They are bringing their extremism with them.

ISIS, also known as ISIL, began in 1999 in Iraq, founded by the now-deceased Abu Musab al-Zarqawi, a militant Islamist from Jordan. In 2004, the group pledged allegiance to al-Qaida. Its current iteration began in 2010, when Abu Bakr al-Baghdadi assumed command. In February 2014, al-Qaida cut ties with the group due to disputes over doctrine and tactics.

Al-Qaida reportedly was particularly troubled by ISIS' interpretation of takfir, which is when a Muslim declares another Muslim to be a heretic. ISIS has used this as justification for killing other Muslims in regions it controls.

The two groups have slightly different philosophies. Al-Qaida sees itself as a band of avengers, trying to spread its agenda through violence. ISIS has used

equally violent tactics but is also more interested in governance, trying to establish ISIS-administered regions and cities.

Life in areas controlled by ISIS is brutal. ISIS forbids alcohol, tobacco, secular music and the rights of women. Muslims and non-Muslims alike have been routinely murdered, crucified, beaten and whipped. In early 2015, ISIS soldiers put a Jordanian pilot in a cage and burned him alive. At its core, ISIS, like Nigeria's Boko Haram, appears to reject all things Western.

Under al-Baghdadi's leadership, ISIS has become indisputably the wealthiest terrorist group in the world. South African journalist Simon Allison, in a policy brief for the Institute for Security Studies, said that ISIS gets its wealth from oil fields, looted banks and tax collections in the regions it controls. At one point in 2014, ISIS assets were confirmed at \$2 billion.

The Guardian reported that ISIS also has made money by smuggling raw materials pillaged in Syria as well as priceless antiquities from archaeological sites. In one instance, ISIS made \$36 million on antiquities taken from a single dig site. Some of them were up to 8,000 years old.



WORLD AMBITIONS

The group's ambition knows no limits. On June 29, 2014, ISIS proclaimed itself a worldwide caliphate with al-Baghdadi as its leader. ISIS says it is now the final authority on Islam and claims absolute authority over all Muslims worldwide.

To accomplish this, al-Baghdadi's extremists use the modern tools of propaganda, including videos and social media. They represent a sharp departure from the long online sermons of al-Qaida leaders.

"Videos put forward by the ISIS tend to be filled with rank-and-file members whom potential recruits find much more relatable than al-Qaida's videos full of leadership figures giving speeches," said a December 2014 report from the Combating Terrorism Center at West Point. "This 'relatability,' paired with slick production

techniques and military successes on the ground, appeals to a new generation of recruits for the ISIS."

Shiraz Maher, a senior fellow at Kings College London, said ISIS has moved beyond the traditional password-protected websites extremists have used in the past.

"Web forums are less important these days, giving way to platforms such as Twitter, Facebook and Instagram," Maher wrote in *The Guardian*. "In this respect, ISIS has harnessed the power of these platforms better than any other jihadist movement today. Online, it has created a brand, spread a seductive narrative, and employed powerful iconography. This strategy has been responsible for inspiring thousands of men from all over the world to join the group."

With al-Shabaab, Boko Haram,

al-Qaida in the Islamic Maghreb (AQIM) and other extremist groups already established in Africa, parts of the continent are already primed for ISIS to spread its ideology. If ISIS does advance on the continent, it will almost assuredly be with the cooperation of some of these groups. In fact, some have already pledged their support.

Of particular concern are the parts of Africa that are lacking in government services, such as northeast Nigeria, where the police and military have been unable to curtail the operations of Boko Haram. Somalia, with its recent history of al-Shabaab occupation, also could be a possible target for ISIS. Egypt and Libya already have ISIS strongholds.

Allison said the biggest danger for African countries — particularly Algeria, Libya, Morocco and Tunisia



— is the “potential impact of thousands of well-trained, battle-hardened fighters choosing to return, or being ordered home after stints with [ISIS] or other jihadist groups in Syria.”

ISIS IN AFRICA

These are some of the African nations dealing with ISIS fighters:

ALGERIA: In September 2014, the Soldiers of the Caliphate, also known as Jund al-Khilafa, pledged their allegiance to ISIS. The group, an offshoot of AQIM, accused it of deviating from the “true path.” Members vowed absolute obedience to ISIS, and two weeks later they beheaded a French citizen in retaliation for France participating in airstrikes on ISIS in Iraq.

Terrorism Research & Analysis Consortium Editorial Director Vryan Khan told *New York* magazine that the beheading was particularly significant in that it was done “on the Islamic State’s behalf.”

Iraqi troops train for an assault to recapture the city of Mosul from ISIS invaders.

AFF/GETTY IMAGES

ISIS LEADER SHROUDED IN SECRECY

ADF STAFF

Abu Bakr al-Baghdadi is the undisputed leader of ISIS. But beyond that, remarkably little is known about him.

He claims to be a direct descendant of the prophet Muhammad. For the most part, he is a mystery. Even the elements of his childhood are widely disputed.

He does not allow photographs or videos of him. He maintains a low profile and is said to wear a mask when meeting with prisoners.

Al-Baghdadi joined a small armed group in eastern Iraq after the American invasion. In 2005, he was captured and sent to Bucca prison camp in southern Iraq. There, he is believed to have met and trained with al-Qaida fighters. Over the course of his time in prison, he consolidated his power.

In 2010, after the deaths of two of the leaders of al-Qaida in Iraq, al-Baghdadi took charge. At that time, the Sunni rebellion was foundering. The civil war in Syria changed everything. The sudden lack of authority in large areas of Syria opened the door for the growth there of al-Qaida.

In June 2013, he rejected al-Qaida and its leader, Ayman al-Zawahiri.

“ISIS’ rise at the expense of Zawahiri’s movement signals that a new, more dangerous hybrid based on state development by wrecking everything in its path is emerging from the Syrian terrorist incubator,” wrote Theodore Karasik of the Institute for Near East and Gulf Military Analysis. “Ultimately, ISIS seeks to create an Islamic state from where they would launch a global holy war. Perhaps that war is now beginning as Baghdadi’s ISIS eclipses Zawahiri’s al-Qaida.”

Al-Zawahiri, some observers said, is now seen as ineffective, compared to his ISIS rival.

“For the last 10 years or more, [al-Zawahiri] has been holed up in the Afghanistan-Pakistan border area and hasn’t really done very much more than issue a few statements and videos,” Richard Barrett, a former counterterrorism chief at Britain’s foreign intelligence service, told Agence France-Presse. “Whereas Baghdadi has done an amazing amount — he has captured cities, he has mobilized huge amounts of people, he is killing ruthlessly throughout Iraq and Syria.”

EGYPT: ISIS set up operations in Egypt's northern Sinai Peninsula in mid-2014, attacking Egyptian Soldiers, police officers and civilians. An ISIS video indicated that the group had set up military checkpoints in Egypt near the Mediterranean, along a main road linking Al-Arish with the Palestinian city of Rajah. In the video, ISIS said it would attack Egyptian Soldiers and "spies for the Jews." In mid-December 2014, ISIS released a video showing it killing three Egyptian Soldiers in a drive-by shooting.

The Egyptian faction of ISIS calls itself Wilayat Sinai (Sinai Province). *The New York Times* said the faction is composed mainly of an existing group called Ansar Beit al-Maqdis, which has about 1,000 militants. The group, formed during the Egyptian revolution in 2011, was regarded as the most dangerous extremist organization in Egypt. It pledged allegiance to ISIS in November 2014, hoping for resources and weapons to overthrow the leadership-in-turmoil in Cairo.

Before aligning with ISIS, the group was already a significant force. Voice of America reported that the group had "grown increasingly proficient in carrying out attacks" and had become more sophisticated in selecting targets based on their strategic value. It stepped up its attacks after the July 2013 ouster of President Mohamed Morsi by the Egyptian military. Early attacks were confined to the Sinai Peninsula, but it has expanded its range of operations to include Cairo.

In January 2015, Egyptian officials arrested nine men who were trying to enter Egypt from Libya. The Kuwaiti newspaper *Al-Rai* reported that the men were on a mission to kill government ministers, media personalities and businessmen. The nine were from Pakistan, Afghanistan and Egypt.

LIBYA: The country has been unstable since the overthrow of Moammar Gadhafi in 2011. Vast numbers of the weapons stockpiled throughout the country have since been pillaged and sold on the black market. Libya itself has become a training ground for extremist fighters.

A new group calling itself the

Islamic Youth Shura Council took over the coastal Libyan city of Derna in April 2014. The group initially allied itself with al-Qaida but switched its allegiance to ISIS in June 2014. In a statement, the group said, "It is incumbent on us to support this oppressed Islamic State that is taken as an enemy by those near and those far, among the infidels or the hypocrites, or those with dead souls alike."

Although the group's absolute control of an entire city of more than 80,000 is disturbing, it should not come as a complete surprise. CNN International reported that the city contributed 800 fighters to the ISIS invasion of Iraq. The network also reported that the city was home to a large number of fighters in the Syrian civil war. Those returning fighters led the siege of the city, *The Washington Times* reported. The group took control of government buildings, security vehicles and local landmarks. They were using a football stadium for public executions.

"ISIS pose a serious threat in Libya," former Libyan extremist Noman Benotman told CNN. "They are well on the way to creating an Islamic emirate in eastern Libya. Most of the local population in Derna are opposed to the takeover by the Islamic State, but, with the complete absence of any central government presence, they are not in a position to do much for now."

One of the group's most brutal and high-profile atrocities took place in Libya in February 2015 when ISIS militants beheaded 21 Egyptian Coptic Christians. ISIS released a video of the killings, which the Egyptian government and the Coptic Church confirmed as authentic.

MOROCCO: In January 2015, Morocco announced that it had dismantled an Islamist militant cell sending fighters to Syria and Iraq to join ISIS. Reuters reported that the fighters were under instructions to attack their homeland when they returned.

The cell had been active in the city of Meknes and the towns of El-Hajeb and El-Hoceima in the Northern Rif mountains, Moroccan officials said.

*Boko Haram fighters
"use heavy equipment,
they parade with tanks taken from
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Al-Qaida is the brand
of yesterday."*

— J. Peter Pham, head of the Africa Center at the Atlantic Council, a Washington think tank

One official said the government thinks that nearly 2,000 Moroccans have fought alongside ISIS in Syria and Iraq.

Social media videos of armed Moroccan ISIS fighters vowing to overthrow the Moroccan government have been circulating in the country.

NIGERIA: Although there have been no reports of ISIS movements in Nigeria, observers have seen its influence in the tactics and rhetoric of Boko Haram rebels in the northeast.

"There are no direct operational contacts," said J. Peter Pham, head of the Africa Center at the Atlantic Council, in December 2014. "But it is quite clear that Boko Haram is paying attention to [ISIS,] and [ISIS] is paying attention to Boko Haram."

