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ON THE COVER:

A Kenyan Soldier serving in the African Union Mission in Somalia holds a child at a hospital in the Lower Juba region during a medical outreach event.



istory shows that wars are not always won with just bombs and bullets. To defeat an enemy and preserve the peace, Soldiers must win the hearts and minds of civilians.

This is particularly important in peacekeeping operations where foreign forces can be viewed with suspicion and fear.

To overcome this challenge, militaries must invest time and energy in civil-military engagement projects. These can be as complex as building a new bridge or as simple as organizing a football match. No matter the scale, these projects help the local population see Soldiers in a different light.

For these efforts to be successful, it is important for the military to reflect the population it serves. Defense forces across the continent are pushing to increase the number of women serving in uniform. The United Nations has set a goal of increasing female uniformed personnel in peacekeeping missions from 5% to 15%.

Other efforts emphasize nontraditional peacekeeping skills. Peacekeepers are learning about mediation and conflict management as a way to deescalate tensions in war-torn countries. They are taking the time to learn about the culture and history of the countries in which they serve.

Militaries also are answering the call to respond to natural disasters and pandemics. The South African National Defence Force (SANDF) has played a leading role in rescuing people from floods in Southern Africa and delivering food and medical aid. In a span of just six days after Tropical Cyclone Idai hit Mozambique in May 2019, SANDF rescued 417 people and airlifted 30 to medical facilities.

By putting people at the center of the mission, Soldiers can gain the trust of allies and build a foundation for a lasting peace. Respect is earned when Soldiers live up to the highest standards of professional ethics and responsibility. The defense forces that understand this duty are in the best position to succeed.

U.S. Africa Command Staff



A Senegalese peacekeeper serving in the United Nations Multidimensional Integrated Stabilization Mission in Mali offers medical care to a child in Koro as part of a civil-military engagement program. MINUSMA



Hearts and Minds

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Cyril Ramaphosa, president of South Africa and commander in chief of the South African

National Defence

Force (SANDF),

spoke in Cape Town on National Armed Forces Day, February 21, 2019. His comments have been edited to fit this format.

'A Source of Enduring Pride'

It is said that it is only in the service to one's fellow human that one's mettle is truly tested. And the Armed Forces of democratic South Africa can be justifiably proud of having produced Soldiers of resolve, of steadfastness and of great patriotism.



Through National Armed Forces Day we want to display to our people the capabilities and state of readiness of our Armed

Forces. We also want to expand the public's understanding of the military's function and purpose in our society.

We all recall the iconic image of a young mother, clutching her newborn baby, Rosita, as she was pulled to the safety of a SANDF chopper during the Mozambican floods of 2000. We also recall with pride the deployment of the South African Military Health Service across hospitals in Gauteng in 2017 after an industrial action nearly paralyzed services in the province.

A year later, military health personnel were dispatched to Mahikeng Hospital in the northwest, where their intervention averted the collapse of health services in the facility.

The SANDF also has been involved in international peacekeeping missions on the continent, notably in the Democratic Republic of the Congo under the United Nations mission.

Whether it is engaging in anti-piracy patrols in the Mozambique Channel, battling veld fires in the Cape, doing border patrols as part of Operation Corona, or attending to critical infrastructure, our national defense force is a source of enduring pride.

It is a pride we want to impart to the next generation. For the SANDF to effectively carry out its mission, we need to recruit high-caliber individuals into its ranks.

The Armed Forces are a home for the youth of this country. It is the means through which they can serve, through which they can also step forward and say: *thuma mina*, meaning "Send me."

Over the years, the role of the Armed Forces has had to evolve in response to ever-changing global military, political, social and economic conditions. Our Navy, the host of today's event, has a particularly critical role to play.

We have a 3,000-kilometer-long coastline, the third-largest in Africa, and are strategically located on one of the world's most vital shipping lanes. Over 96 percent of our own exports and imports are carried by sea.

It is upon our Navy that we rely to protect our trade routes, to cooperate with neighboring countries and international bodies to promote regional maritime security, and to advance our developmental objectives as a country.



Members of SANDF march in Cape Town on National Armed Forces Day in 2019. GOVERNMENT OF SOUTH AFRICA

It is also the responsibility of our Armed Forces to guard our country's borders against the infiltration of transnational criminal syndicates, the flow of contraband, human trafficking, undocumented migrants and other illicit activities.

It is imperative, therefore, that all our Armed Forces are supported to enable them to respond effectively to current realities and threats, as well as emerging ones.

To our Soldiers, yours is a clear mission, to take the SANDF into the future. To uphold our constitutional order and the rule of law. To defend and protect our sovereignty and territorial integrity.

And, above all, to contribute toward the well-being, prosperity and upliftment of the people of South Africa.



ALGERIA'S ANCIENT PYRAMID TOMBS Still Shrouded in Mystery

AGENCE FRANCE-PRESSE

lgeria's pyramid tombs, called the Jeddars, are unique relics of an ancient era. The 13 monuments, whose square stone bases are topped with angular mounds, are on a pair of hills near Tiaret, 250 kilometers southwest of the capital, Algiers.

Built between the fourth and seventh centuries, the tombs are believed to have been the final resting places for Berber royalty. Some are as tall as 18 meters.

Algerian authorities and archaeologists are pushing to get the Jeddars listed as a UNESCO World Heritage site. About 20 archaeology students and their teachers have been working at the monuments.

When the Jeddars were built, Berber kings ruled the area in small fiefdoms whose history is poorly known and of which few traces are left. It was a period of great unrest for the former Roman province of Numidia. As the Western Roman Empire collapsed, Vandal and Byzantine troops invaded, and Arab forces stormed across North Africa.

The research team has been working on Jeddar A, which sits on Mount

Lakhdar along with monuments B and C. The remaining Jeddars are on a hilltop 6 kilometers away, Mount Arouri, and are known by the letters D through M.

Each contains at least one room, with the largest mound giving way to a labyrinth of 20 compartments, including funerary chambers.

Inside the tombs, traditional Christian symbols, hunting scenes and animal figures are carved above doors. Traces of inscriptions believed to be Latin mark the walls, but time has rendered them unreadable.

The Jeddars were built centuries after other imposing pre-Islamic funerary monuments, which are found in present-day northern Algeria, making them the last of their kind to be erected before the arrival of Islam. "The most

distinctive feature of the Jeddars is by far the date of their construction," said Algerian archaeologist Rachid Mahouz.

Experts and students work on one of the Jeddars pyramid tombs, near the Algerian city of Tiaret. AFP/GETTY IMAGES



Malawi Introduces

GROUNDBREAKING

MALARIA VACCINE



AGENCE FRANCE-PRESSE

alawi has launched the world's first malaria vaccine in a program to prevent a disease that kills hundreds of thousands across Africa and around the world each year.

Mosquirix was rolled out in the capital, Lilongwe, in April 2019. It was extended to Ghana and Kenya weeks later. The program aims to immunize 360,000 children ages 2 and under in the three countries to assess effectiveness and whether the delivery process is feasible.

Four successive doses must be administered on a strict timetable to be successful, and the children must continue to use other preventive measures such as sleeping under a mosquito net.

The vaccine could prevent 1 million of Malawi's 6 million annual malaria cases, which would help avoid 4,000 deaths. "This vaccine is a huge plus to Malawi," said Michael Kayange, deputy director in Malawi's Health Ministry.

Mosquirix passed previous scientific testing — including five years of clinical trials on 15,000 people in seven countries — and was approved for the pilot program in 2015. Trials reduced malaria by 40 percent.

The vaccine will not give full protection against the disease but is the furthest along in development and so far the most effective. Scientists say if it was rolled out on a large scale, it could save hundreds of thousands of lives.

The World Health Organization (WHO) believes that the new vaccine adds a key tool to mosquito nets, insecticides and drugs in the battle against the disease.

"We have seen tremendous gains from bed nets and other measures to control malaria in the last 15 years, but progress has stalled and even reversed in some areas," WHO Director-General Tedros Adhanom Ghebreyesus said. "We need new solutions to get the malaria response back on track, and this vaccine gives us a promising tool to get there."

Malawi, Ghana and Kenya were selected for the trial because their malaria rates are high, and they have a long history of using bed nets and other preventive measures.



EFFORTS COULD BRING HOPE FOR

SNAKEBITE VICTIMS

AGENCE FRANCE-PRESSE

In 2015, a puff adder bit 4-year-old Chepchirchir Kiplagat. She lost the use of the left side of her body. Sleeping beside her, 2-year-old Scholar also was bitten. She died. A Bio-Ken Snake Farm herpetologist milks a puff adder in the first step of antivenin production.

"We saw two blood spots on her (Chepchirchir's) wrist," said their father,
Jackson Chepkui, in the village of Embosos in Kenya.
"That's how we were able to conclude that they were bitten by a snake."

Chepkui traveled 160 kilometers to the hospital in Eldoret. The trip included two stops at clinics along the way and took nine hours. Chepchirchir was in the hospital for two months.

Snakes bite 5.4 million people worldwide each year, and 81,000 to 138,000 people die annually, according to the World Health Organization (WHO).

What happened to the girls was avoidable, said Royjan Taylor, director of the Bio-Ken Snake Farm in Watamu, Kenya. Mosquito nets can repel the reptiles, and access to trained medical staff and antivenins can save lives.

An antivenin availability report by the Global Snakebite Initiative in 2013 estimated it could be as low as 2.5% of what is needed, with most African countries having no effective or affordable antivenin at all.

Venomous snakes pose a public health risk that experts say has been neglected too long. But things may be changing.

In February 2019, a United Nations working group unveiled a strategy for halving snake bite deaths by 2030. The plan envisions making 500,000 antivenin treatments available in Sub-Saharan Africa every year by 2024, rising to 3 million per year globally by 2030.

WHO will work to boost production of the serum, improve regulatory control, and reinvigorate the market by ensuring that safe and effective products are available.





IN RESPONSE TO THE CRISIS OF DEFORESTATION, SOLDIERS HAVE PLANTED MILLIONS OF TREES

ADF STAFF

enyan environmentalist Francis Muhoho says his country is risking an environmental crisis by cutting down too many trees.

"Kenya lost an average of over 200,000 hectares of forests per year between 2000 and 2014," he said in March 2019, as reported by the Kenya News Agency. "This is both in government and private forests."

Kenyan President Uhuru Kenyatta said that so far this century, East Africa has lost a total of 6 million hectares of forest, some of it containing plants and animals found nowhere else on Earth.

"Our forests are the lungs that keep this planet alive," said Kenyatta, speaking at a 2019 environmental conference. "Deforestation and degradation of our environment ultimately undermine our efforts toward biodiversity conservation, climate change mitigation as well as adaptation."

The Kenya Forest Service is doing its part to help, including distributing tree seedlings to farmers. And for years now, the forest service has had an unlikely ally — the Kenya Defence Forces (KDF).

The KDF acknowledged that the nature of the military's mission has been part of the environmental problem. "Military operations — weapon tests and firing, digging of fire-trenches for protection from enemy direct fire and using of vegetation as camouflage for cover and

concealment from enemy direct observation — wherever are undertaken, have affected the environment," the KDF said. "Even though there are designated Military Training Areas on land, sea and air, population growth and urbanization are proving a challenge for the military."

The KDF has been frank in assessing the negative role it has played in the environment. It said that farmers and herders have complained in the past about deaths caused by unexploded ordnance left behind after KDF training and exercises, as well as the deaths of animals after falling into abandoned foxholes that never were filled in. The KDF said it has attempted to address the damage its training has caused.

"Soldiers have taken it as duty and responsibility to care for and preserve the environment wherever they go," the KDF said.

In 2003, it took the proactive step of forming the Environmental Soldier program, with the sole purpose of planting trees.

In an email to ADF, the KDF said "changing

climatic patterns across the world are having impacts ranging from dwindling natural resources, impacts on health and safety of populations, to threats of extermination of whole nations, especially the small island nations facing threats from sea-level rise."