In March, Boko Haram formally pledged allegiance to ISIS and al-Baghdadi endorsed the alliance calling Boko Haram "our jihadi brothers."

African specialist Jacob Zeen of the Jamestown Foundation told Agence France-Presse that Boko Haram initially had received backing from



Pro-Iraqi fighters help secure an area they seized from ISIS extremists 75 kilometers north of Baghdad.

AFP/GETTY IMAGES

AQIM, but, “It has more recently begun to model its ideological and military doctrine after the Islamic State and, in turn, has started to receive recognition from the Islamic State.”

Pham said Boko Haram has begun promoting itself in the same way ISIS has.

“They use heavy equipment, they parade with tanks taken from the Nigerian army flying the black flag, like they saw on ISIS videos,” he said. “ISIS presents a compelling model. Al-Qaida is the brand of yesterday.”

ISIS, in turn, has been influenced by Boko Haram. When ISIS took Yazidi hostages in Iraq in 2014, it cited Boko Haram’s infamous kidnapping of 276 girls in Chibok, Nigeria. As of early 2015, Boko Haram was adopting another ISIS tactic — in addition to its raids, it was beginning to hold territory.

TUNISIA: Tunisia, a secular country, is widely viewed as a model for democratic reform after the Arab Spring revolutions. But that could be changing. *The Guardian* estimated that there have been more Tunisians among

foreign extremists fighting in Syria and Iraq than from any other country.

Tunisia estimates that at least 2,400 of its citizens have become combatants in Syria since 2011, and that as of early 2015, about 400 have returned. “In Douar Hicher, a poor district at the edge of Tunis, it is common knowledge that 40 or 50 young men have left to fight and perhaps a dozen have been killed,” the newspaper reported.

Two Tunisian militants who murdered secular politicians in 2013 said in December 2014 that they had since joined ISIS. “We are going to come back and kill several of you,” one of the militants said in a video. “You will not have a quiet life until Tunisia implements Islamic law.”

KEEPING THE RULE OF LAW

ISIS hopes to plant its flag in Africa. Aaron Y. Zelin, writing for The Washington Institute, said that the ISIS-based occupation of Derna could be a model for “future acquisition of territory by the Islamic State beyond its base in Iraq and Syria.”

“This model would also diverge sharply from how al-Qaida had done business in the past, namely, relying primarily on autonomous local franchise organizations,” he wrote.

In confronting ISIS, experts agree on one point: Military intervention will undoubtedly be necessary, but a heavy hand won’t work. The Institute for Security Studies said its research indicates that stopping any extremist groups requires adherence to the rule of law and a criminal justice-based approach within a country’s own legal framework. Other organizations concur.

“Too often, in the name of counterterrorism, security forces forget that human rights violations such as detainee abuse, denial of fair trial guarantees, extrajudicial killings and unlawful renditions create instability by undermining the rule of law and alienating affected populations,” the New York-based Open Society Justice Initiative wrote. Such tactics, the initiative said, “do little to reduce terrorism violence,” and “may well make the situation worse.” □

WINNING BACK THE COAST

A Kenyan Organization is Fighting Extremism by Empowering Youths



Phyllis Muema is the director of KECOSCE. In 2013, she was awarded the Head of State Commendation, a presidential award in recognition of her work and that of KECOSCE in promoting peace and security on the coast of Kenya.

AFRICA CENTER FOR
STRATEGIC STUDIES

PHYLLIS MUEMA/EXECUTIVE DIRECTOR, KENYA COMMUNITY SUPPORT CENTRE

If a battle against extremism is being waged in East Africa, coastal Kenya is on the front line.

About 3.2 million people — approximately half of them Muslim and half Christian — live in the six counties that make up coastal Kenya. The region is about 600 square kilometers and stretches from Kenya's southern border with Tanzania to its northeastern border with Somalia. The area, especially its largest port city Mombasa, has a history of tension with the national government. The coastal population believes that it has been neglected for decades in terms of development and infrastructure spending. In recent years, Mombasa also has become a fertile ground for extremism. It is the home to several mosques where incendiary clerics preach radical ideology. A separatist movement called the Mombasa Republican Council has gained adherents and threatens to secede from Kenya by force if necessary.

Adding to this volatile mix, coastal Kenya residents are young and unemployment is rampant. About 60 percent of the population is under 25, and unemployment in five of the six counties is higher than the national average. In Mombasa, the youth unemployment rate is 44 percent — about double the national average.

It's no surprise that radicals including al-Shabaab have recruited and planned attacks in the area. The most notable attack was the 2002 bombing of the Paradise Hotel in Mombasa that left 13 dead. In 2014, al-Shabaab extremists boarded a bus near the border town of Mandera and executed 28 passengers. Al-Shabaab later said the

killing was retribution for Kenya's security forces raiding mosques in Mombasa.

Since Kenya is still developing a coherent national strategy to counter violent extremism, local organizations are trying to fill the gap by offering young people an alternative to radicalization.

The Kenya Community Support Centre (KECOSCE) is a nongovernmental organization established in 2006 with a mission to mobilize, organize and empower citizens to participate in social, economic and political processes. KECOSCE works with people ages 15 to 35 with a particular emphasis on reaching students, women and religious leaders. The group also works with local government agencies, including the police, civil administrators and national commissions, to address underlying conditions that give rise to violent extremism.

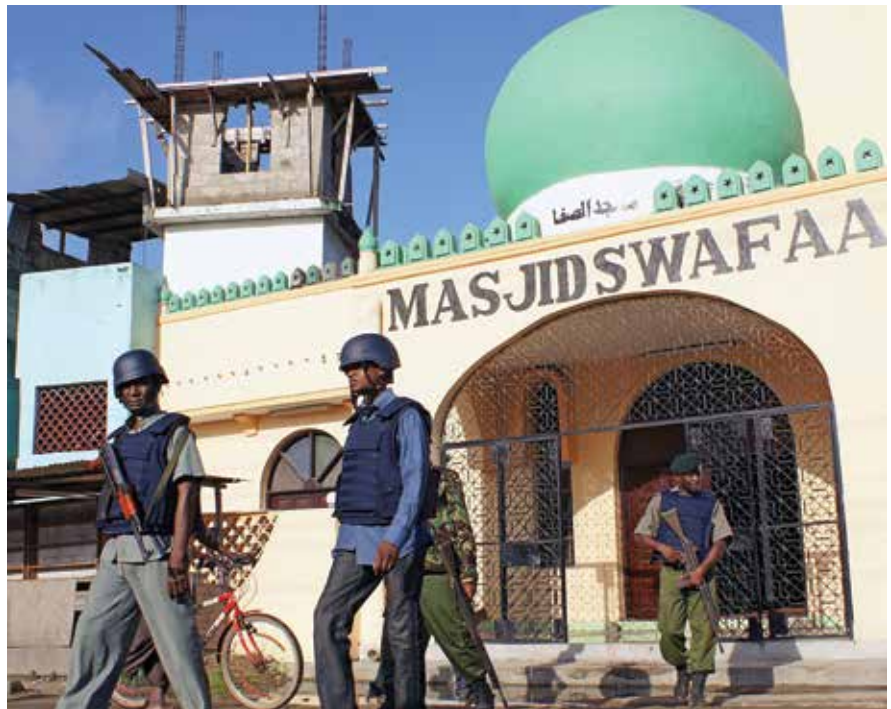
Over the past eight years, KECOSCE has introduced diverse initiatives in coastal Kenya including:

- Holding community gatherings and school events with elected officials, police and members of the security forces to build bridges of understanding. Since many police officers posted in coastal Kenya come from other parts of the country, introducing them to the community and its culture is vitally important.
- Offering training and discussion forums to aid understanding of religious teachings and narratives commonly misused by extremists to recruit youths.
- Providing messaging that runs counter to extremist propaganda by broadcasting victims' testimony in the media through radio and print.

- Training young people in skills for employment. Once they gain skills and begin small-scale businesses, KECOSCE helps train them to market their business and apply for micro-loans and other sources of funding. The center has successfully trained about 2,000 people.
- Empowering the marginalized through civic education and awareness, and promoting understanding of the Constitution, citizenship and leadership.

ACHIEVEMENTS

- KECOSCE launched the Women Against Violent Extremism network to support female terrorism victims. The network provides solidarity for women whose children have joined violent extremist groups. The network also empowers women to challenge the ideology that promotes violence and teaches them to use their influence as mothers and caregivers to steer children away from extremism.
- The center began a youth program called Kataa Kutumiwa, which means “refuse to be used,” that has provided a platform for youths to talk with older people, religious leaders and government officials. These conversations are about religious ideology and narratives that are twisted by recruiting agents to sanction violence. This has empowered young people to debate radicalizers and challenge their viewpoints. The project has educated youths about the Constitution, leadership qualities and patriotism. It has opened channels of communication between young people and government officials to discuss issues related to arrests, marginalization and unemployment.
- KECOSCE used multimedia tools to promote conversations among at-risk communities. Youth discussion forums via radio, social media, discussion boards and billboards enabled moderated debates about a range of topics, including extremism, good governance and the need for young people to participate



Kenyan police officers stand guard outside the Masjid Swafaa mosque in Mombasa in November 2014. The mosque was suspected of harboring al-Shabaab supporters. A raid of the mosque yielded weapons and bomb-making materials.

in leadership. The center also has worked to rehabilitate former al-Shabaab members and helped them share their stories about the group’s brutality.

- The center held joint mapping and training workshops between law enforcement and community leaders to build a closer partnership and collaboration that promotes peace, security and respect for human rights. These workshops have opened alternate communication channels between the police and peace monitors by addressing the challenges of information sharing and showing law enforcement the importance of respecting cultural and religious practices.

THE FUTURE

Now is the time for a national discussion about how to prevent youth radicalization and provide opportunities for Kenya’s young people. The adoption of the new Constitution in 2010, which provides for a devolution of power and gives counties greater control over their finances, is a positive development. This could allow

counties such as those in coastal Kenya to invest more in programs that specifically target youths who are marginalized and at risk of radicalization.

Numerous challenges still exist. A large gap of trust has developed between coastal Kenya’s young people and public figures. Kenyan security agencies have conducted arbitrary raids and profiled communities when investigating violent extremists. This has left some in the community feeling like victims of police harassment, and it feeds the potential for further radicalization and can render KECOSCE’s interventions ineffective.

We at KECOSCE believe the community needs to join hands and work with the authorities to prevent extremism. The police and public figures also need to respect the communities and their cultural values. Together, we can develop a joint strategy on how best to protect our borders, preserve our shared values, and prevent people from outside or from within who use religion to cause mayhem and destroy lives. □

IN *ebola's* WAKE

The West African
Epidemic Shines a
Light on the Need for
Water and Sanitation
Infrastructure

ADF STAFF

In late 2013, Ebola took root in West Africa, spreading like wildfire and throwing the region into chaos. By early March 2015, it had killed nearly 10,000, mostly in Guinea, Liberia and Sierra Leone.

As Ebola raged, a quieter, more insidious killer took its toll all over the continent: a lack of clean water. London-based nongovernmental organization WaterAid estimates that dirty water killed 73,000 — more than seven times as many people as Ebola — in Nigeria alone in 2014.



ISTOCK



igeria is not unique in Africa when it comes to water and sanitation problems. Consider these incidents from just the past five years:

- Cholera spread through West and Central Africa in 2011, infecting at least 85,000 and killing nearly 2,500.

- A year later, Guinea and Sierra Leone had seen more than 14,000 cases of cholera — with up to 300 deaths — by August 2012.
- Lassa fever is spread by rats and produces symptoms similar to Ebola. It infects between 100,000 and 300,000 West Africans annually, killing an estimated 5,000.

All of these threats can be directly linked to poor sanitation practices, lack of clean water, and underdeveloped health and sanitation infrastructure. And all of them have been bedeviling the continent longer and with greater frequency than the West African Ebola crisis.

Ebola Epidemic Serves As A Wake-Up Call

A lack of clean water, the practice of open defecation, and health-care facilities decimated by years of civil war have combined with Ebola to bring attention to sanitation deficiencies. As a result, observers on and off the continent are calling for more investment and lifestyle changes to prevent and adequately address disease and health-related issues.

“Sometimes it takes an outbreak for positive things to happen. Maybe it takes Ebola for sanitation and water to become a top priority,” Bai-Mass Taal, executive secretary of the African Ministers’ Council on Water, told the Thomson Reuters Foundation. “This is like a blessing in disguise: Nobody wants it to happen, but you use it as a means to have more commitment and investment in water and sanitation.”

Calestous Juma, Kenyan-born professor of the Practice of International Development at Harvard University, said lasting solutions to the Ebola crisis will have to address poor infrastructure and a lack of investment in public health. “The Ebola outbreak is not an episode; it is a wake-up call for strategic political action,” Juma wrote for *aljazeera.com*.

“The limited availability of basic amenities such as clear water and sanitation adds more pressure on the stressed health services. Infrastructure and public health are intricately connected,” Juma wrote.

Sanitation is Linked to Public Safety

Cholera rides into West Africa and elsewhere during perennial rainy seasons. Areas flood — particularly densely populated urban slums — and floodwaters mix with open sewers

and human waste to sicken residents by the thousands through contaminated water.

“If your area is flooded with rainwater, and if people are defecating in the open, it will get into the water supply,” Jane Bevan, a regional sanitation specialist for UNICEF, told *The New York Times*. “We know governments have the money for other things. I’m afraid sanitation is never given the priority it deserves.”

In November 2014, the United Nations used the occasion of “World Toilet Day” to call for an end to open defecation. A U.N. report, released to coincide with the event, notes that many in Liberia and Sierra Leone — countries hit hardest by Ebola — have virtually no toilet access.

The problem is not just a challenge for Africa. Worldwide, 2.5 billion people lack adequate toilets. In Africa, the total is roughly 644 million out of more than 1 billion people — about 64 percent.



People walk past stagnant wastewater and garbage in Nairobi's Mukuru kwa Njenga slum. AFP/GETTY IMAGES

Chris Williams, executive director of the Water Supply and Sanitation Collaborative Council in Geneva, said open defecation spreads disease, hurts economic productivity and leads to unnecessary deaths. “People who do not have access to a hygienic toilet and a place to wash their hands are exposed to an array of fecally transmissible and potentially deadly diseases that with improved sanitation are easily preventable,” Williams told IPS in May 2014.

In the countries affected by the recent Ebola outbreak, 25 to 40 percent of the population lacks clean water, according to the World Health Organization. Sometimes, even Ebola treatment centers have no running water. Dr. David L. Heymann, professor of infectious disease epidemiology at the London School of Hygiene and Tropical Medicine, told



A Kenyan woman carries water after waiting hours to reach the tap in Nairobi's Kibera slum. She and others rise before dawn, trudge through mud, and stand in line for just the water they can carry. REUTERS

ADF that lack of proper sanitation practices and infection control in hospitals have been problems in past and current Ebola outbreaks.

Open defecation and the lack of sewer infrastructure have not been identified as causes of Ebola or linked to its transmission. However, direct contact with body fluids and human waste are documented modes of transmission and can amplify outbreaks. Ebola doesn't appear to be passed through contaminated drinking water, Heymann said. But he adds that this is the first major outbreak of the disease, so there are questions about it that can't be answered yet.

What is clear, Heymann said, is that fecal contamination can spread diseases such as polio and cholera through tainted drinking water or through direct contact with sewage and human waste. Diarrhea also is common in Africa and has killed far more people than Ebola.

In 2013 alone, 47 countries worldwide reported

129,064 cases of cholera to WHO. Of those, 43 percent — more than 55,000 — were reported in Africa. But the global total is known to be much higher: WHO says an estimated 1.4 million to 4.3 million cases occur each year, and death totals range from 28,000 to 142,000 annually.

Solutions Can Include NGOs, Militaries and Companies

WaterAid has worked to improve access to clean water and adequate sanitation all over the world. In budget year 2013-14, the organization made clean water available to 885,000 Africans, and it provided improved sanitation and toilet facilities to nearly 1.5 million on the continent.

The agency worked with local governments and communities in Sierra Leone to rebuild water and sanitation services devastated after a decade of civil war. Fighting left many wells and toilets destroyed. Nearly half of Sierra Leone's more

than 5.7 million people were forced out of their homes as fighting continued, leaving them without adequate sanitation and water. WaterAid tells of Hawa Turay, who upon returning to her village of Vaama, collected water from a river contaminated with waste from a nearby hospital. Cholera killed three of her children. WaterAid worked with local partners to repair broken infrastructure. Now, a trained committee of residents in Vaama maintain water and sanitation infrastructure.

WaterAid also provides education to go along with services. "When I went for training, I was taught about sanitation, and when I finished my course, I went out into the villages," said Francesca Banji, a hygiene facilitator in Zambia. "I went to each village and visited people's houses so that I trained them to train others."

In Senegal, the military has taken a prominent role in providing infrastructure of all kinds, including sanitation services. The military's Armée-Nation program has been a model of civil-military cooperation for years and has contributed to stability and good will. Among the military's many public works projects are construction of waste treatment facilities, wells, and lakes and water retention basins. Soldiers also revitalize and clean public spaces.

According to 2012 estimates, 67 percent of Senegal's urban population and nearly 41 percent of rural dwellers had access to improved sanitation facilities. That works out to about 52 percent of the total population, according to *The World Factbook*, more than any of the three nations most affected by Ebola in 2014. In Ghana, the Armed Forces' 48 Engineer Regiment also builds public works projects.

Militaries usually have the personnel, equipment and expertise to perform a wide range of construction and service projects. But Soldiers must be seen as allies by civilians who need services.

The Problem of Priorities

Infrastructure of any kind takes money. Just as important as money is the political will to make health and sanitation a national priority. That has not always been the case in Africa, said Dr. Earl Conteh-Morgan, a native Sierra Leonean and professor of international studies at the University of South Florida. Development often seems to come in the form of "conspicuous industrialization," he said.

"I think the African governments probably think that development is only when you have a big stadium, a nice city council center, and maybe concentrate a lot of the money at the universities," Conteh-Morgan said. "And they forget, in fact, that a water system, a clean water system, is really, really necessary."

"I believe they have a problem of priorities," he said. "They do not prioritize something like good health care."

Dr. Offei "Bob" Manteaw, director of research, innovation and development at Zoomlion Ghana Ltd., agrees. The company specializes in a wide

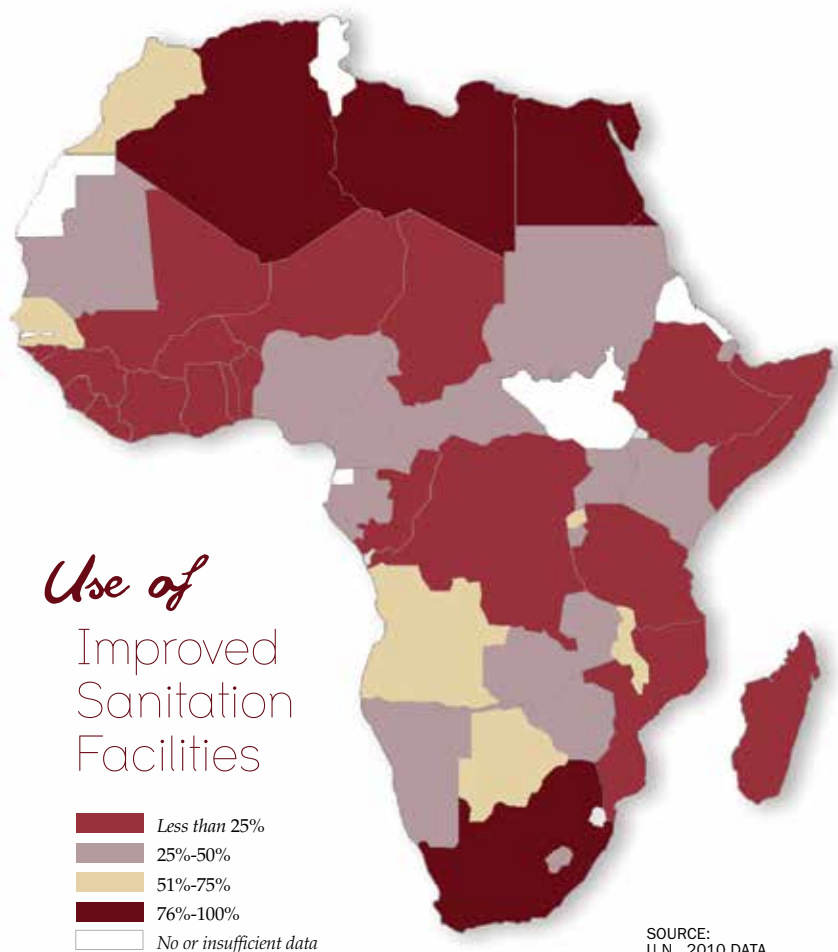
range of waste-handling services, from janitorial work to landfill management. He said the challenge for Ghana and many other African nations, especially regarding sanitation infrastructure, is a lack of planning and political will.

"If there was a prioritization, if there was a realization of the importance of public health and all other health issues to national development, then it doesn't matter the size of our purse, we will dedicate some to taking care of some of these basic things," Manteaw told *ADF*.