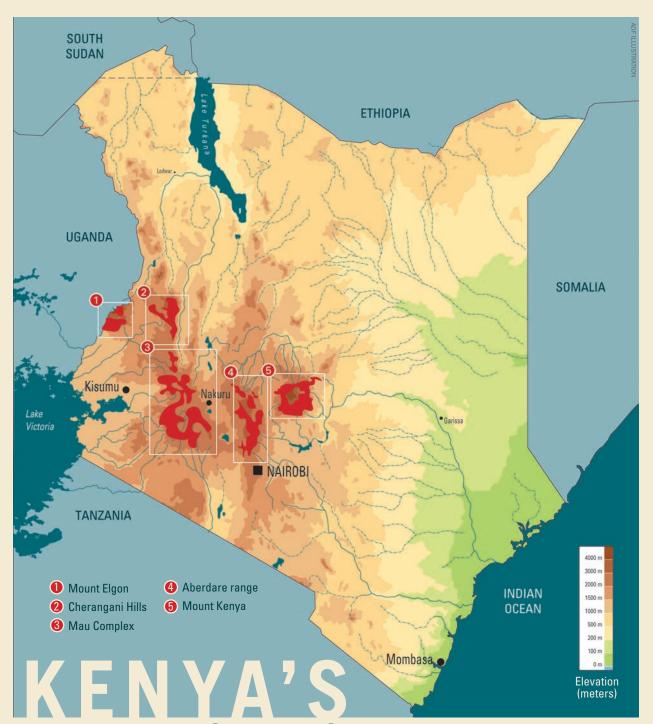
KDF officials said, "The usual thinking and practice for most response strategies has been largely reactive and the impacts temporary." The KDF determined that the environmental situation was compromising the accomplishment of its mission and decided it was "time to act in order to effectively protect and preserve the sovereignty and territorial integrity of the country." Thus began the Environmental Soldier program. Its goals are:

- To reduce the overall carbon "boot-print" of the KDF.
- To start an ecological restoration program.
- To encourage efficiency and sustainability in the use of natural resources.
- To promote behaviors that improve the environment.

Kenyan Cabinet Secretary for Defence Raychelle Omamo, wearing a red scarf, visits a tree-planting exercise.

KENYA DEFENCE FORCES





WATER TOWERS

Kenya's five major forests are known as the country's "water towers." These mountain forest ecosystems — Mount Kenya, Aberdare range, Mau Complex, Cherangani Hills and Mount Elgon — form the containment and natural drainage areas for all but one of Kenya's main rivers.

The water towers cover less than 2 percent of the total area of Kenya, but they host 40 percent of Kenya's mammal species, including 70 percent of the threatened ones. The forests host 30 percent of Kenya's bird species,

including half of those that are threatened.

They are the single most important source of water in Kenya for direct human consumption and industrial use. Millions of farmers live on the forest slopes and depend on the rich soil and microclimatic conditions for crop production.

The rivers flowing from the water towers are the lifeline for major conservation areas in the lowlands. These conservation areas host a diversity of plants and animals.

The water towers provide water to hydroelectric plants and produce

57 percent of Kenya's total installed electricity capacity.

The decline of forest cover in the water towers has been attributed to illegal logging of indigenous trees for timber and charcoal, forest fires, and encroachment for crop cultivation and settlement.

The restoration and rehabilitation of the five water towers is one of the flagship projects of Vision 2030, Kenya's long-range growth plan.

Sources: "A review of Kenya's national policies relevant to climate change adaptation and mitigation Insights from Mount Elgon," published by the Center for International Forestry Research; Rhino Ark

"OUR FORESTS ARE THE LUNGS THAT KEEP THIS PLANET ALIVE."

~ KENYAN PRESIDENT UHURU KENYATTA







forcing the seedlings to "compete" with each other and allowing them to mimic natural environments. The trees are often self-sustaining in just three years.

The Environmental Soldier program now has planted more than 25 million trees. In 2018, the KDF entered into an agreement with the Ministry of Environment and Envertey.

has planted more than 25 million trees. In 2018, the KDF entered into an agreement with the Ministry of Environment and Forestry to adopt five badly stripped forests as "test pilots" for restoration. The first phase of the agreement, according to Kenya's Capital FM, was the planting and nurturing of 2 million indigenous trees in Kibiku Forest and another 1 million trees in Ololua Forest.

The program has benefits beyond restoring forests to good health. For instance, when the KDF planted more than 5 million trees in the arid and semi-arid areas of Lodwar, Lokichogio, Turkana, Pokot and North Eastern Province, the military's Corps of Engineers' Water Drilling Squadron constructed wells in the area that were used to tend to the trees. The wells also provided water for the residents.

Kenyan officials say they have come to regard the Environmental Soldier program as serving a larger purpose — that of maintaining peace in their country. Protection of the environment is the first line of defense in resolving resource-based conflicts, such as those between herders and farmers.

In a 2018 tree planting ceremony Kenya's first lady, Margaret Kenyatta, said the mission to go green is an urgent one. "This is no longer a waiting game," she said. "Our actions require urgent, bold, decisive response from all stakeholders, both private and public, to promote behavioral change to address the threats posed by our human actions."

Kenyan officials say that one of the main reasons for focusing on planting trees was because of the relative ease of the task, which could be used to give early positive outcomes as well as long-term benefits. To make it work, the Soldiers had to form partnerships with other government institutions, communities, nongovernmental organizations (NGOs) and corporations. Among the first partners were the Kenya Ministry of Environment and Forestry; the United Nations Environment Programme; and Nobel Peace Prize winner Wangari Maathai, founder of the Green Belt Movement. The Green Belt Movement is a Nairobi-based NGO that focuses on environmental conservation, community development and capacity building. In 2007, the movement partnered with the KDF to plant 44,000 trees in the Kamae Forest to restore the region's main water catchment and to prevent erosion.

A LARGER PURPOSE

With the support of the Ministry of Defence, the KDF established tree nurseries within some military units to ensure that there would be enough saplings for planting during Kenya's two rainy seasons.

Initially, Soldiers focused on planting trees in the country's five main mountain forests, also known as "water towers," because they collect water from all but one of Kenya's main rivers. The plantings have since been expanded to cover more than 50 forest areas and public lands throughout the country.

The KDF plantings follow a globally tested method developed by Japanese botanist Akira Miyawaki. It involves researching the trees that originally existed in a degraded forest and planting such trees close together,

Kenya Defence Forces cadets help clean a community.

Soldiers prepare trees for planting.
KENYA DEFENCE FORCES

Warm HEARTS



in a Cold

Female Malawian Peacekeepers Win the Trust of Locals by Attending to Basic Needs

CAPT. WILNED KALIZGAMANGWERE CHAWINGA, MALAWI DEFENCE FORCE

nternational peacekeeping in the Democratic Republic of the Congo (DRC) is entering its third decade after years of regional conflict and two multinational wars. The detritus of this unrest has left behind instability exacerbated by a mix of violent groups, especially in the DRC's eastern region and neighboring countries.

Now the country is home to the United Nations Organization Stabilization Mission in the DRC (MONUSCO), a 21,000-strong multinational peace-keeping force that works to bring peace to the region using "all necessary means" to protect civilians, humanitarian workers and others who live under the threat of violence.

Serving in that effort are the men and women of the Malawi Defence Force, who form the Malawi Battalion, or MALBATT as it is commonly known. The 850-member battalion brings with it a warmhearted approach rooted in Southern Africa's *ubuntu* tradition, which stresses human relations, particularly that all people belong to each other in a shared sense of humanity. Malawi's Soldiers are not just in the DRC to protect civilians, but also to attend to their needs.

The war in the DRC has ravaged societies and caused many to become displaced or flee to other countries. With that disruption has come lawlessness that inflicts pain and suffering on civilians, particularly women and children. Sustained war has left its mark on the people. Poverty, hunger and lack of medical care are the face of conflict in the DRC.

FEMALE ENGAGEMENT TEAMS

Sexual and gender-based violence also is a long-standing problem in the DRC. Violence against women and girls instills fear and can be used to coerce cooperation with armed groups. Sometimes, women or girls are raped, killed or taken as wives or soldiers. Sometimes, government security forces or local leaders take advantage and participate in the abuse. In 2018 alone, the U.N. documented 1,049 cases of conflict-related sexual violence in the DRC, although the majority of incidents go unreported.

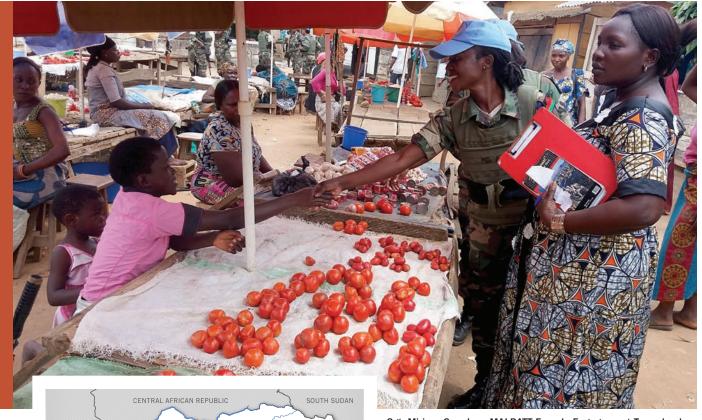
MALBATT 5 deployed to the eastern DRC as part of MONUSCO's Force Intervention Brigade in May 2017 after working with military trainers from the United Kingdom. The battalion rotated out in August 2018. About 50 battalion members are women. From their ranks were established two Female Engagement Teams of 10 women each.



MALBATT members meet women and children on a road in the DRC. MALAWI DEFENCE FORCE

Each team included a nurse, a clinician and a social worker. One team worked out of Sake, South Kivu. The other was based in Beni and Mavivi in the North Kivu region to focus on Mayi-Moya, Oicha and Eringeti towns.

MALBATT's Female Engagement Teams, under the command of Col. Luke Yetala, responded to the United Nations' call for the deployment of more women to address the needs of women and children during conflict. The importance of having women serve in multinational peacekeeping operations is promoted



JGANDA

BURUNDI

TANZANIA

ADE ILLUSTRATION

Sgt. Miriam Gapala, a MALBATT Female Engagement Team leader, greets people at a market in Oicha, DRC. MALAWI DEFENCE FORCE

force approachable to women and young people in the community."

ENGAGING FACE TO FACE

It is in that spirit that Malawi's Female Engagement Teams work with communities in the eastern DRC to win the hearts and minds of civilians. Before deploying, team members underwent training in civil-military cooperation, influence operations and Swahili.

The women then met with key leaders in deployment areas to familiarize themselves with local issues. It is through these leaders that team members assessed the problems experienced by local women so that they could form appropriate outreach programs. They conducted needs assessments by providing medical care and through other programs.

Civilian women in conflict areas often are more comfortable around other women and are more likely to trust them with their concerns and needs. Since the Female Engagement Teams have been used, more information has emerged about the suffering of women and children in the DRC.

"They are able to give details and explain how they were raped, sexually harassed, even how their friends or sisters were gang raped and later killed," said Cpl. Chipiliro Banda, a MALBATT Female Engagement Team member. "The problems that these women face are so numerous. In addition to rape and sexual

and supported at the highest levels of the U.N.