Zoomlion builds mobile toilet facilities and has worked with the government to place them in slums and densely populated areas. He said his company and others could provide more of these services, but government support is crucial. The company also does business in Angola, Equatorial Guinea, Liberia, Togo and Zambia.

Manteaw also is involved with the Africa Institute of Sanitation & Waste Management, which opened in Accra in November 2013. The institute, which is affiliated with the Kwame Nkrumah University of Science and Technology, trains individuals and companies from all over the continent on waste management through undergraduate and graduate programs.

"We're hoping that through such engagement and exchanges we will develop and share knowledge that could be replicated and adapted to specific cultures and





Workers dig a trench for latrines in a camp for displaced people in Bangui, Central African Republic. REUTERS

contexts across Africa to help solve the sanitation challenge that most of African cities face," he said.

Manteaw has seen opportunities emerge since Ebola prompted calls for better sanitation. First, he pitched a subregional "post-Ebola cleanup" to the Economic Community of West African States. There has been some communication back and forth, and he hopes to keep the idea alive. Second, he said nations should look for ways to "add value" to waste so there would be some incentive for citizens to keep areas clean. As an example, he used plastic water bottles, a pervasive sight in Ghana and elsewhere. He envisions sanitation parks where people could bring water bottles and sell them to facilities that would crush them and reuse them to make other things, such as waste bins. "If we can formalize it, bring some organization around it, it will solve the problem on the streets.

"A post-Ebola cleanup should not just be collecting waste from somewhere and going to dump it," Manteaw said. "Let's change the culture of waste management in the subregion." □

Security, Sanitation Are Intertwined



BENJAMIN AWUVAFOGE/KOFI ANNAN INTERNATIONAL PEACEKEEPING TRAINING CENTRE

he understanding of security often is limited to armed conflict or violent situations. Hence, most governments' security planning is focused on the military and police to the exclusion of important sectors such as health and sanitation. This narrow conception of security has complicated the fight against disease in Africa.

According to scholar Mohammed Ayoob, security is defined in relation to internal and external vulnerabilities that can significantly weaken territorial and institutional state structures and regimes. That means anything that poses a threat to the survival and life of an individual is a security issue.

The lack of basic sanitation, coupled with effects of conflict such as the destruction of a country's infrastructure and health systems, impede attempts to effectively fight disease outbreaks. It's not surprising that the World Health Organization (WHO) observed that many of the countries most severely affected by the recent Ebola outbreak have weak health systems and lack human and infrastructural resources after long periods of conflict and instability.

Infection control and hygiene are major issues. Soap and clean water are unavailable in some areas. Alcohol-based hand rubs are needed on a large scale. Isolation facilities are vital to contain Ebola, as are labs for testing because of the importance of rapid diagnosis. In some places, isolation is nothing more than an area behind a curtain.



Benjamin Awuvafoge

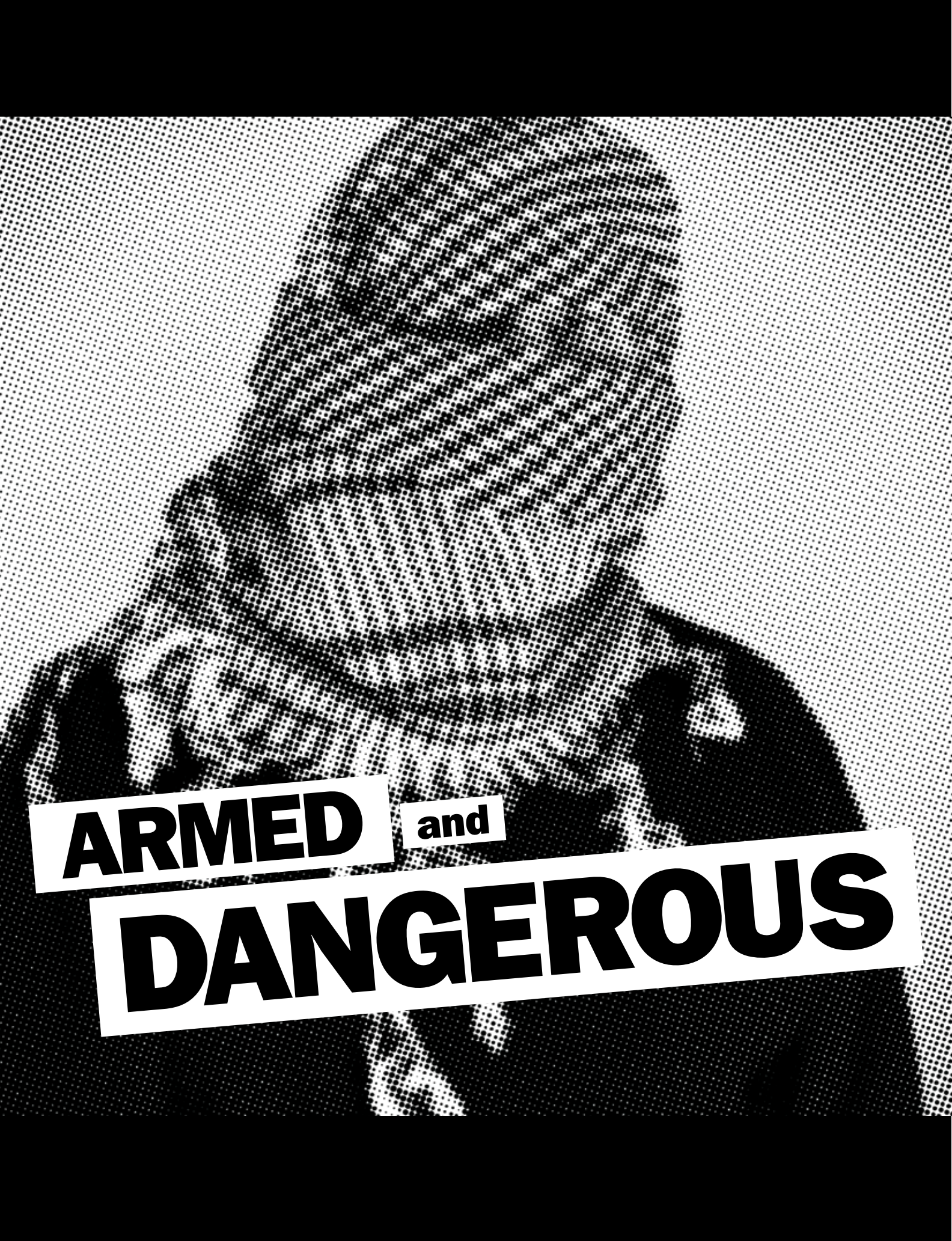
Sanitation deficiencies also undermine public health. WHO's Department of Public Health and Environment says that although 1.8 billion people have gotten access to basic sanitation facilities since 1990, more than 2.5 billion people — about 37 percent of the world population — still lack that access.

Ghana, like many African countries, has a problem with waste and garbage disposal, particularly around the capital, Accra. Waste-collection bins often overflow at city transport stations, and public urination and defecation are not uncommon. Cholera outbreaks occur regularly during the rainy season in Ghana and elsewhere, underscoring the importance of proper waste handling and disposal. In 2014, Ghana's cholera outbreak infected more than 27,900 people and killed 217, according to the U.S. Centers for Disease Control and Prevention. The disease is spread when water is contaminated by human waste. As the cholera outbreak was ongoing, President John Dramani Mahama called on municipal authorities and citizens to take part in regular cleanups. He also stressed the need for hand-washing and pledged to distribute free garbage bins to all households so waste didn't end up in the gutters.

It is said that prevention is better than a cure, and this is true in the fight against disease. The nature of Ebola being a contact-based disease that is not spread through the air makes it an ideal target for prevention. Prevention mechanisms are cost-effective and include wearing protective clothing and washing with products such as soap and chlorine. By contrast, treatment is resource-intensive and often unsuccessful. For example, a 70-bed Ebola management center in Bong County, Liberia, cost \$170,000 to build and about \$1 million per month to operate.

Although early 2015 has shown promising signs in the fight against Ebola, African leaders still must learn important lessons from the outbreak. Now is the time for them to re-examine their perception of security issues, especially to redirect government expenditures to other important, yet basic, sectors such as health and sanitation. The job of the security sector is to prevent the loss of human lives. If national leaders can reorient priorities in the coming years and widen their understanding of security, more lives could be saved.

Benjamin Awuvafoge completed his master's degree in Gender, Peace and Security in March 2015 at the Kofi Annan International Peacekeeping Training Centre in Accra.



ARMED **and**
DANGEROUS

NIGERIA LOOKS TO STEM THE FLOW OF WEAPONS TO BOKO HARAM.

ADF STAFF

In a blurry, 36-minute video shot somewhere in northeastern Nigeria, a man wearing a black cap and reading from a stack of papers stands beside a weapons cache.

"We are now showing the world all the arms and ammunition that we got from the Nigeria Army barracks," said Boko Haram leader Abubakar Shekau, speaking first in Arabic and then in Hausa. "What we have in our armory now, plus all that we had before, is enough to execute a victorious war against the whole of Nigeria."

Shekau went on to threaten more attacks like the one in January 2015 that leveled the town of Baga and left as many as 2,000 people dead. He said it was "just the tip of the iceberg," according to a translation by the Nigerian newspaper *Premium Times*. Later in the video, another man wearing a caftan proudly toured Boko Haram's arsenal. He gestured to mounds of bullets, AK-47s stacked like kindling, and boxes of ammunition and grenades piled shoulder-high.

"As you can see, we have thousands of AK-47 rifles. We have so much that we are still conveying them to our camp here," the unidentified fighter said, boasting of anti-aircraft weapons, rocket-propelled grenades (RPGs) and a tank.

Among the many problems Nigerian security forces face is a feeling of being outgunned by Boko Haram fighters, who have the hardware of a professional army. In September 2014, for example, government Soldiers were stunned to find insurgents using a T-55 tank and an armored personnel carrier.

The questions remains: How do the insurgents get these sophisticated

weapons and equipment?

Dr. Freedom Onuoha, a lecturer at Nigeria's National Defence College and an expert on Boko Haram, said the group has acquired arms and military hardware in three ways: trafficking across international borders, stealing weapons and vehicles from defense installations, and buying weapons trafficked domestically.

INTERNATIONAL TRAFFICKING

Nigeria's border stretches across varied and rugged terrain that is difficult to patrol. More than 4,000 kilometers long, it crosses a desert in the north, the notorious outlaw hideout the Sambisa Forest in the northeast, and the marsh and islands of Lake Chad. Much of the eastern border with Cameroon is mountainous and foreboding. Traffickers use the difficult landscape to their advantage.

There are more than 1,500 illegal entry routes to the nation, compared to about 84 official entry routes, according to Nigeria's Ministry of Interior. Most observers believe the actual number of illegal routes is much higher.