DEMOCRATIC

REPUBLIC

OF THE CONGO

7AMBIA

"Female personnel are key to the success of U.N. peacekeeping missions, as they broaden the skill set available on the ground," said Bintou Keita, assistant secretary-general for U.N. Peacekeeping Operations, in an interview with Medium U.N. Peacekeeping. "Their presence in the field empowers women in the host communities, allows our operations to address specific needs of female ex-combatants during the process of demobilizing and reintegration into civilian life, and contributes to making the peacekeeping

CAMEROON

GABON

REPUBLIC

KINSHASA

ANGOLA

MONUSCO Facts & Figures

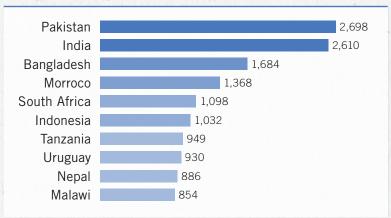
United Nations Organization Stabilization Mission in the Democratic Republic of the Congo

MONUSCO's purpose is to protect civilians and consolidate peace in the DRC. MONUSCO took over from the United Nations Organization Mission in the Democratic Republic of the Congo on July 1, 2010.

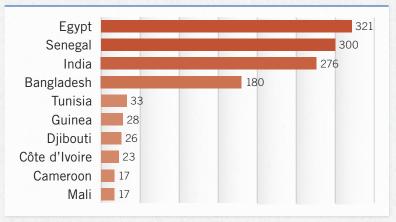
The mission is authorized to use all necessary means to carry out its mandate relating to the protection of civilians, humanitarian personnel and human rights defenders who face an imminent threat of physical violence and to support the government in its efforts to stabilize and consolidate peace.

Contributing Countries

Top 10 troop contributors (as of January 2019)



Top 10 police contributors (as of January 2019)



Location: Democratic Republic of the Congo

Headquarters: Kinshasa Established: July 2010

Strength

as of January 2019 (Civilian data as of May 2018)

Deployed number of personnel



20,501
Total personnel

| 2.970 | Civilians | |
|-------|-----------|--|

15,255 State Contingent Troops

231 Experts on Mission

1,362 Police

269 🔰 Staff Officers

414 U.N. Volunteers

Authorized number of personnel



18,316

Total uniformed personnel

16,215 Similarly personnel*

660 Signature Military observers

391 🐯 Police

1,050 Personnel of formed police units

* Military personnel include contingent troops, experts on mission and staff officers.

Source: United Nation

A Life Given in the NAME OF PEACE

The United Nations Honors a Malawian Peacekeeper Who Died Saving a Comrade in the DRC



Pvt. Chancy Chitete UNITED NATIONS

ADF STAFF

rmed rebels with the Allied Democratic Forces were entrenched near Beni city in the eastern Democratic Republic of the Congo (DRC). From there, the deadly militia launched attacks, including assaults on Ebola treatment centers.

On November 13, 2018, a combined effort of the Armed Forces of the Democratic Republic of the Congo (FARDC) and United Nations peacekeepers fought to root out the rebels in Kididiwe, about 20 kilometers from Beni in North Kivu province during Operation Usalama.

A fierce battle raged as Malawian peacekeepers provided cover fire so Tanzanians could advance to safer ground. Tanzanian peacekeeper Cpl. Ali Khamis Omary was hit by gunfire. Pvt. Chancy Chitete of Malawi, who served in the United Nations Organization Stabilization Mission in the DRC, saw that Omary remained exposed to enemy fire. In a moment, he decided to act.

As Chitete pulled his comrade to safety and administered first aid, Chitete was fatally wounded. For his heroism, the United Nations awarded Chitete the Captain Mbaye Diagne Medal for Exceptional Courage on May 24, 2019, during the International Day of U.N. Peacekeepers ceremony at U.N. Headquarters in New York.

The U.N. established the Diagne Medal in 2014 "to recognize uniformed and civilian personnel who demonstrate exceptional courage." The award is named for a Senegalese U.N. peacekeeper who saved hundreds of people in 1994 during the Rwandan genocide before he was killed.

Chitete's widow, Lachel Chitete Mwenechanya, and other relatives accepted the award during the May ceremony.

Chitete is only the second person to receive the medal. The first was presented posthumously to Diagne's family during the award's inauguration in May 2016.

The battle at Kididiwe killed eight peacekeepers — seven Malawians and one Tanzanian, according to The Associated Press. Ten other peacekeepers were injured,



Lachel Chitete Mwenechanya, widow of peacekeeper Chancy Chitete of Malawi, listens as U.N. Secretary-General António Guterres speaks during a ceremony honoring fallen peacekeepers. UNITED NATIONS

and at least a dozen FARDC Soldiers were killed. Several rebels were captured.

Omary, the wounded Tanzanian peacekeeper, was evacuated to safety and later eulogized his fallen comrade. "Pvt. Chitete saw that I was struggling, exposed and at the rate at which the rebels were closing in on us, I was in danger and could be killed. He then decided to leave his position to where I was to move me to a safer position," Omary wrote. "I owe Pvt. Chitete a lot for risking his life to save me."

During the ceremony, U.N. Secretary-General António Guterres said that the "world doesn't have many true heroes," but that Pvt. Chitete was "indeed one of them."

"Pvt. Chitete's selfless heroism and sacrifice helped the peacekeepers achieve their objective and dislodge the militia from its stronghold, and that was vital for the Ebola response to go on," Guterres said. "He personally made a difference. A profound one.

"We could not have found a more deserving recipient."

harassment, the environment in general is not that safe for women and children to live in."

The threat of violence is not the only concern for locals in the conflict zones. Food and clean water are scarce because rebels often steal what little is available. "The water they are drinking is not that safe for human consumption," said Sgt. Mercy Dzalani, a MALBATT Female Engagement Team leader. "Good water sources are very far from safe areas, and the moment they go there to fetch water, they become prone to rape and other forms of human rights abuse.

"We are trying our level best by sensitizing them on human rights and how to report abuses," Dzalani continued. "We also do some basic needs assessments and come up with ways of mitigating them. Some of the victims have been provided with medical care, and we will continue giving them the proper insight of how to avoid and report violence."

In the past we could not visit our gardens, go to work or conduct any business activity because of violence from the Allied Democratic Front. But since MALBATT and their sister units deployed in the Beni to Eringeti axis, much has improved."

Pascal Muhindo manager of Radio Motto in Oicha, DRC

Other MALBATT Soldiers identify vulnerable groups that need contact from Female Engagement Teams through robust offensive patrols, and they also provide security for female MALBATT members as they carry out their service duties. Female team members engaged civilians in Mavivi, Oicha, Mayi-Moya, Eringeti, Sake, Goma and Luwindi towns in North Kivu province.

Female Engagement Team members build trust and goodwill among residents by visiting village chiefs, women's groups and local hospitals, where they work in maternity wings. They also interact with religious groups, including women's choirs and guilds. Winning the trust and confidence of local leaders is key to mission success. It is because of that important work that they can then meet vulnerable women, hear their needs and address those needs through mobile medical outreach work and

by sharing information on gender-based violence and conflict-related sexual violence.

In some cases, the team members bought uniforms for church choral groups and chairs for churches, and invited women to attend prayer and encouragement services at nearby MALBATT bases.



MALBATT Female Engagement Team members led by Cpl. Brenda Ngomwa engage with civilians and community leaders to assess needs.

MALAWI DEFENCE FORCE

Despite the many challenges and dangers of the eastern DRC, members of the Female Engagement Teams bring peace and hope to civilians by meeting their needs with tenacity and a positive attitude. They are making a difference, and local civilians are noticing.

"In the past we could not visit our gardens, go to work or conduct any business activity because of violence from the Allied Democratic Front," Pascal Muhindo, manager of Radio Motto in Oicha, said of one of the many active armed insurgent groups. "But since MALBATT and their sister units deployed in the Beni to Eringeti axis, much has improved.

"We have seen locals visiting their gardens, I go to work daily, children and women are being taken care of, and we at least get some medical care from MALBATT."



ABOUT THE AUTHOR

Capt. Wilned Kalizgamangwere Chawinga is a staff officer in the Malawi Defence Force. He joined the force in 1996, took basic military training at the Malawi Armed Forces College (MAFCO) and graduated in 1997. From 2000 to 2004, he trained as a journalist and was deployed to the Democratic Republic of the Congo and then Côte d'Ivoire as a public affairs assistant. He was commissioned to the rank of lieutenant in 2013 after conducting a cadets training at MAFCO. From 2015 to 2016, and again from 2017 to 2018, he deployed to the DRC and worked as a public information officer. He is married with three children.



'THEY SHOULD BE CLIMBING THE LADDER'

Bintou Keita, U.N. Assistant Secretary-General for Africa, Discusses the Benefits and Challenges of Bringing More Women into Peacekeeping

PHOTOS BY THE UNITED NATIONS

riginally from Guinea, Bintou Keita joined the United Nations in 1989 and is now assistant secretary-general for Africa. She has served in various roles, including deputy special representative for the African Union-U.N. Hybrid Operation in Darfur (UNAMID), and chief of staff and director of operations for the United Nations Mission for Ebola Emergency Response. This interview has been edited to fit this format.

ADF: Could you share a bit about yourself with our readers? Was there anything in your personal or professional background that inspired you to spend your career working on issues of peace and security?

KEITA: My father was in the military. And at the time, there were issues between Guinea and France. So I grew up hearing a lot of stories about how military engagement in various countries can be a blessing but

also, at times, can be difficult. My father wanted me to be in the military, and I refused. I said, "No, I can't be traveling all over the world." So here I am years later, my father is no longer on this planet, but I am working in peacekeeping operations and traveling around the world.

ADF: You have made it a priority to recruit more women to serve in U.N. peacekeeping missions. However, women still make up only 5% of uniformed personnel. Why do you think it is important to increase these numbers?

KEITA: I've seen firsthand the difference it makes in the operation. I remember one night in January 2016, when I was in Darfur, one of our team sites in North Darfur, Sortoni, received more than 21,000 internally displaced people [IDPs]. And we only had 275 peacekeepers from the Ethiopian contingent. At the time, no woman was available to engage with the IDPs. So our peacekeepers were making their best effort to provide assistance. There were a number of women who had been delivering babies on the way to the team site, and they were in very difficult circumstances, including having no clothes for their babies. So, having our male colleagues engaging at this time was quite a challenge. One month later, I was back in

When the women can see people who look like them it's a plus, and it reduces the fear and increases a sense of safety and security.

that same place, and we had our formed police unit with a number of women from Malawi, and they managed to engage with most of the women there. One of them was even able to speak in the local language, which helped with the women but also with the children. So, for me, it's about increasing the effectiveness of the work that we do.

ADF: There has been some reporting on the success recorded by female engagement teams in the Democratic Republic of the Congo. Do you see this as a good model for other missions? Are you encouraged by the success of these efforts in the U.N. mission there, MONUSCO?

KEITA: We are very encouraged with the female engagement teams. We have now 10 female engagement teams. Beyond MONUSCO, in UNMISS [United Nations Mission in South Sudan], we're talking about an entire unit of female Soldiers coming from Rwanda to join. This is not to say that we only need women; we need both — because it is diversity that brings added value in how the local population perceives the work of the peacekeepers. Particularly when the women can see people who look like them. It's a plus, and it reduces the fear and increases a sense of safety and security.

ADF: What tangible steps do you hope to take to increase representation of women across U.N. peacekeeping missions?

KEITA: We have two challenges. Whenever we have a number of women already within the national armies, the challenge is for them to be put forward to participate in peacekeeping. We are also trying to see how we can increase their involvement in

decision-making and leadership roles. The other challenge is that a number of national armies don't have the numbers because women are not joining. This is due to a perception of what peacekeeping is about. We have to work with the agencies to form programs in the national armies so then we can have specific stories about what the female engagement provides in the world of peacekeeping. And we have to show the investment and return on investment in how the local communities feel more reassured and are finding themselves better protected when mixed engagement is used. We have to work on both ends. For females to join the national armies, there has to be a conducive environment and an understanding that they will not just be put into the traditional roles of nurs-

ing or logistics or administrative roles. They should also be climbing the ladder and be nominated for appointments as force commanders, sector commanders and so on. I'm very happy that we've managed to have two female force commanders, and I think we should be aiming to have more in the years to come.

ADF: How do you view the importance of winning the "hearts and minds" of the civilian population in the places where the U.N. operates?

KEITA: I think it is critical, particularly at the inception or startup of the mission. As the mission grows up in terms of years, I think we have to transform how winning the hearts and minds evolves. Why do I say this? Because if you have a mission that is 1 year old versus a mission that is 10 years old, the contact with the local community has evolved. There is a history. For me, what is important is to make sure that the civilian personnel and the



military understand that the way they come across to the local population is critical. This is done by having certain types of activities or making an investment in what the community needs, particularly when the results can be sustained. If you build a health clinic or drill water bore holes, after a while the local government or the central government can take over. Even schools, because many of our quick-impact projects have to do with infrastructure and vocational training. These projects are a way to connect communities that may not be mixing or mingling otherwise.

ADF: Recent history shows that acts of indiscipline or bad behavior by just a few peacekeepers can tarnish the image of an entire mission. The U.N. requires specialized training on things such as prevention of sexual exploitation and protection of minors, but what type of training is most effective in preventing misconduct? How has this evolved in recent years?

KEITA: The most important part is the predeployment training, which has clearly been bolstered by our Integrated Training Service in partnership with our military colleagues and our police division colleagues. This is done in partnership with the troop-contributing countries [TCCs]. Even after the predeployment training, there are trainings that happen during the mission. These are important because they are refreshers on a daily, weekly or monthly basis that there is zero tolerance for sexual exploitation and abuse. This is critical for our credibility and moral stance vis-avis the population. I also believe in a strong chain of command in terms of the discipline, ensuring that the troops have access to a commander who truly enforces discipline and holds the Soldiers or police accountable. All of this is critical because it sends the signal that no tolerance is ever acceptable, not even for one case. Since U.N. Security Council Resolution 2272, more and more I see efforts made here at HQ level; with the TCCs,

Keita arrives at Kismayo airport during her visit to Jubaland State in Somalia.



there is also a basket fund put in place for tackling the issues of the aftermath of the sexual exploitation of youth. I hope that, as we move forward, the sanctions put in place by individual nations are going to be a deterrent. We have all the training, we have the discipline and we also now have the appropriate level of sanctions.

ADF: How important are issues of cultural sensitivity and cultural familiarity for peacekeepers?

KEITA: I believe that, for each deployment, there are

very specific circumstances. During training I've seen rehearsals of "protection of civilians" scenarios. During the rehearsal I have seen a gesture or behavior that I would say, "Well, if we were in a particular country I would avoid this, because it will be seen as offensive or aggressive to the population." So I believe having rehearsals and training and linking them to cultural sensitivity is important. And having proper briefings on the culture of the countries is critical to raise awareness and to remind everyone that there are ways where we behave instinctively, and it's not always congruent with what is expected of us.



ADF: What's an example of something that can be misinterpreted?

KEITA: One aspect that comes to mind is assertiveness. When we are in negotiations and we look at things in the Western way, it's always about being very direct. But with most of the cultures on the continent, you have to be patient. It's about giving time for people to internalize and understand that you are genuinely connected. It's a conversation, and you are not there to impose something on them. It becomes a discussion about a partnership between equals and not from

Left: Keita meets with internally displaced people in Darfur, Sudan, to discuss the country's security situation.

Top: Keita meets with African Union Mission in Somalia police officers in Kismayo during a five-day visit to the country in June 2019.

a condescending point of view where we know it all and they are the "beneficiaries." For me, it's not just in peacekeeping, but I see it on a larger scale. We have to question our approach to dialogue, to conversation. Even though we know there is a goal to be attained, how we go about it is going to be the trigger in terms of cultural sensitivity.

ADF: Many African countries have a deep reserve of peacekeeping experience. But many countries struggle to provide access to training. What needs to be done among troop-contributing countries, particularly on the African continent, to improve domestic training capacity for peacekeeping forces?

KEITA: I believe that the African Union is doing a lot in trying to tap into organizing the way the various TCCs across the continent will come on board. I know there are various training centers being put forward. There is one in Cairo; in Addis Ababa, Ethiopia; in Accra, Ghana; and in Mali. So, all in all, I think we are going in the right direction in ensuring that we have a systematic way to prepare the troops. If there is one thing I would say, it is that we need to go beyond the traditional ways of preparing the troops when we think about asymmetric threats, terrorism and violent extremism. This is part of the new DNA of this era, and I don't think the traditional way to prepare the troops is sufficient. In terms of new equipment, new technologies and how to go about collecting intelligence in the era of social media, I believe there is work to be done.



BRIDGE BRINGS TOGETHER THE GAMBIA, SENEGAL

ADF STAFF

enegal's southern Casamance region has long been isolated from the more populous north by a geographic peculiarity: The Gambia, and the namesake river that runs most of its length.

In January 2019, the presidents of both nations celebrated the opening of a bridge that spans the river, linking both banks of The Gambia and the two regions of Senegal. The Trans-Gambia Corridor bridge ends years of isolation and difficult travel for people in the two nations along both sides of the river.

"Given the geography of The Gambia and Senegal with a river dividing both countries in two halves, I wonder why it took so much time to have this bridge," Gambian President Adama Barrow told Agence France-Presse during the inauguration.

"We can be proud of having turned this dream of several generations into a reality," Senegalese President Macky Sall said.

The span, also known as the Senegambia bridge, has been under study since 1972, according to The Gambia's National Roads Authority.

Construction began in 2015. It is part of a larger project, the Cairo-Dakar-Lagos Corridor, which doesn't just connect the two countries. It also helps link other Economic Community of West African States nations between Dakar and Lagos, Nigeria.

The concrete bridge is in Gambian territory and is nearly 2 kilometers long. It crosses the river about 10 kilometers from the Farafenni border post, where Barrow and Sall met for the inauguration.

The bridge is much more than

just a regional convenience. It helps link the isolated Casamance region to the rest of Senegal by avoiding a 400-kilometer route. It also will improve regional commerce. Goods and services should flow more freely across the region. Before the bridge, vehicles had to cross the river by ferry.

Sometimes people would line up and have to wait a week to board a ferry, Reuters reported.

After the inauguration, people crowded the bridge to cross it, standing shoulder to shoulder as they walked. "I'm happy about this bridge," traveler Amadou Bah, 42, told Reuters. "Vehicles just come and pass without any delay."

Trucks were scheduled to start crossing in July 2019. "A few months ago, I spent 10 days [at the ferry terminal] before it was my time to cross," Senegalese truck driver Mawdo Saine told Reuters. "That's a lot of difficulty for us drivers because what you should do in one week, you end up doing in one month."



AFP/GETTY IMAGES





ADF STAFF

ACE TO FA

As the Stubborn Disease Continues in the DRC, Responders Must Build Trust to Succeed

Dr. Jean-Christophe Shako went to Butembo, Democratic Republic of the Congo (DRC), to fight a fierce and dangerous enemy.

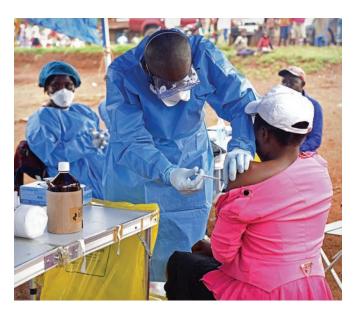
But first he needed to make a friend.

Shako, Ebola response coordinator in the eastern DRC town, is a veteran of four Ebola outbreaks in Africa. He wrote of his experiences with the current disease crisis in February 2019 for The New Humanitarian, an online news outlet. He recalled his team's experience in Guinea during the height of the West African pandemic in 2014. It was then that villagers, suspicious of the outsiders who spoke of a mysterious killer disease, came after them armed with machetes.

Nearly five years later and nearly 5,000 kilometers away, Shako faced the same threat. "It only took a few days in Butembo, responding to the current outbreak in eastern Congo, before I was surrounded by an angry mob chanting, 'Kill him,' after they refused to allow our surveillance team to investigate a death in their neighborhood."

Ebola was back for the 10th time in the DRC and the second time in less than a year. An outbreak in Equateur province between May 8 and July 24, 2018, led to 54 cases and 33 deaths. By August 1, 2018, a new outbreak erupted in North Kivu and Ituri provinces in the east. It has been more deadly and intractable for those fighting it, despite new tools, such as vaccines.

By June 10, 2019, there were 2,071 confirmed and probable cases reported, and 1,396 people had died — a mortality rate of 67%. The majority of cases were women and children, and 115 health care workers caught the disease. Dozens had died. The outbreak is the secondworst since Ebola was discovered in 1976. Only the West African pandemic was more deadly.



A Congolese health worker administers Ebola vaccine to a woman who had contact with an Ebola sufferer in a village in Mangina, North Kivu province. REUTERS

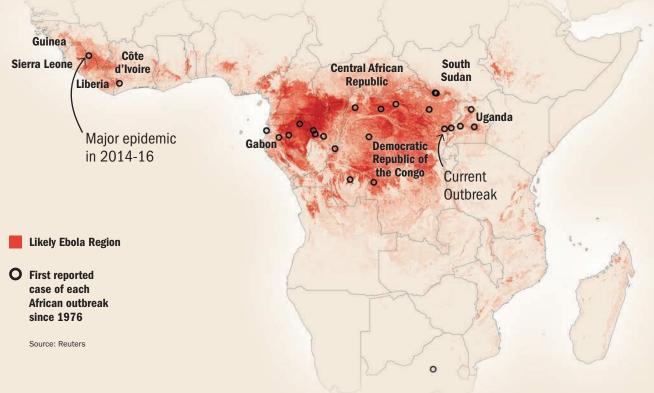
An already fearsome disease is complicated by the remoteness of the affected provinces, their proximity to other countries such as Uganda and Rwanda, and the scores of armed groups operating in the region. Expertise and effective vaccines are helping, but as Shako knew, success would require a dose of humanity.

A DANGEROUS EPICENTER

Workers were able to vaccinate 73,298 people by January 27, 2019, according to the DRC's Ministry of Health. That is a vital tool for blunting the spread of the highly contagious disease, which is transmitted from person to person through bodily fluids such as blood, feces and vomit. During the West African outbreak in Guinea, Liberia and Sierra Leone, the disease spread in large part because of burial and funeral traditions that had villagers

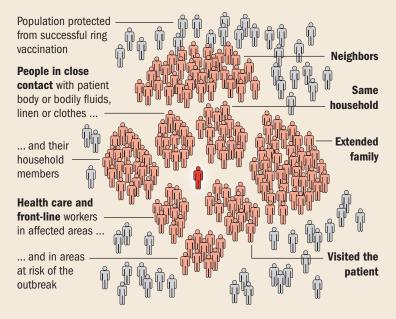
Ebola Hot Spots

Since initial reports of Ebola in 1976, the virus has killed more than 13,000 people. Experts from Oxford University's zoology department have analyzed species distribution models and environmental conditions to define at-risk areas and likely Ebola reservoirs in animal populations.



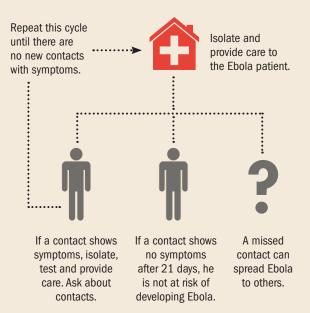
Vaccinate to stop Ebola

The strategy for deploying the Merck-developed rVSV-ZEBOV vaccine is the ring vaccination strategy, which traces a patient's contacts and "contacts of contacts" in the 21 days since the patient showed symptoms. The World Health Organization says that on average a ring consists of 150 People.



Contact tracing can stop Ebola

Contact tracing is finding everyone who comes in direct contact with a sick Ebola patient. Contacts are watched for signs of illness for 21 days after they come in contact with the Ebola patient.