Onuoha, who speaks regularly to people in the customs service and military units stationed near the border, said they are daunted by the task of securing borders.

"The security agencies are finding it increasingly difficult to regulate the flow of arms," Onuoha told ADF. "Essentially, the maritime borders are very porous, the land borders are very porous. Also in this environment, you have massive corruption as well as high unemployment and poverty. Once somebody gets hold of these weapons, it's fairly easy to see who you can sell those arms to."



Traffickers have found creative ways to sneak arms across the northeast border. One method is to attach thatched bags to camels or livestock brought across by nomadic herders. In the Lake Chad region, traffick-

A Cameroonian Soldier scans the border with Nigeria. Experts say increased cooperation among countries of the Lake Chad Basin will be essential to shutting off Boko Haram's weapon supply.

AFP/GETTY IMAGES

ers are using the canoes of small-scale fishermen to hide weapons. For larger shipments, traffickers sometimes use hiding places in long-haul trucks transporting legitimate goods.

John Pokoo, an expert in small arms and light weapons (SALW) and an instructor at the Kofi Annan International Peacekeeping Training Centre in Ghana, said it is common for well-known trucking companies to pass through border checkpoints with minimal inspection. "If I am coming as a well-established company and everyone knows me, typically in Africa I will not be subjected to the same search as an ordinary person," he told *ADF*. "Already there are trucks that they empty out, workers cut a hole in the bed, load it with either cash or guns and seal it up. Then they load the normal goods in there on top. So unless you use a serious scanner, it is difficult to detect."

Onuoha said anecdotal reports indicate that traffickers' attempts to sneak weapons across official checkpoints slowed down near the end of 2014 and the beginning of 2015. This may be due to two factors: First, the weapons that had been looted in Libya after the fall of strongman Moammar Gadhafi are starting to run out. Second, Boko Haram had successfully taken control of some stretches of border territory, including the land near Baga, negating the need for formal crossings.

"The seizure of territory by Boko Haram and the ability to hold territory allows them to establish more long and enduring trafficking routes, which is even more difficult for the government to handle," Onuoha said.

In February 2015, the Nigerian Army liberated Baga with assistance from regional forces.

A key to decreasing illicit cross-border activity will be tight cooperation between law enforcement agencies on all sides of the border. The *Premium Times* reported that a beefed-up intelligence-sharing agreement

among Benin, Cameroon, Chad, Niger and Nigeria already is bearing fruit. In April 2014, Cameroonian forces arrested traffickers near the Chadian border. They were found to be carrying 288 rifles, 35 RPGs and 35 improvised explosive devices. The traffickers also had 50 Cameroonian passports.

Boko Haram, however, has proved adept at diversifying the routes by which it obtains weapons and changing once it attracts government attention. Origin points for arms that end up in Nigeria range from regional neighbors like Côte d'Ivoire and Liberia to Turkey and Eastern European countries, including Bulgaria, Kosovo and Ukraine. In 2011, officials found a shipload of arms and ammunition at a Nigerian port and arrested an Iranian arms trafficker.

Pokoo said security services are only one part of the equation to halting international trafficking. To truly reduce the flow of arms across borders, the central government will need to win the allegiance and trust of people living in border communities. "The state must work with people who live there and see what goes on on a daily basis," he said. "Any military high-handedness may make it difficult for communities living along the border to cooperate."

Pokoo is particularly concerned with increased ties between extremists in border communities and other ethnic groups in North Africa. This sort of alliance could give Boko Haram access to sympathetic



A Nigerian Joint Military Task Force Soldier positions his rifle on sandbags in the northeastern Nigerian town of Maiduguri, Borno State.

AFP/GETTY IMAGES

A NEW FOE,

A NEW STRATEGY



Maj. Gen.
Ibrahim Sani

ADF STAFF

Maj. Gen. Ibrahim Sani, chief of transformation and innovation for the Nigerian Army, said his country is countering the threat of Boko Haram and other asymmetric threats by “thinking outside the box.” The military is taking the fight to what he calls “dark networks” of terrorists with a combination of technology, improved training and a newly created Nigerian Army Special Operations Command (NASOC).

Speaking to *ADF* in February 2015 at the Global Special Operations Forces Foundation conference in St. Petersburg, Florida, Sani said his job is to look for innovative solutions to emerging threats. “I look at administration, I look at operations, I look at logistics, I look at everything you can think of and ask, ‘What does the Nigerian Army require to be able to meet the current challenges?’” he said. “Once I don’t see it, I look at the possibility of how to go about it.”

Technology: Among the latest technology his office has worked to introduce is the Nigerian Army Low Altitude Platform Station. This balloon-based platform has a surveillance range of 5 kilometers and provides real-time images to Army units. The Army also is introducing a mobile remote sensing device known as a TM-1. This unit can detect human-borne improvised explosive devices (IEDs) or suicide vests from a distance of 500 meters or more. The plan is to have these available at all military checkpoints and control points.

To gather data from the widest range of sources, the Army has set up the Nigerian Army Information Processing Center. This open-source data collection center asks the public to call, email or send text messages to alert the Army of emergencies or terrorist activity. In addition to gathering information about security

threats, the center lets citizens report unprofessional conduct by Soldiers without fear of retribution.

“Whatever we get from the public, we collect, analyze and within 15 minutes we send it to the location, to the formation or unit where the emergency is occurring,” Sani said. So we get on-the-spot information of what is happening in real time at a distance.”

NASOC: The Nigerian military is standing up a Special Operations Force composed of fewer than 1,500 highly trained Soldiers. The five- to 10-year process began in 2014 with help from U.S. Special Operations Command Africa. The military will select and train the fighting force with an emphasis on speed, precision and low-visibility operations.

“Humans are more important than hardware and quality is more important than quantity, and they cannot be mass-produced,” Sani said. “If you have 5,000 guys who apply, if you are lucky you might get 500.”

Training: To combat IEDs, Nigeria worked with the U.S. Office of Security Cooperation to produce a handbook on how to detect and disable explosives, and it has expanded training on asymmetric warfare. At border checkpoints, Nigeria is employing the “cluster approach” in which a group comprised of individuals from various government agencies, the military, police, customs and immigration are trained together and work together at an outpost. “The approach has brought about the integration of all relevant agencies in training and the conduct of operations,” Sani said. “On the whole, we are embarking on new forms of training with customs, immigration, state security and police. So each one, we are integrating them, enhancing their responsibilities and their constitutional tasks.”

communities stretching from southern Nigeria all the way to the Sahara. The International Crisis Group (ICG) said Boko Haram has developed significant links to extremist groups Ansar al-Dine, al-Qaida in the Islamic Maghreb (AQIM) and the Movement for Oneness and Jihad in West Africa (MUJAO). It also has established rear training bases in Niger.

“The three Islamist groups have boosted Boko Haram. In particular AQIM made its financial resources, military arsenals and training facilities available,” the ICG wrote in a 2014 report.

In 2015, Boko Haram pledged allegiance to the Islamic State.

DOMESTIC WEAPONS

West Africa has become a hot spot for illegal SALW, with an estimated 8 million circulating in the region, according to the Economic Community of West African States (ECOWAS). As many as 70 percent of those are in Nigeria.

The methods used to conceal weapons moved within the nation are similar to those used to cross international borders. Arms smugglers linked to Boko Haram have hidden SALW in bags of grain and even wrapped them in plastic bags and stashed them inside empty fuel tankers, Onuoha said.

One unique aspect of internal trafficking is the use of tunnels to move weapons without detection. In July 2013, near the city of Maiduguri, Nigeria, authorities discovered a network of tunnels and bunkers used by Boko Haram fighters to move weapons between houses to avoid detection. Some of the bunkers were large enough to fit 100 people.

ECOWAS has launched a program that includes imprinting its logo, the serial number, manufacturer and other details on weapons in member countries. Official weapons will be marked with additional details. To control internal trafficking, Nigeria has begun a four-year action plan overseen by the Presidential Committee on Small Arms. Among its tasks will be identifying unregistered weapons-makers and instituting a nationwide program to mark and register weapons.

Most observers agree, however, that the proliferation of SALW in Nigeria is

STEPS TO CUT OFF FLOW OF WEAPONS TO BOKO HARAM



- **TAKE BACK** border territory controlled by Boko Haram.
- **EMPLOY** air support for hitting Boko Haram camps and air surveillance to track trafficking activities.
- **ENACT** strict oversight of border control officers to prevent bribery or collusion.
- **INTERNALLY MONITOR** arms circulating through weapons marking and registration.
- **SET UP** cooperation on border patrols and intelligence sharing between nations.
- **TRAIN** border agents to look for common methods of concealment.
- **HAVE THE GOVERNMENT** reach out to border communities.

unlikely to decrease until people have a greater sense of security. Regular conflicts and a lack of ability by the police and military to provide safety in northern Nigeria have made it imperative for citizens to keep arms.

"This is a country that has lived in tension for more than 40 years," Pokoo said. "How can you tell people under such conditions to just surrender their weapons? It's virtually impossible."

WEAPONS DEPOTS

About 5 a.m. January 3, 2015, Boko Haram fighters stormed the military base in Baga, the headquarters of the Multinational Joint Task Force created to bring back peace to the troubled region. Militants entered on motorbikes and hurled homemade explosive devices. Although the Nigerian Soldiers fought back for several hours, they were eventually forced to flee.

The victory for Boko Haram gave it access to the huge weapons cache displayed in the video featuring Shekau. The theft of weapons from military and police installations has been a core element of Boko Haram's armament strategy since the group's inception. The group also has conducted strategic raids on locations where it can get ingredients for explosives.

Onuoha said better protection of military installations doesn't necessarily mean more arms for Soldiers. Instead, he thinks strategic air support is badly needed to push back Boko Haram assaults and

ensure that they are not able to regroup and continue to attack.

"The greatest problem, I think, that has allowed Boko Haram to take on so many territories — forget about the firepower — is the inability, in terms of the air power, of the Nigerian Air Force," Onuoha said. "Some of the aircraft that you can use for surveillance, but more importantly for combat, are really not there in the inventory. The Air Force actually needs that kind of air power in the form of Cobra attack helicopters or other things they can use for immediate response ... that could really be the game changer."

There also is a need for better security of military weapons depots and registration of military weapons. Oversight and training of the Soldiers guarding depots are essential. Pokoo said a program in Ghana that trains military officers to register and mark their weapons has been successful at reducing the diversion of official weapons. Some of the most disturbing reports in Nigeria indicated that corrupt Soldiers have, in rare instances, intentionally left weapons depots unlocked so they could be raided by Boko Haram fighters.

"We know that Boko Haram is getting some of its supply from official armories," Pokoo said. "The pickups, the armored cars, the heavy machine guns and all that. Some are coming from official armories. They've done that because they've been able to infiltrate the hierarchy of the military." □



MAASAI WARRIORS

Go for the Gold

A competitor takes part in the spear throw during the annual Maasai Olympics at the Sidai Oleng Kimana sanctuary in Kenya.