Source: U.S. Centers for Disease Control and Prevention

Devastating virus

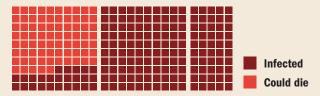
On average, each Ebola patient can infect one or two people. But with an average case-mortality rate of 50% — and up to 67% in the current Democratic Republic of the Congo epidemic — the disease can soon devastate communities.

SMALLPOX

Each infected person infects **five to seven other people** on average.



To infect 250 people, it takes only **three steps of transmission** and with a mortality rate of 30%, **75 of those infected could die.**

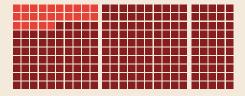


DIPHTHERIA

Each infected person infects six to seven other people on average.



To infect 250 people, it takes only **three steps of transmission** and with a mortality rate of 5% to 10%, **25 of those infected could die.**

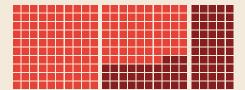


EBOLA

Each infected person infects **one to two other people** on average.



To infect 250 people, it takes seven steps of transmission and with a current mortality rate of 67%, more than 167 of those infected could die.



Source: Reuters



A police officer guards an Ebola treatment center attacked on March 9, 2019, in Butembo by Mai-Mai rebels, who killed a police officer and wounded a health worker. AFP/GETTY IMAGES

"Once a village is attacked, there's a movement of people, so the sick person moves, and the disease spreads from one village to another."

> ~ Justus Nsio Mbeta, representative of the Ministry of Health, Beni village

touching, kissing and washing the bodies of their dead. There was no vaccine for most of that outbreak, and the disease made its way to bustling urban centers such as the Liberian capital, Monrovia.

West Africa was experiencing relative peace during the Ebola outbreak, although there were incidents of violence by skeptical and fearful villagers in more remote areas. But the eastern DRC provides a much different landscape for the disease.

Scores of armed groups roam the mostly ungoverned spaces of the DRC's eastern expanse. Colonial structures and years of corrupt leadership after independence have left the region troubled and violent. Some of the armed groups originated in neighboring countries, such as the Allied Democratic Forces, which came out of Uganda. The Democratic Forces for the Liberation of Rwanda, Hutu rebels who oppose Tutsi rule in Rwanda, also have taken root in the eastern DRC. Other armed groups are present,



and the large United Nations Organization Stabilization Mission in the DRC works to keep the peace.

Fighting Ebola in a conflict zone is dangerous for local civilians and health workers alike. "Once a village is attacked, there's a movement of people, so the sick person moves, and the disease spreads from one village to another," Justus Nsio Mbeta, a representative of the Ministry of Health in the village of Beni, told Vice News in February 2019.

One of the most common ways to approach an Ebola outbreak is through what is called "contact tracing." This is when health officials track down everyone who has had contact with an Ebola sufferer. Those people are then watched for 21 days from the last day they were with the Ebola patient to see whether they develop symptoms. If so, they are isolated and treated, and the tracing cycle continues with other contacts until there are no new contacts with symptoms.

When armed attackers raid a village or attack an Ebola treatment center, it increases the likelihood that the disease will spread and complicates contact tracing. On February 27, 2019, unknown armed assailants attacked a treatment center in Butembo, setting a fire and trading gunfire with security forces.

Health officials said that 38 suspected Ebola patients and 12 confirmed cases were in the center when it was attacked. Four people, each with confirmed cases of Ebola, ran away. Just three days earlier in the nearby town of Katwa, assailants set fire to a treatment center, killing a nurse, Reuters reported.

On April 20, 2019, militia members attacked a treatment center and tried to burn it down. A day earlier in Butembo, attackers killed a Cameroonian epidemiologist, *The Washington Post* reported.

RUMORS HINDER EFFORTS

A report from the DRC's Ministry of Health indicates that the proportion of known contacts improved from 24% to 63% between October and December 2018, but this dropped to about 10% in mid-January 2019 because of security and political disruptions.

The ministry recommends methods to strengthen

monitoring of displaced contacts for those who have been lost to follow-up. Ways include forming mobile surveil-lance teams to find lost contacts, bolstering psycho-social support for identified contacts to encourage participation, and training coordinators to use technology to monitor workers involved in contact tracing.

However, such efforts will be difficult without a way to counter the rampant rumors that circulate in areas affected by Ebola. In a nation beset by instability, deadly violence and mistrust of the government, news of the mysterious disease often is greeted with suspicion.

A study published in the journal *Lancet Infectious Diseases* surveyed 961 people in the cities of Beni and Butembo. It found that more than a quarter of people did not believe Ebola existed. More than a third — 36% — said the disease was fabricated to destabilize the DRC. Researchers questioned people in September 2018 and published results in late March 2019.



Health care workers in Beni must secure protective gear before entering the baby's room. REUTERS

These views came as DRC officials used the Ebola outbreak as a rationale for postponing the region's participation in national elections. The rest of the country voted in December 2018, selecting a new president who took office in January 2019. More than a million people in areas affected by Ebola couldn't vote until March 31, 2019, and then only in parliamentary contests.

NBC News reported in mid-April 2019 that some locals believed the response was a money-making scheme called "the Ebola business." Treatment centers are accompanied by security forces, which also raises concerns. The outbreak's proximity to national elections had some believing it was an excuse to keep voters from the polls. After the vote, however, conditions seemed to improve.

Aid agencies also are taking extra steps to assuage fears among locals. Eva Erlach, who heads the regional community engagement program for the International Federation of the Red Cross and Red Crescent Societies (IFRC), told NBC News that the organization is using transparent body bags "to show the family that it is actually their loved one that is being buried, and it's not stones or empty coffins."

Decisions such as that are based on information culled from 800 IFRC volunteers who have collected 150,000 comments for a database that is shared with other relief organizations. "Ultimately, if you don't connect with communities, it doesn't matter how efficient the treatment system is," Tariq Reibl of the nonprofit International Rescue Committee told NBC News.

ENGAGING FACE TO FACE

As Dr. Shako found himself surrounded by the threatening mob in Butembo, his experience helped him keep his composure and respectfully deescalate tensions. Less than two months after arriving in the city, responders heard about a baby boy who died from Ebola in the village of Tinge, which was controlled by the dangerous Mai-Mai militia. Shako told his team they would have to go to Tinge to vaccinate people. He, a nurse and a driver set out on the 45-minute ride, followed by a 35-minute walk. Dozens of villagers had gathered to mourn the baby.

"We were greeted by a woman who asked what we were doing in their village," Shako wrote. "I told her I had to see the village chief because I had something important to tell him. She pointed me to his house."

In the house were five men, including the chief, seated at a dining table. They invited Shako to join them at the table, where they shared a meal of pondu (cassava leaves), fufu (cassava flour and water) and a piece of meat. As Shako ate, the mood lightened and a conversation began. Shako spoke of Ebola and vaccination, which the men had not heard of. He told how the virus spreads and how to prevent it.

"Without saying a word, the village chief went outside and gathered the villagers. He said a few words in their local dialect while making big gestures," Shako wrote. "Then he allowed the [nurse] to list all those who had been in contact with the baby boy so we could follow the chain of transmission. In total, 75 people came forward."

The next day, everyone was vaccinated. "Not a single person in that village developed the virus," Shako wrote.

Shako's contact with one village chief built enough goodwill that he was able to meet with more, answering questions and gaining trust. The DRC's minister of health spoke with another Mai-Mai leader, who pledged that his fighters would not hinder Ebola efforts.

"Earning trust during such a deadly outbreak is always hard," Shako wrote. "Which showed me yet again that respect, compassion, and humility can go a long way — even saving your life and the life of an entire community."

TRAINING FOR Career Career

INSTITUTIONS LOOK FOR NEW METHODS TO PRODUCE BETTER PEACEKEEPERS

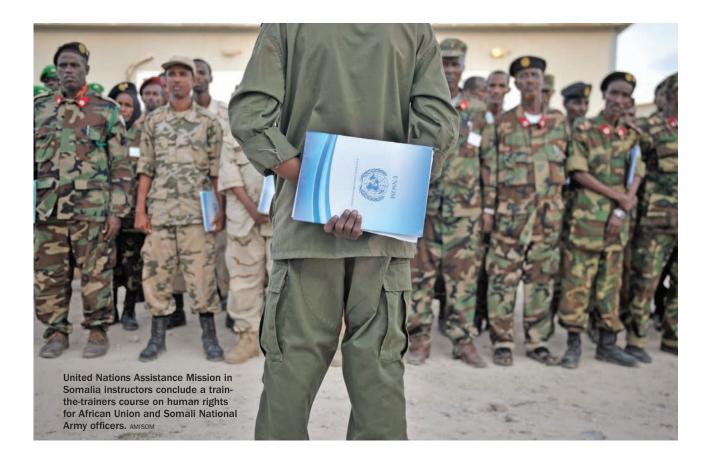
ADF STAFF



Peacekeeping is sometimes called a paradox because it requires the ability to use force and the restraint not to use it. Former United Nations Secretary-General Dag Hammarskjold summed up the challenge when he said: "Peacekeeping is not a job for Soldiers, but only Soldiers can do it."

Modern peacekeepers face daunting tasks. They must deploy to a foreign country where they may not speak the language. They must quickly assess the situation on the ground, where a war has just been fought or is ongoing. They must encourage dialogue between warring parties, protect civilians, follow international law, operate within the mission mandate and so on.

African Union
Mission in Somalia
Soldiers attend a
class on preventing
sexual exploitation
and abuse. AMISOM



The complexity of modern peacekeeping makes training vitally important. But what is the best way to maximize this training amid funding and time constraints?

U.N. staff deployed to peacekeeping missions undergo three phases of training. **Predeployment training** is the crash course on everything a peacekeeper must know before serving in a mission. It typically lasts two weeks. **Mission-specific induction training** occurs in country and refreshes some of the things taught in the predeployment phase while offering new information on issues unique to the mission. It lasts one to six days. **Ongoing training** occurs during deployment and could be specialized training, career development courses or technical skills.

Critics point out that the volume of material peacekeepers are expected to master before deployment is daunting. For example, a two-week predeployment session for police officers in the United Nations-African Union Hybrid Operation in Darfur covered 21 subjects, including map reading, radio use, the mission mandate and land mine awareness.

"How can anyone be expected to learn all of these subjects — and then apply them in a conflict setting — *within two weeks?*" wrote researcher Anne Flaspoler. "Ambitious is one way to describe it!"

Trainers and troop-contributing countries are looking for a better way.

PEACEKEEPING TRAINING CENTERS

Training options have multiplied in the past 25 years as peacekeeping has expanded and more countries have contributed troops. There are now training institutions and prepackaged courses that can be adapted to match the needs of deploying forces. In 1995, the International Association of Peacekeeping Training Centres was founded to help these institutions share information. It has 265 members, including government agencies, universities, think tanks and regional organizations.

African nations are playing a leading role in staffing peacekeeping missions. At any given moment there are 60,000 troops from 39 African nations serving in peace support operations across the globe. Countries such as Ghana, Rwanda, Senegal and South Africa have deep reserves of peacekeeping knowledge gained from operations that date back decades.

Homegrown training assets also are on the rise on the continent. In 2004, Ghana opened the Kofi Annan International Peacekeeping Training Centre (KAIPTC). It is a training hub for personnel from across West Africa and offers predeployment and other training for military, police and civilians



serving in peace support operations. The center has provided more than 400 courses to more than 11,000 people since it opened. In addition to the KAIPTC, there are seven other peacekeeping training institutions in Africa.

Foreign partners also contribute. Since 1997, the Africa Contingency Operations Training and Assistance (ACOTA) program funded by the U.S. Department of State has trained hundreds of thousands of peacekeepers from African countries.

As nations expand their peacekeeping training capacity, they will look at ways to make it more effective.

FOCUS ON IMPACT

Historically, training has been measured in terms of time spent in classrooms or the number of certifications handed out. These are simple benchmarks, but they don't measure effectiveness of the training.