AFP/GETTY IMAGES



AGENCE FRANCE-PRESSE

For generations, Maasai warriors in Kenya proved their manhood by killing a lion, but a campaign led by Olympic champion David Rudisha is working to swap spearing for sport.

As the numbers of big cats rapidly decline due to poaching and humans' increasing encroachment on their territory, a special Maasai Olympics organized by conservationists aims to provide an alternative test of the warriors' strength.

Rudisha, the 800-meter gold medalist and world record-holder — and himself a Maasai — is patron of the games.

In a Kenyan twist on classic athletics events, the warriors threw spears instead of javelins.

Daubed in red paint, dressed in colorful Maasai robes and draped in beaded necklaces, warriors competed in the plains beneath the snow-capped peak of Mount Kilimanjaro, Africa's highest mountain. They also hurled the Maasai's heavy wooden fighting club instead of

the discus, with the winner determined by the accuracy of the throw.

Running races included 200-meter, 800-meter and 5,000-meter distances for men; for women, there were 100-meter and 1,500-meter races. Athletes also took part in a Maasai high jump, measured by the traditional standing jump straight into the air, not over a crossbar.

The games offered warriors a chance to compete using traditional skills used in the hunt, but tested instead in a sports competition against each other.

Organizers said the games give the Maasai "an avenue to demonstrate their physical prowess through a sporting event rather than a traditional hunt," as well as raising awareness about the threats lions are facing. "Lions are in trouble," said Fiesta Warinwa of the African Wildlife Foundation, one of sponsors of the games, adding that fewer than 2,000 lions remain in Kenya.

TOUR OF RWANDA

DRAWS 2 MILLION SPECTATORS

BBC NEWS AT BBC.CO.UK/NEWS

Dubbed “the land of a thousand hills,” Rwanda can leave even the toughest cyclists gasping for air. Competitors on the eight-day Tour of Rwanda cross 934 kilometers, climbing 19,500 meters, with peaks rising to 2,500 meters. Cyclists pedal through coffee, tea and banana plantations.

Cycling in Rwanda, as in the rest of Africa, is growing as a sport. And the latest Tour of Rwanda, staged in November 2014, is growing as well.

“We started with five riders and five-speed cycles from the 1980s, but most of the gears were not working; they were wrecks,” said Jonathan Boyer, the first American to have raced the Tour de France in 1981, and who in 2006 became the first coach of Team Rwanda.

Competitive cycling in Rwanda “grows gradually,” Boyer said, explaining that many racers are former bicycle taxi drivers who transport people and goods, building strong muscles pedaling up Rwanda’s rolling hills.

The Rwanda Cycling Federation has about a hundred members. In June 2014, the country opened a training center in the northern town of Musanze with modern equipment.



Rwandan cyclist Valens Ndayisenga celebrates after crossing the finish line to win the Tour of Rwanda. TOUR OF RWANDA

“This is a country where the hills are really tough,” said Cameroonian competitor Damien Tekou.

Organizers estimated that more than 2 million spectators saw the 2014 event, nearly a fifth of Rwanda’s 11 million people. The hometown fans were treated to a historic performance as Rwandan cyclist Valens Ndayisenga won the event, becoming the first Rwandan to do so. “The country has been behind us,” Ndayisenga said. “Every day I would wake up with a conviction that we can do it. There were many people encouraging us, and I am glad this has paid off.”

The race is expanding. Fourteen teams took part in 2014, with cyclists from across the continent — including Algeria, Burundi, Eritrea, Ethiopia and Morocco — as well as from France, Germany and Switzerland.



Algerian midfielder Yacine Brahimi grimaces during a match in January 2015, while playing for the club team F.C. Porto.

AFP/GETTY IMAGES

ALGERIA’S BRAHIMI

IS FOOTBALLER OF THE YEAR

AGENCE FRANCE-PRESSE

Yacine Brahimi was voted the BBC African Footballer of the Year 2014. The 24-year-old midfielder was the first Algerian to win the award, which is decided by football fans.

“It’s a big honor for me to receive this wonderful trophy,” said Brahimi, a winger for the Portuguese club team F.C. Porto. “I owe it to my country, Algeria, and to all the people who voted for me. It’s also a trophy for the whole of Africa, because it rewards an African player. So, I am really very happy.”

After fans in 207 FIFA-registered countries submitted a record number of

votes, Brahimi came out ahead of Nigerian Vincent Enyeama, Gabonese Pierre-Emerick Aubameyang and Ivorian pair Gervinho and Yaya Toure.

In 2014, Brahimi starred for Algeria at the World Cup in Brazil, helping his team reach the last 16 for the first time. He scored his first international goal in the 4-2 win over South Korea in the group stage. Domestically, Brahimi started the year at Spanish club Granada, where his strong performances led him to be named best African player in the country, and earned him a move to Porto.

South Africa, Partners to Grow Aviation Fuel

DEFENCEWEB

South African farmers in the Limpopo province hope to harvest a first crop of energy-rich Solaris plants to be used as aviation fuel.

The aviation giant Boeing and national carrier South African Airways (SAA) launched Project Solaris. The project is a collaborative effort to develop an aviation biofuel supply chain with the Solaris plant, a nicotine-free variant of tobacco. More than 300 varieties of the tobacco plant were crossed to create the Solaris variety. Oil from the plant's seeds may be converted into bio-jet fuel as early as 2015, with a test flight by SAA as soon as feasible.

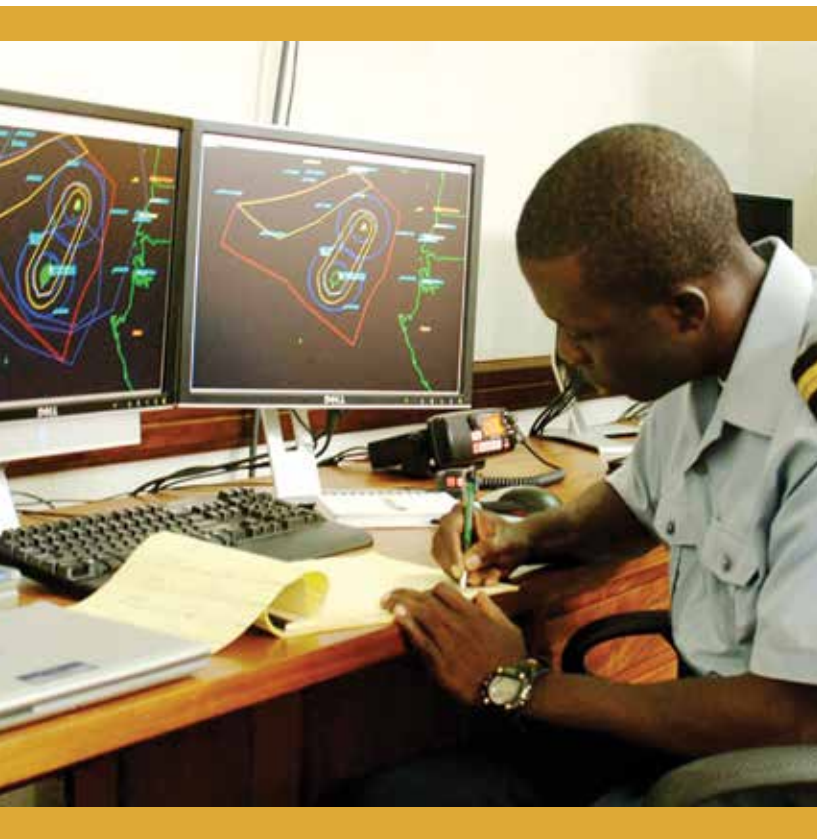
"SAA continues to work towards becoming the most environmentally sustainable airline in the world and is committed to a better way of conducting business," said Ian Cruickshank, environmental affairs specialist for the SAA Group. "The impact the biofuel program will have on South Africans is astounding:

thousands of jobs mostly in rural areas, new skills and technology, energy security and stability, macro-economic benefits to the country, and a reduction in the amount of carbon dioxide emissions."

If test farming in Limpopo is successful, the project will be expanded in South Africa and potentially to other countries. In coming years, emerging technologies are expected to increase aviation biofuel production from the plant's leaves and stems. By 2020 Project Solaris hopes to have at least 50,000 hectares of Solaris under cultivation in South Africa. This would also create 50,000 direct and indirect jobs.

Tobacco farmworkers in Marble Hall, South Africa, carry Solaris seedlings from a nursery to the field. BOEING





BRAZILIAN

NAVY TO PARTNER WITH

São Tomé and Príncipe

ADF STAFF

The Brazilian Navy announced plans to establish a mission in São Tomé and Príncipe, the island nation in the Gulf of Guinea off the coast of Gabon.

The mission is intended to improve defense cooperation between the two countries, said Julio Soares de Moura Neto, commander of the Brazilian Navy, in an interview with *The New York Times*.

The two countries share a common language and cultural links since they were once Portuguese colonies. Brazil also has donated computers, rifles and two dinghies to the São Tomé Coast Guard. The dinghies will allow the Coast Guard to improve inspection capacity around its waters in the highly strategic area of the gulf, Panapress reported.

A São Tomé and Príncipe Coast Guardsman oversees daily operations at the country's Regional Maritime Awareness Capability center. U.S. AFRICA COMMAND

EU Plans to Train 1,200 SOMALI SOLDIERS IN 2015

DEFENCEWEB

The European Union Training Mission in Somalia plans to train 1,200 Somali National Army (SNA) noncommissioned officers, junior officers, specialists and military instructors in 2015. The effort is part of an internationally backed capacity-building program for Somali security forces.

The security and stabilization mission trained 1,150 SNA Soldiers in 2014 and aims to continue producing graduate officers in the same numbers in 2015, according to media reports from Brussels. The mission was moved from Uganda to the Somali capital, Mogadishu, in January 2014. It has held 11 training courses and graduated nearly 4,000 SNA officers and specialists since it began in 2010.

The training is focused on commander up to battalion and company level, in addition to specialist training in the areas of military police, civil-military cooperation, intelligence and combat engineering.

The EU's Jazeera Training Camp in Mogadishu also provides lectures on international humanitarian law, human rights and the protection of civilians in combat situations.

Somali National Army Soldiers prepare for a passing-out ceremony marking the conclusion of a 10-week advanced training course by the African Union Mission in Somalia.

AU-U.N. INFORMATION SUPPORT TEAM PHOTO





Two Nigerian Navy police officers guard suspected pirates in 2013 near Lagos. REUTERS

Nigerian Navy, Red Cross Team Up for Training

ADF STAFF

The Nigerian Navy has announced plans to partner with the International Committee of the Red Cross to train Sailors on international arms laws and conflict resolution.

Commodore Atiku Abdulkadir, the commandant of the Nigerian Navy College in Onne, made the announcement during a three-day training event in December 2014.

"All officers and trainees must be adequately informed on what their responsibilities are when they find themselves in situations that they have to apply the import of this [international arms] law," Abdulkadir told Nigeria's *Daily Independent*. "The armed forces, particularly the navy, are always involved in resolution of one conflict or the other, be it in direct conventional warfare and counter-insurgency or counter-terrorism."

Abdulkadir said the naval headquarters asked the Red Cross for help in training its Sailors on international humanitarian and human rights laws. "It is expected that personnel will be getting in contact either with armed personnel who are no longer in capacity to continue to fight, or a civilian who acted against the law, and may be carrying arms," he told the *Daily Independent*. "So, we need to educate our officers and men on how they should relate and how they should behave in conflict and in resolution of conflict."

Newly graduated officers from the Nigerian Defence Academy and Direct Short Services Cadets will participate in the training, Abdulkadir said.

INTERPOL TO OPEN ADDIS ABABA OFFICE



ADF STAFF

Interpol announced plans to open a permanent office at the African Union headquarters in Addis Ababa, Ethiopia.

The *Sudan Tribune* reported that Interpol's head commander in Ethiopia, Girmay Kahsay, said Interpol has reached an agreement with the Ethiopian government and the African

Union to open the office.

This will be Interpol's third permanent office outside its headquarters in Lyon, France, the *Tribune* said. The other offices are at the United Nations in New York and the European Union in Brussels. The move marks another step in the progression toward creating a

continental police force known as AFRIPOL.

Interpol was established in 1923 and collaborates with police around the world to investigate and stop terrorism, organized crime, drug trafficking, environmental crime, genocide, war crimes and piracy. It has 190 member states.

GHANA NAVY FREES HIJACKED OIL TANKER

REUTERS

The Ghana Navy announced it freed a tanker that was hijacked off the coast of Nigeria and arrested eight pirates believed to be responsible for seizing it.

Pirate attacks have increased in West Africa in recent years, raising insurance costs for shipping companies. Experts say gangs based in the waters off Nigeria, Africa's top oil producer, are extending their reach across the Gulf of Guinea.

Col. Aggrey Quarshie would not say when pirates seized the MT Mariam, but news reports stated it was freed on January 17, 2015. The small tanker's owners, using an onboard tracking device, informed Ghanaian authorities of the ship's position in Ghanaian waters.

The Daily Guide reported that a Navy patrol team onboard the GNS Blika, a patrol vessel, followed the oil tanker to 26 nautical miles offshore. Ghana officers then boarded it and apprehended the suspects in two groups, as they hid in the engine and cargo compartments.

"The Ghana Navy responded swiftly with a patrol team to the area, and they were able to overpower the pirates and free the ship," Quarshie told Reuters. "But when they got there, the cargo had already been transferred to another vessel." The ship's crew members were unharmed, Quarshie added.

The armed pirates, all thought to be Nigerians, were arrested and handed over to Ghana's Bureau of National Investigations. Recovered items included cash, four AK-47 rifles, additional magazine cartridges, digital cameras and mobile phones, *The Daily Guide* reported.

Quarshie said Ghana's Navy and other forces from Benin, Nigeria and Togo had launched a search for the ship carrying the stolen cargo.



The GNS Blika, a snake class patrol vessel, was commissioned in 2012.

GHANA MINISTRY OF FOOD AND AGRICULTURE



SAHNOUNI VIA WIKIMEDIA COMMONS

Algeria, South Africa to Create Aeronautics Center of Excellence

DEFENCEWEB

The Council for Scientific and Industrial Research (CSIR) in South Africa and the University of Blida in Algeria signed a memorandum of understanding to establish a Joint Centre of Excellence in aeronautics research.

An Algerian Su-30MK2 flies above the air base Oum El Bouaghi.

The signing took place at the International Exhibition of Unmanned Aerial Vehicles in Algeria in late 2014. The center would strengthen Algeria in the field of aeronautics, and South Africa's Department of Science and Technology could expand its relationship with Algeria.

Potential fields of cooperation include technologies for unmanned aerial vehicles, avionics and ground systems, aircraft structures, gas turbines, wind tunnels, store integration, hypersonic flow, flow control, space technologies, computational methods, aero-elasticity, optronics, radar and aero acoustics.

Staff exchange programs, postgraduate student programs, joint seminars and workshops, and joint development programs will be organized at the center.

"Outside of South Africa, there are really no other significant aeronautics research capabilities and facilities in Africa," said retired Air Force Maj. Gen. Des Barker, acting director of CSIR. Algeria "understands the requirement for Africa to take ownership of its aeronautics research requirements and is delighted to close the African aeronautics research chasm through collaboration with South Africa."



CORGENIX MEDICAL CORP

15-MINUTE EBOLA TEST APPROVED

BBC NEWS AT BBC.CO.UK/NEWS

The World Health Organization (WHO) has approved the first rapid blood test for Ebola. It should allow patients to be identified, isolated and cared for as quickly as possible to bring an end to the outbreak that killed more than 9,300 people as of February 2015.

It is less accurate than conventional tests, but it takes minutes rather than hours to get a result. The test also works without electricity so it can be used in remote regions.

Conventional Ebola testing requires a laboratory to analyze blood for fragments of the virus' genetic material, taking 12 to 24 hours to get a definitive answer.

The ReEBOV Antigen Rapid Test involves putting a drop of blood on a paper strip and waiting 15 minutes for a reaction. The test, developed by United States-based company Corgenix, searches the blood for a different part of the virus. Trials in West Africa suggest the test correctly identifies about 92 percent of people who have Ebola.

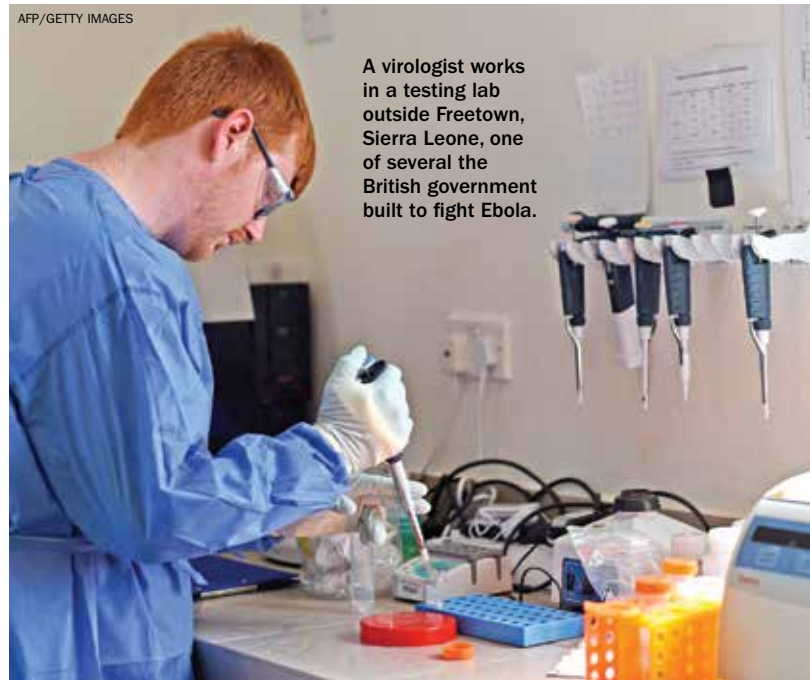
WHO said: "While less accurate, the antigen test is rapid, easy to perform and does not require electricity. It can therefore be used at lower health care facilities or in mobile units for patients in remote settings." It added that, where possible, the results from the rapid test should be confirmed by the more precise conventional testing.

More than 23,250 people had been infected in the outbreak, and 9,380 had died as of February 2015.

"The new test could help to quickly confirm outbreaks in remote areas without the need to send samples to a testing

clinic and wait for results," said Dr. Ben Neuman, a lecturer in virology at the University of Reading in England. "The new test isn't about saving the lives of infected people, but it can help in the long run by making it easier and quicker to detect Ebola outbreaks."

AFP/GETTY IMAGES



A virologist works in a testing lab outside Freetown, Sierra Leone, one of several the British government built to fight Ebola.

NAMIBIA SWITCHES TO ELECTRONIC VOTING

REUTERS

When Namibians voted in November 2014, it marked a historic event as Africa's first electronic election.

Despite an 11th-hour challenge from the opposition party over the devices, the election commission used 4,000 voting machines for the presidential and parliamentary vote instead of paper ballots.

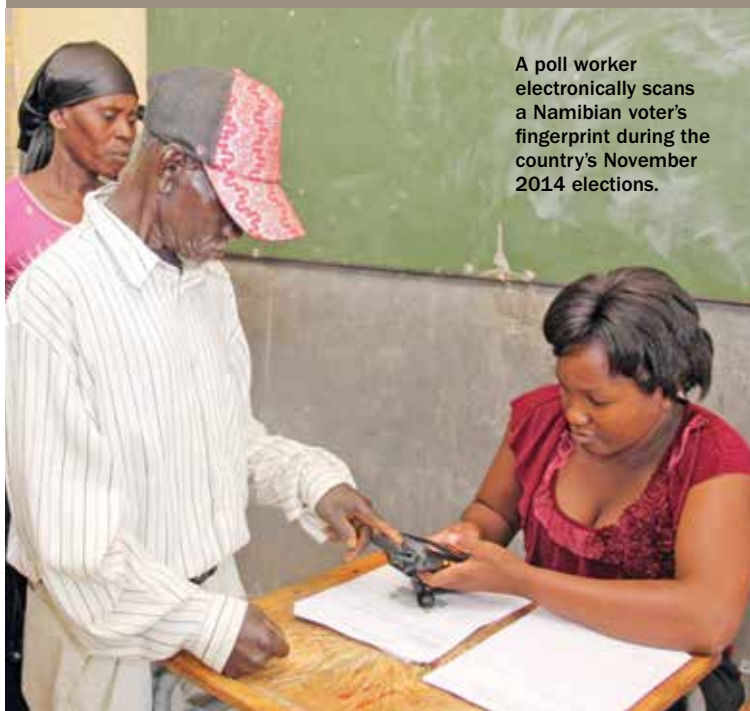
In the booth, voters found a gray electronic device with pictures or logos of the candidates and a green button next to each one. Instead of marking a cross on paper, voters selected their choice by pressing the button.

"It is way better and faster," said voter Sara Isaacs.

Although there is no history of election fraud in Namibia, unlike in many neighboring countries, logistical problems meant the results from the 2009 vote took a week to emerge.

Elections director Paul Isaak said that instead of spending \$1.81 million printing ballots, the commission had achieved an "enormous saving" by spending just \$181,000 on one paper for each voting machine.