Newer evaluations measure the acquisition and application of skills by trained Soldiers. For instance, if a peacekeeper is taught that there are certain instances where he must intervene to protect civilians, it is not enough to simply show that fact on a PowerPoint slide. The only way to know whether the peacekeeper has internalized the information is to see how he or she reacts in a complex and nuanced scenario.

This is the difference between transferring

knowledge and changing behavior, said Flaspoler in her book, *African Peacekeeping Training Centres: Socialisation as a Tool for Peace?*

"Knowledge and commitment are not enough, given the complexities faced by peacekeepers," Flaspoler wrote. "Peacekeepers cannot be prepared for the ethical complexity of the realities encountered in the mission by [only] teaching them codes of conduct and laws."

Suzanne Monaghan, formerly of the Pearson Peacekeeping Centre in Canada, said many of the old ways of teaching simply don't work for peacekeepers. She found that adults retain 10 percent of what they read, 20 percent of what they hear and 90 percent of what they do. "We can't lecture for fifteen days and think learners will leave the classroom knowing exactly what to do," Monaghan wrote. "We need to actively engage participants in role playing, small group discussions and problem solving."

The U.N.'s Integrated Training Service is working to measure impact with better evaluations during deployment. These evaluations take a 360-degree approach by interviewing not only the peacekeepers, but also commanders, peers and civilians.

In 2018, Jean-Pierre Lacroix, undersecretary-general for Peacekeeping Operations, announced more rigorous performance assessments of troops, including an emphasis on command and control, protection of

civilians, conduct, and discipline. The U.N. also seeks a more stringent evaluation of predeployment training by testing units for readiness before they reach the field.

"We are devoting considerable attention to better assessing performance," Lacroix said. "We are putting in place the policies and evaluation systems that will enable all of us, collectively, to better tailor our efforts to strengthen peacekeeping."

KEEP IT FRESH

All training is perishable. Soldiers trained on military tasks show diminished skills after 60 days and, by 180 days on average, they have lost 60 percent of what they learned, according to the U.S. Army Research Institute for the Behavioral and Social Sciences. "A trained peacekeeper in the past is not a trained peacekeeper in the present," wrote Daniel Hampton of the Africa Center for Strategic Studies.

This is why peacekeeping training must be regularly reinforced. The U.N. includes training for forces throughout their deployment and recently created mobile training teams (MTTs) to focus on mission-specific training in country. For instance, an MTT specializing in countering improvised explosive devices might deploy to Mali to help peacekeepers dealing with asymmetric threats.

Still, the problem of skill loss runs deep. Troopcontributing countries can only maintain training capacity if they keep units together over extended periods and develop their own pool of trainers. This is difficult because peacekeeping units tend to rotate out every six months, and much of the predeployment training is done by international trainers.

Organizations such as the U.N. Institute of Training and Research have invested in train-the-trainers programs to help build domestic capacity for peacekeeping training among troop-contributing countries.

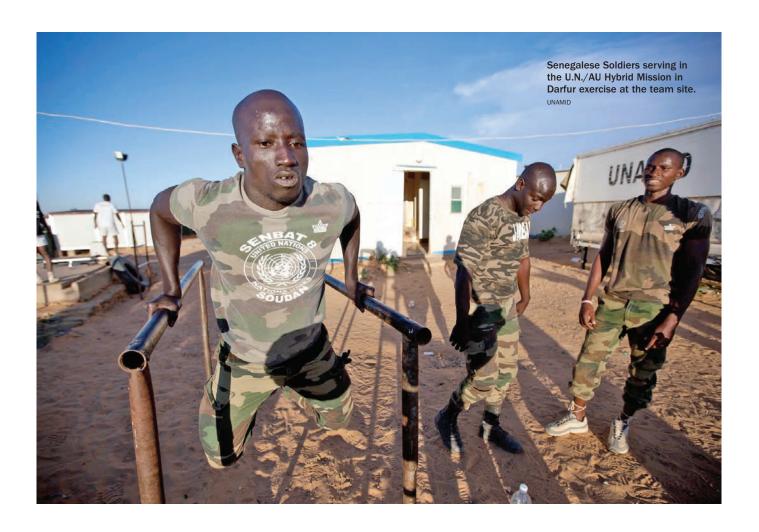
"Ideally, a professional cadre of peacekeeping trainers would exist within a defense force's [professional military education] system at an institutionalized peacekeeping training school or center," Hampton wrote.

To promote continuity, the U.N. has created the Peacekeeping Capability Readiness System (PCRS). Through the PCRS, countries pledge to have units ready for deployment within 60 days of a request by the secretary-general. These units train together, have their own equipment and are evaluated regularly to ensure high performance.

This avoids constant retraining, lack of equipment and lack of cohesion. One U.N. official said that peacekeeping used to be akin to building the fire station after the house was on fire. They hope the PCRS will change that dynamic by improving readiness.

"Now we have a firehouse, we have a fire engine. We have capabilities registered to us that are deployable," the U.N. official said.

TRAINING PHASES FOR U.N. STAFF DEPLOYED TO Peacekeeping Vissions



WIN HEARTS AND MINDS

Peacekeeping is most effective when the mission wins the trust and the support of the local population. Doing so requires specialized training.

One of the main barriers to winning local support is inadequate cultural training. A 2012-2013 report by the U.N. on peacekeeping training found that briefings given to peacekeepers on cultural awareness during induction were not enough, and more in-depth training was needed.

Brig. Gen. Emmanuel Kotia of Ghana, who served in the U.N. mission in Lebanon, recalled that during that mission some peacekeepers drank in public, which angered Lebanese civilians. Additionally, the U.N.'s failure to consult with local leaders about road-building projects led to delays and obstruction. These were easily avoidable cultural missteps.

Kotia said peacekeepers, especially officers, need to have the tools to win over the public. "Have tea with them," Kotia said. "Invite them to social events and sports competitions. These are your partners."

To replicate these situations, some

peacekeeping training institutions have created mock villages with actors portraying locals in tricky scenarios.

Mediation and conflict management also helps. Good peacekeepers can serve as trusted mediators who can broker deals between warring parties. The U.S. Institute of Peace (USIP) through ACOTA offers a class in conflict management training for peacekeepers. The institute has trained 5,700 peacekeepers using experiential exercises, scenario-based problem solving, and role playing.

In a 2017 study of mediation training, USIP found that peacekeepers called it one of the most useful skills they had while serving in a mission. Nearly all interviewed wanted more training on cultural awareness and on how to use dialogue to deescalate conflict.

"If you go to a mission, you are not going there to use force," a Togolese Soldier told USIP. "If there is any problem or conflict, the first thing that you have to do is use negotiation. ... You have to be a good Soldier by talking to the people, by trying to know the problem."



ATALE OF TWO MISSIONS

U.N. Peacekeeping Operations in Côte d'Ivoire and Liberia Offer Lessons From Challenges

ADF STAFF -

ôte d'Ivoire and Liberia share more than a border. The two West African nations have a recent history of civil war and upheaval. Both also had United Nations peacekeeping missions to help them pick up the pieces after the conflicts.

The United Nations Mission in Liberia (UNMIL) began September 19, 2003, immediately after the second Liberian civil war, which started in 1999. The first civil war raged from 1989 to 1996. UNMIL's job was to support the cease-fire agreement; protect U.N. staff members, civilians and infrastructure; protect humanitarian workers; and help train national police

A Malawian peacekeeper greets children while serving with the United Nations Operation in Côte d'Ivoire.

UNITED NATIONS

officers and restructure the military. The mandate was a tall order for a nation beset for so long by violence and instability.

Conditions were similar in Liberia's neighbor to the east. The United Nations

Operation in Côte d'Ivoire (UNOCI) began February 27, 2004. Its primary concern was to help warring parties implement the peace agreement they had signed in January 2003.

Each mission encountered major problems along

the way. In Côte d'Ivoire, violence broke out after the November 2010 national election when President Alassane Ouattara defeated incumbent Laurent Gbagbo, who refused to relinquish power. Gbagbo spent five months in 2011 using troops and mercenaries to resist the transition. Authorities eventually arrested him, and Ouattara was inaugurated May 21, 2011.

UNMIL's big challenge came less than three years later when Ebola reared its head in West Africa, bringing terror and death to Liberia, Guinea and Sierra Leone. The first regional outbreak of the deadly disease sickened 28,600 people and killed 11,325. Liberia was hardest hit, logging nearly 11,000 cases and 4,810 deaths, according to the U.S. Centers for Disease Control and Prevention.



A former Liberian rebel surrenders his weapon to a UNMIL peacekeeper during a disarmament campaign. THE ASSOCIATED PRESS



These factors ensured that both missions would be difficult, but they ended — first in Côte d'Ivoire on June 30, 2017, then in Liberia on March 30, 2018 — after logging significant successes. Much can be learned from both.

UNOCI CONFRONTS ELECTION CRISIS

Back in 2002, Ivoirian Soldiers tried to overthrow then-President Gbagbo, who had taken office two years earlier. The coup failed, but a rebellion followed, with rebels taking the name Forces Nouvelles, or New Forces. They controlled Côte d'Ivoire's North, splitting the country. The government controlled the South, and the clashes grew into a civil war.

"From September 2002 to January 2003, the civil war was marked by confrontations between government forces and rebels, the capturing of towns followed by massacres of civilians, aerial helicopter attacks in the west, targeted kidnappings and assassinations, and large-scale sexual violence," Alexandra Novosseloff wrote for the International Peace Institute (IPI). Liberian and Sierra Leonean mercenaries fighting on both sides gave the conflict a regional dynamic.

France intervened with Operation Licorne on behalf of thousands of its citizens living in the country, and the Economic Community of West African States (ECOWAS) also stepped in militarily. In February 2004, the U.N. created UNOCI, and ECOWAS rehatted its

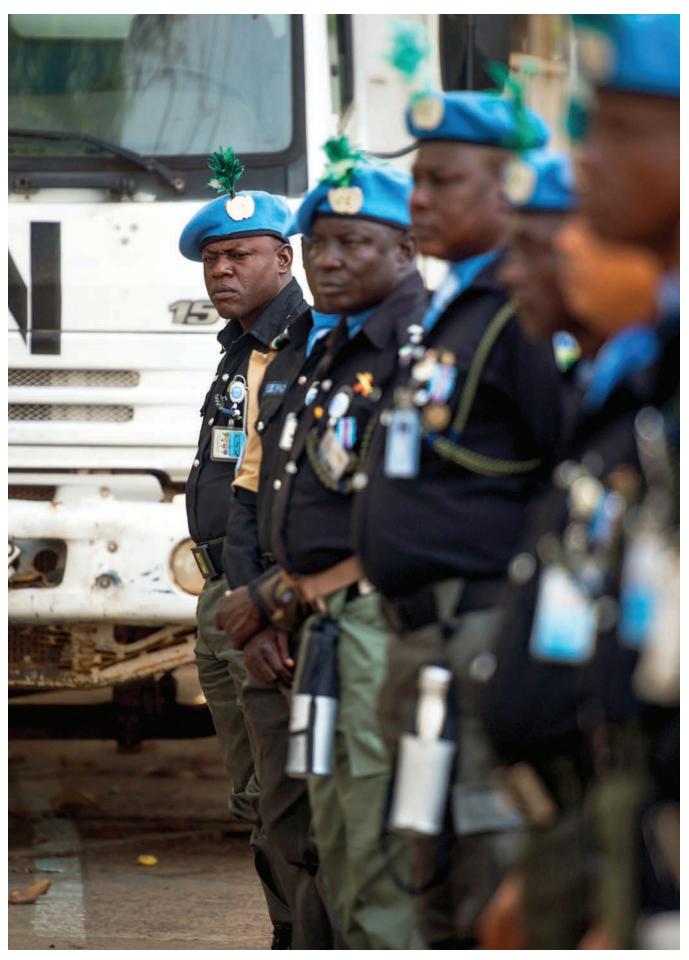
Senegalese peacekeepers provide security during an official visit to Abidjan, Côte d'Ivoire. REUTERS

forces under the peacekeeping mission.