SWAPO won the 2014 election, extending its 24-year rule. Mineral-rich Namibia has one of Africa's healthiest economies, and SWAPO, the former liberation movement that secured independence from South Africa, has maintained its popular support, although dissent is growing over inequality and a lack of housing.



A poll worker electronically scans a Namibian voter's fingerprint during the country's November 2014 elections.

THE ASSOCIATED PRESS



Somalia Offers Amnesty to al-Shabaab Members

VOICE OF AMERICA

Somalia's president has renewed an offer of amnesty to members of the al-Qaida-linked militant group al-Shabaab.

In January 2015, President Hassan Sheikh Mohamud said his government will ensure the safety of al-Shabaab members who acknowledged their crimes, reject the militant group, and embrace Somalia's peace-and-reconciliation process.

Mohamud also said his government will help defectors learn a trade or find a job. The announcement came after the defection of al-Shabaab's former intelligence chief, Zakariya Ismail Hersi, and what the government said is a steady flow of foot soldiers abandoning extremism.

Mohamud said some crimes, such as murder and rape, are not subject to amnesty, but he added that those who committed such crimes could join the peace process after serving their sentences.

Hersi denounced the extremist group during his first public appearance after surrendering to the Somali government. Hersi said the group's leaders had misled militants into fighting a distorted form of jihad, and he vowed to persuade fighters to renounce violence and to surrender to the Somali government.

Until his defection, Hersi, also known as Zaki, served as the head of intelligence for the Somali-based al-Shabaab. He is the most senior al-Shabaab commander to surrender to the Mogadishu-based government since Said Atam, head of al-Shabaab in the Puntland region, surrendered in June 2014. Another leader, Hassan Dahir Aweys, surrendered in June 2013.

Al-Shabaab once controlled much of southern and central Somalia and imposed a harsh form of Islamic law that banned music and led to public amputations for accused thieves.

Government and African Union troops have recaptured most of the territory, but the militants still were able to kill several members of Parliament in 2014 and launch two major assaults on the presidential palace. The Somali government first offered amnesty to al-Shabaab fighters in September 2014, after al-Shabaab's top leader Ahmed Abdi Godane was killed in an air strike.

Zakariya Ismail Hersi, a former senior al-Shabaab commander, speaks during a press conference at the presidential palace in Mogadishu, Somalia.

THE ASSOCIATED PRESS



KENYA BUILDING NO-FRILLS VEHICLE

The Mobius II is a low-cost vehicle built in Kenya and designed for African roads.

MOBIUS MOTORS

On the edge of Nairobi, two doors down from a gleaming display of Germany's

luxury Porsche cars, another showroom offers Africa's answer to the continent's potholed roads.

It's called the Mobius. It has no flashy dials, alloy wheels or electric windows. In fact, it has no windows at all except for the windshield. Instead, the square car-cum-pickup with its aluminum panels has been stripped of extras to make it sturdy and cheap.

"We are not trying to reinvent the wheel; we are just trying to make one that is a bit tougher," says sales manager Aman Ghai in the showroom, where engineers are also at work.

Mobius Motors hopes to design, build and sell a product in Africa, which has long provided the raw materials to feed the world's factories but struggled to create a manufacturing base at home.

Mobius faces prodigious challenges. It has had to weave through government bureaucracy, a perennial

REUTERS

complaint for businesses. Fifty cars are being built in the first batch, each selling at \$10,500 before tax.

Starting the project on African soil also had benefits, enabling the engineering team in Kenya to focus on what rural Africans need. The car's back seats run along the sides and fold away to create space for goods, while a heavy-duty suspension copes with bumpy roads. Minimal electronics mean there is less to break down.

"The challenge is basically overcoming that fear that Africans can't manufacture," said Ghai, a Kenyan who worked for foreign dealers in the past. "We have all the resources here. We have the talent pool here. It is just getting over the fear."

The company could make two vehicles a day at its plant and plans other versions, including one with four-wheel drive. The Mobius II model, designed in Kenya, will have about 45 percent local content, although the engine and some other parts are imported, a practice common in the industry, particularly for new entrants.

DEVICE DESIGNED *to* KEEP SHARKS AWAY

AGENCE FRANCE-PRESSE

In the blue waters off Cape Town, South Africa, a revolutionary experiment with an electronic barrier seeks to exploit the supersensitivity of sharks' snouts to keep swimmers safe.

The technology has been developed by South African experts who invented the electronic "shark pod" for use by surfers and divers — now marketed by an Australian company — and could be applied globally if successful.

Years of research have shown that sharks will turn away when they encounter an electrical current. That fact has prompted this experiment on a much larger scale.

A 100-meter cable with vertical "risers" designed to emit a low-frequency electronic field was attached to the seabed off Glencairn beach for a five-month trial, starting in late 2014.

"If successful, it will provide the basis to develop a barrier system that can protect bathers without killing or harming sharks or any other marine animals," says the KwaZulu-Natal Sharks Board, which developed the shark pod.

As for humans, "if someone touched the small part of an electrode that is exposed, they might experience a tingling sensation" but would suffer no harmful effects.

The barrier would mark a major shift away from the shark nets used in KwaZulu-Natal on South Africa's east coast for the past 50 years, which also kill other animals and have been criticized as environmentally destructive.

Research has shown that a gel in the sharks' noses makes them more sensitive to electrical currents than are other species. Ordinary fish and sea mammals such as seals and dolphins should not be affected by the barrier.



ETHIOPIA *Rising to* MIDDLE CLASS

WITH annual economic growth rates of more than 10 percent and attractive investment conditions due to low infrastructural and labor costs, Ethiopia is eagerly trying to rise from the status of a low-income to a middle-income country in the next 10 years.

Ethiopia, with 94 million inhabitants, is the second-most-populous country in Africa after Nigeria, but it remains predominantly rural. Only 17.5 percent of the population lives in cities, and most are in Addis Ababa.

It also is one of the continent's fastest-growing economies. Between 2015 and 2018, growth is expected to average 7.3 percent, according to a study by the United Nations Industrial Development Organization.

Economic growth since 2006-07 doubled per capita income to \$550 in 2012-13, and the percentage of people living below the national poverty line dropped from 38.9 in 2004 to 29.6 in 2011. Still, government sources admit that eradication of poverty remains a pressing issue.

The official target of rising to a middle-income country is considered to be realistic, but one diplomat cautioned that although

the amount of foreign direct investment rose from 0.5 percent in 2008 to 2 percent in 2013, investors face trade constraints.

The U.N. says the constraints are mainly related to border logistics. Djibouti, the main import-export seaport used by Ethiopia, is 781 kilometers from Addis Ababa, which makes the cost of land transportation a critical factor.

The U.N. has chosen Ethiopia, along with Senegal, as pilot countries for its Inclusive and Sustainable Industrial Development program, which aims to achieve industrialization in developing countries in order to eradicate poverty and create prosperity.

U.N. officials said "there is not a single country in the world which has reached a high state of economic and social development without having developed an advanced industrialized sector."

Promoting the sustainability that should be inherent to industrialization, the U.N. said the program takes into account environmental factors together with its partner countries and organizations. It also fosters an inclusive industrialization, sharing the benefits of the generated prosperity for all parties involved.

A woman gathers roses at a flower farm in Ethiopia. Ethiopian industries are contributing to an annual growth rate of more than 10 percent. The country wants to rise from the status of a low-income to a middle-income country in the next decade.

AFP/GETTY IMAGES



An Honest Man

ADF STAFF

In the short history of Burkina Faso, one name towers above the rest: Thomas Sankara.

Born into a working-class Catholic family in the northern town of Yako, Sankara entered the military at age 19. He rose through the ranks, impressing his fellow Soldiers with his charisma and work ethic. At 26, he took command of the nation's prestigious Commando Training Centre, where he taught an elite fighting force. Later, he became a government information minister. He was known for the peculiar habit of riding to work on a bicycle and the even stranger habit of encouraging journalists to write critical stories about government misdeeds. After a stint in prison on politically motivated charges, he took power in a popularly supported coup in 1983. He was 33.

As president, Sankara made it his mission to root out corruption. He took a pay cut and insisted that all government ministers do the same. He replaced the official Mercedes fleet with more modest vehicles, and when he traveled to New York to address the United Nations, he made government ministers sleep on mattresses on the floor to save money.

He also fought abuses of power in the military, dismissing those who did not meet the highest standards. He warned: "A Soldier without political and ideological training is a criminal in power."

His unconventional attitudes made him a hero in his home country, and his influence spread around the world. He embraced the role of spokesman for the downtrodden and began to preach about larger issues, including self-sufficiency and women's rights. He appointed women to high ministerial posts, encouraged them to join the armed forces, and spoke out against forced marriages and female genital mutilation. "Women hold up the other half of the sky," he said.

His ability to galvanize the nation was famous. He launched "L'operation vaccination commando," in which 2.5 million people were vaccinated against polio, measles and meningitis in one week. He was the first African head of state to warn against desertification, and he began tree-planting campaigns in the north to halt the encroachment of the Sahara. In 1985 he started the "bataille du rail," on which thousands of civilians worked, many using only their bare hands, to build a rail line connecting the capital Ouagadougou to the manganese mines in the far north.

His legacy also is one of national unity. When he took power, the country was known as Upper

Volta. Its borders were a vestige of colonialism, and its many ethnic groups saw little in common with one another. To help build a national identity, he supported efforts to preserve indigenous customs and languages, and renamed the nation Burkina Faso, an amalgam of two languages that roughly translates to "the land of honest men."

But his time in office was not without controversy. He imprisoned political opponents and cracked down on trade union leaders. Amnesty International gave Burkina Faso a dismal grade for civil liberties and political rights during his tenure.



Thomas Sankara

His exacting demands and anti-corruption message did not win him friends among the political elite. On October 15, 1987, he was attacked during a meeting with 12 other officials. All were gunned down. His body was dismembered and buried under cover of night. Many suspected the connivance of Sankara's second-in-command and close friend, Blaise Compaoré, who took power after the assassination.

Since his death, Sankara's stature has only grown, and he is pointed to as an example of an ethical and modest president. At the time of his death, he had only \$350 in his bank account. His largest possession was a simple mud-brick home that he was still paying off.

"The great men, in a certain way, continue to give off light well after they are gone," said Jean-Hubert Bazie, a Burkinabé journalist. "Because, it's only when you have lost something that you begin to recognize its true value."

CLUES

- This former Roman colony was founded in the first century, during the reign of the Emperor Nerva.
- The site has a large collection of mosaic pavings, illustrating myths and daily life.
- At 900 meters above sea level, the site is an example of Roman urban planning adapted for a mountain location.
- The well-preserved site includes an amphitheater that can accommodate 3,000 people.



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