Gbagbo stubbornly held onto power up to and through the presidential election of 2010, which he lost to Ouattara. As both men started to form their own administrations in Abidjan, conflict again erupted, leading to 3,000 deaths with half a million people either internally displaced or forced out of the country before Gbagbo was arrested on April 11, 2011, Novosseloff wrote.

During this post-election crisis, Gbagbo's loyalists attacked civilians in the capital, as well as UNOCI patrols and headquarters. UNOCI worked alongside Licorne forces to end the violence. Two U.N. helicopters joined French attack choppers to target Gbagbo munitions storage positions. In April 2011, Ivoirian forces caught Gbagbo and his wife, who were flown to The Hague to face prosecution. He was the first former head of state taken into custody by the International Criminal Court. Both were eventually acquitted.

A Nigerian Formed Police Unit leaves as the United Nations Mission in Liberia comes to an end in March 2018. UNITED NATIONS



As the UNOCI mission began to draw down in 2013, its mandate was extended into 2017 because it had to maintain the ability to support a series of elections in 2015 and 2016.

UNMIL, UNOCI COOPERATE

Upheaval in Côte d'Ivoire and Liberia — and the two nations' proximity — made mission cooperation virtually inevitable. The shared border was a focus of cooperation in the latter stages of the UNOCI mission. Both efforts supported national governments in addressing border security, and both bolstered information sharing between their respective civilian and military components, according to a 2013 report to the U.N. Security Council by then-Secretary-General Ban Ki-moon. The work produced "a positive impact on operations and analysis," he wrote.

In fact, starting in 2005 as the United Nations Mission in Sierra Leone (UNAMSIL) was ending nearby, then-Secretary-General Kofi Annan asked the Security Council to allow inter-mission cooperation in Côte d'Ivoire, Liberia and Sierra Leone. The move was a significant innovation at the time for such missions, according to the U.N. After UNAMSIL peacekeepers left, a small UNMIL contingent moved to Freetown, Sierra Leone, to provide security to the court prosecuting crimes committed during that country's civil war. This arrangement lasted until 2012.



Senegalese Soldiers serving in UNOCI guard the presidential palace while Alassane Ouattara, the new president, visited in 2011. AFP/GETTY IMAGES

To preserve adequate troop numbers in Liberia, the Security Council increased UNMIL's troop limit slightly.

UNOCI and UNMIL focused on security and border control, strengthening state authority and sustainable return and reintegration for those who had been displaced. UNMIL troops conducted land and air patrols across the borders of Côte d'Ivoire, Guinea and Sierra Leone. The patrols, called Operations Mayo, Seskin and Loko, respectively, served as a template

for continued joint operations by the militaries for the three countries, according to a 2007 article on the website ReliefWeb.

UNOCI and UNMIL also reached out to refugees and communities in western Côte d'Ivoire and eastern Liberia through radio station broadcasts.

UNMIL radio in particular was one of the mission's most valuable assets, according to a paper for IPI by policy analysts Daniel Forti and Lesley Connolly. At its height, UNMIL radio broadcast 24 hours a day in multiple languages and reached about three-quarters of the country and 80 percent of the population. It was so successful that after the mission, ECOWAS later took control of it to continue broadcasts. This type of media outreach would prove vital to UNMIL's most challenging threat: Ebola.

I'm convinced that the continued presence of UNMIL was reassuring to the population, and the fact that we had offices all over the country actually contributed to convening the actors who needed to come together."

~ Karin Landgren U.N. undersecretary-general

UNMIL FACES EBOLA

Liberia, like its neighbor Côte d'Ivoire, faced nearly intractable challenges after years of civil war. In 2003, the UNMIL mission had 15,000 peacekeepers, more than 1,100 police officers and nearly 2,000 civilian staff members, making it the largest peacekeeping mission at the time. UNMIL was charged with reestablishing the rule of law and ensuring free and fair elections. But UNMIL's leaders, and indeed the world, could not have predicted the next test.

In early 2014, Ebola struck Liberia just as UNMIL was preparing its withdrawal. With one of the lowest concentrations of doctors in the world — about 1.4 physicians per 100,000, or about 50 for the nation of 4.8 million people — Liberia quickly fell into disaster. But the presence and involvement of UNMIL made a difference as the region and world responded.

"The U.N. and other partners recognized quite early on that this was more than a public health crisis," Karin



Landgren, undersecretary-general, said in 2015, according to *The Story of UNMIL*.

Health services collapsed, and commodity prices grew, she said, leading to security concerns. The government declared a state of emergency and called out the army.

"I'm convinced that the continued presence of UNMIL was reassuring to the population, and the fact that we had offices all over the country actually contributed to convening the actors who needed to come together," Landgren said.UNMIL's support for the Ebola response, especially through the U.N. Mission for Ebola Emergency Response (UNMEER), could be considered a model.

"Although UNMEER was the official Ebola mission, the UNMIL structure enabled what UNMEER needed," David Penklis, director mission support, said in *The Story of UNMIL*. "If UNMIL didn't deliver, UNMEER could not have delivered."

The peacekeeping mission was forced to adjust to meet the demands of the crisis, including abandoning a troop downsizing exercise. Logistics was a key area. UNMIL transported cargo that came into the country by air and stored it in contracted warehouses.

UNMIL's communications efforts, particularly through its radio broadcasts, also made a difference. The mission started media outreach through radio,

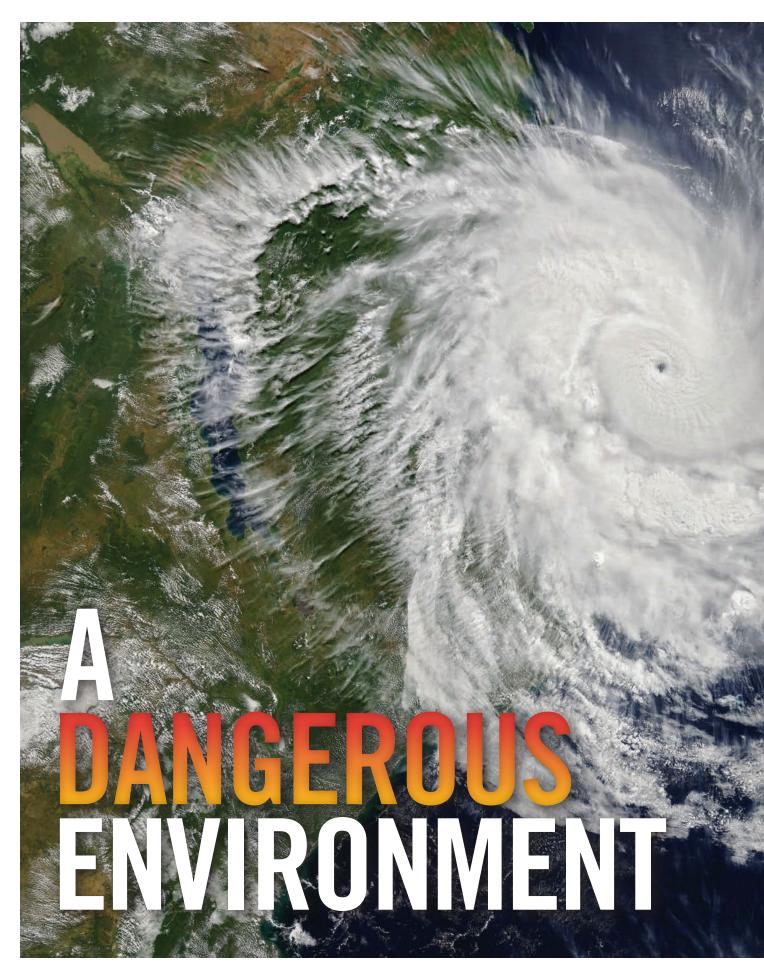
UNMIL Soldiers patrol polling stations in Monrovia during 2014 parliamentary elections, which were delayed by Ebola. AFP/GETTY IMAGES

theater and visual media to raise awareness about the virus and its prevention among a skeptical public. Mission radio broadcasters devoted most of their airtime to public education about Ebola and prevention, including news bulletins, safety information and call-in shows through which listeners could talk to health-care workers, traditional leaders and others.

With the increase in education came an uptick in prevention and early treatment, which reduced the risk of the disease spreading.

Conditions are not perfect in Côte d'Ivoire or Liberia today, but the two peacekeeping missions have left the countries poised to capitalize on their potential and success. Côte d'Ivoire is a West African economic powerhouse, posting economic growth of 7.6 percent in 2017, according to the World Bank.

In Liberia, Dee Maxwell Saah Kemayah Sr., the nation's permanent representative to the U.N., wrote for United Nations Peacekeeping that UNMIL supported his country in every sector, from disarmament to judicial reform to elections. "The withdrawal of UNMIL signifies that Liberia is strongly positioned on the path of lasting stability, democracy and prosperity."





Recurring Weather **Events Can Intensify** Security Issues

ADF STAFF

On a continent prone to a wide range of environmental disasters, tropical Cyclone Idai stood out. The exceptionally devastating storm plowed into southeastern Africa on March 15, 2019, bringing fury to Mozambique, as well as neighbors Malawi and Zimbabwe.

The storm might be the worst disaster to strike the Southern Hemisphere, the United Nations said. A month later, Mercy Corps reported that the cyclone had left an estimated 3 million people needing humanitarian assistance and killed more than 1,000, with hundreds more missing.

By April 25, 2019, Cyclone Kenneth was slamming into Mozambican shores, this time in the nation's north-

Floodwaters from Cyclone Kenneth washed away roads and damaged houses in Pemba, Mozambique, in April 2019. REUTERS

Tropical Cyclone Kenneth just before landfall

east. Idai hit as the nation was about to begin its harvest season. Kenneth brought heavy rain and flooding to Pemba, a city of 200,000, in the nation's Cabo Delgado province. The storm had killed five people and flattened homes by April 28. Rain drenched an area prone to landslides and floods, leaving residents fearful that rivers would swell and cover large areas with water, according



Kenyan Soldiers fight a fire on March 1, 2019, in Mount Kenya National Park. Dry weather allowed the fire to burn about 14,000 hectares.

GETTY IMAGES

to the United Kingdom's *The Guardian*. The province has been the site of deadly militant attacks for some time.

Two storms in less than two months in one of the world's poorest countries. One storm

complicating the nation's farming industry. The other slamming into a region already home to insurgent violence. The results of both — and events like them elsewhere in Africa — can exacerbate existing tensions and cripple already-fragile states.

A VARIETY OF THREATS

Catastrophic weather and environmental events are common all over the continent, and not all are deadly cyclones.

For example, in Sierra Leone in August 2017, heavy rains caused mud to cleave off Sugar Loaf mountain and slide down on hundreds of people's homes in Freetown as they slept. "We were inside. We heard the mudslide approaching," a woman named Adama told the BBC. "We were trying to flee. I attempted to grab my baby, but the mud was too fast. She was covered, alive. I have not seen my husband, Alhaji. My baby was just 7 weeks old."

A famine associated with an East African drought from 2010 to 2012 killed almost 260,000 — half of whom were young children — in Somalia alone, according to a United Nations report. Drought and famine are common in this

region. Deadly famines in neighboring Ethiopia date back at least a thousand years.

Environmental hazards such as these, as well as floods, wildfires and other events, can interrupt a population's ability to support itself through subsistence farming and prompt the mass migration of people from one area to another. These types of disruptions can stress populations and resources and bring about conflict or exacerbate existing tensions.

Governments and security forces can't stop weather events, but they can be aware of environmental trends and how those trends are likely to affect certain areas and populations.

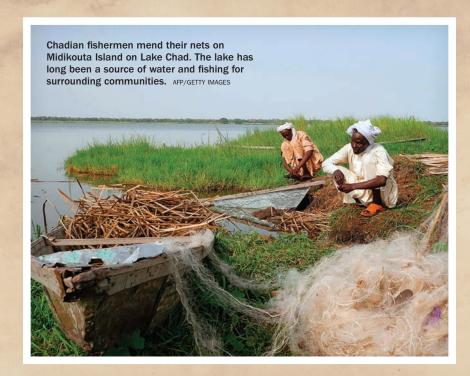
Studies show that climatic events do not cause conflict but can trigger or accelerate them.

Governments and security forces, knowing where conflicts have emerged during specific times, can expect them again when similar conditions arise. For example, pastoralists in a particular region may be inclined to migrate into farming territory in search of water for livestock during dry conditions.

THE LAKE CHAD BASIN

The Environmental and Energy Study Institute, a U.S. nonprofit committed to promoting sustainable societies, lists two major international threats from sustained environmental changes: mass migration leading to refugees and internally displaced people, and conflicts centered on water resources.

Governments and security forces can't stop weather events, but they can be aware of environmental trends and how those trends are likely to affect certain areas and populations.



When a major environmental event occurs, it could cause thousands of people to flee to another area or even across a border into another country. One of the clearest examples of this in Africa is among the Lake Chad basin nations of Cameroon, Chad, Niger and Nigeria. Lake Chad itself has shrunk about 90 percent in the past 50 years. The lake historically has been a lifeline for the region through agriculture, fishing and raising livestock.

"This massive reduction of the lake has resulted in less water availability, decreased agricultural outputs for surrounding communities, and an increase in livestock and fisheries mortality," wrote Abdoul Salam Bello for the Atlantic Council. "Moreover, as the human population that depends on the lake's ecosystem for survival surges in size, the challenge of decreasing freshwater availability grows more and more acute."

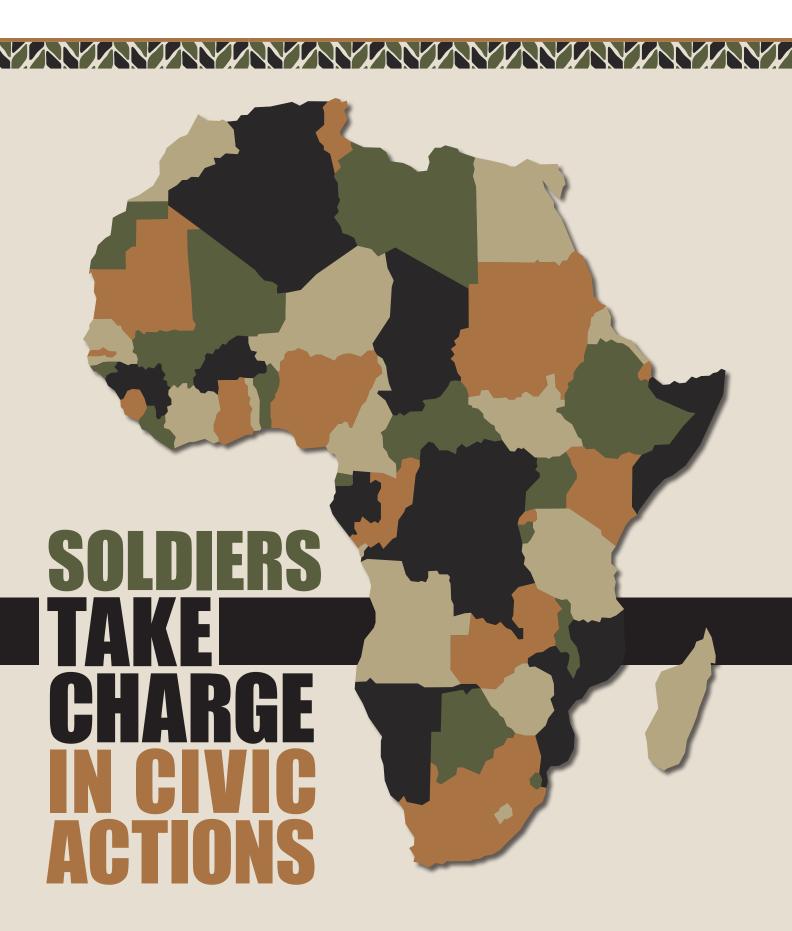
The importance of the lake to the region cannot be overstated. About 700,000 people lived around Lake Chad in 1976, but that number has grown to 2.2 million now as people have been drawn there by drought and poor living conditions elsewhere, according to a report from adelphi, a think tank that focuses on climate, environment and development. The number of people is expected to be 3 million by 2025, with 49 million depending on lake resources.

Before Islamist insurgent group Boko Haram became a security threat to the region, the Lake Chad basin thrived with trade across national borders in produce, fish and other goods. This occurred despite a lack of government support.

Understanding how the environment affects security requires a look at how it interacts with different risk factors such as the economy and social and political stressors. The adelphi study mentions three climate-fragility risks:

- Conflict and fragility increase vulnerability: The ongoing Boko Haram conflict undermines resilience, including the population's ability to adapt to environmental changes.
- Natural resources conflicts: The environment can intensify natural resource conflicts, especially disputes over land and water use by herders and farmers.
- Livelihood insecurity and recruitment into armed groups: When a large percentage of a population, particularly young people, cannot find employment, they may be more susceptible to recruitment by an extremist group or armed militia.

These fragility risks, taken together, can create a self-enforcing feedback loop between increasing livelihood insecurity, vulnerability to environmental changes, and conflict and fragility. Conflict makes communities more vulnerable to environmental changes, which in turn aggravates competition for scarcer natural resources. "If not broken, this vicious circle threatens to perpetuate the current crisis and take the region further down the path of conflict and fragility," the study shows. \Box



FROM PLOWING FIELDS TO REPAIRING SEWAGE PLANTS, SOLDIERS ARE REDEFINING THEIR ROLES

ADF STAFF

The Vaal River in central South Africa is an environmental disaster, threatening the health of 19 million residents who live downstream. Its fate is in the hands of unlikely environmental warriors — the South African National Defence Force (SANDF).

In September 2018, the South African Human Rights Commission inspected the river after allegations that 150 million liters of untreated sewage were spilling into it each day. The commission said, "The site inspection has revealed a prima facie violation of the rights of access to clean water, clean environment and human dignity," TimesLIVE reported. Of particular concern, officials said, was the possibility of a cholera outbreak.







Soldiers participate in rescue operations after a deadly cyclone hit Zimbabwe in March 2019.

THE ASSOCIATED PRESS

Maj. Gen. TT Xundu of SANDF said his team's assessment showed that sewage plants and substations weren't working properly.

"There are leakages and pipes that are burst, and all those things are threatening the welfare of the people," Xundu told TimesLIVE. "We are going to look at our limited engineering capabilities and see what we can do to assist, in particular the substations and the plants."

One advantage the Soldiers had over civilian engineers is that they were not defenseless against thieves. "All of that area will be declared a military zone so that the military can move in and secure the area, and make sure that the equipment that is going to be used there is not going to be stolen or vandalized," the general said.

Officials had hoped to fix the problem within a year. As of April 2019, engineers were finding new sources of pollution in the river, in addition to the damaged sewage plants.

RESCUE SPECIALISTS

The SANDF has years of experience in dealing with environmental problems, but it mostly has been a key player in weather-related disasters. With flooding becoming an almost annual problem in Southern Africa, the SANDF has some of the most experienced rescue teams on the continent.

The response to flooding in 2013 in Mozambique was typical of how the SANDF operates in crises. The South African Air Force first provided airlift capacity to a disaster relief group, Gift of the Givers. SANDF C-130 transport planes shipped more than 136 metric tons of food. The website defenceWeb said the SANDF deployment included Navy divers; Oryx helicopters and crew; and primary healthcare nurses, dietitians and environmental health officers from the South African Military Health Service. After completing search-and-rescue operations for flood victims, the Air Force began food distribution flights.

Col. Andre Pieterse told the South African newspaper *Beeld* that in one operation alone, SANDF rescued at least 500 people from the raging Limpopo River in Mozambique. This work included hoisting people to safety from rooftops and out of trees.

A SANDF officer told *ADF* that in South Africa's neighboring countries, civilians have come to think of SANDF personnel more as rescue workers than as traditional Soldiers.

ENVIRONMENTAL SOLDIERS

South Africa is not the only country using its military forces in new ways. In the 21st century, Soldiers are beginning to discover that environmental protection and repair are key elements of peacekeeping, preventing warfare and protecting civilians.

In 2019, Kenyan Secretary of Defence Raychelle Omamo said the Kenya Defence Forces (KDF) would use protection of the environment as the first line of defense to resolve resource-based conflicts, such as those between farmers and herders.

In the past, Omamo said, Soldiers had been deployed to some parts of the country to reinstate order and stability between the two disputing groups in times of drought.

"Environmental degradation and the destructive effects of climate change serve as multipliers for insecurity and conflict and add credence to the enduring connection between peace, good governance and environmental protection," she said, as reported by the website News Ghana.

Omamo said Kenya's Armed Forces are not restricted to protecting the country from external aggression. Their role, she said, also can be interpreted to include protection from cyclical threats of hunger, disease and the disruption of livelihood arising from extreme weather. Gen. Samson Mwathethe, Kenya's chief of defense forces, said the approach continues to bear fruit, but more is needed.

"The KDF is today reaching out in a bid to establish partnerships towards enhancing a secure and healthy world for present and future generations," he said, as reported by News Ghana.

Nigeria also is taking steps to address environmental challenges. The country has been described as having the worst



In March 2019, Tropical Cyclone Idai struck Southern Africa, moving slowly for five days across Mozambique, Zimbabwe and Malawi. One of the deadliest storms in history, Idai killed more than 1,000 people, with thousands more missing. The total death toll may never be known.

After the storm, the South African National Defence Force (SANDF) assisted in rescue efforts in Malawi and Mozambique. According to defenceWeb, the SANDF kept this report:

Friday, 15 March: The SANDF flew in a team of specialists to the flooded areas to assess what kind of humanitarian assistance was needed.

Saturday, 16 March: After a successful assessment in both countries, SANDF deployed a team of 10 military health practitioners with search-and-rescue air forces to Malawi. The same day, an Oryx medium-utility helicopter and a CASA-212 light-transport plane also were dispatched to Malawi.

Sunday, 17 March: Despite persistent rains and wind in Mozambique, SANDF managed to land a first team in preparation for the arrival of humanitarian relief workers. Officials deployed two Oryx helicopters for continuous duty. They deployed one A109 light helicopter for search and rescue, a C-212 for personnel and equipment transport, and a PC-12 aircraft for reconnaissance.

Monday, 18 March, to Saturday, 23 March: SANDF sent 82 people, including medical workers, cargo carriers and air crews, to the region. The personnel included psychologists and environmentalists. SANDF dispatched two heavy cargo aircraft to the two countries to deliver medical supplies, meals and equipment. During those six days, SANDF rescued 417 people, assisted 11 people with critical medical conditions, and airlifted 30 to medical facilities.

An Oryx helicopter from the South African National Defence Force flies an air relief drop mission over a flooded area of central Mozambique in March 2019. APP/GETTY IMAGES



deforestation problems on the planet. The Nigerian Conservation Foundation says Nigeria has lost 96% of its natural forest cover. One significant cause is the illegal logging of valuable furniture wood for the Chinese market.

Nigerian Armed Forces officials say that they have the added problem of trying to protect an environment for plants and animals while preventing that same environment from being a sanctuary for criminals, kidnappers and terrorists.

In March 2019, the Nigerian Army announced a radical step to help preserve the nation's wild-life. Army officials announced they were planning to establish "mini zoos" and wildlife parks in all military camps to protect endangered plants and animals.

Maj. Gen. Adekunle Shodunke said the zoos and parks also would serve as recreational areas for military personnel. He asked officials with Nigeria's National Park Service to help develop



People run after collecting food from a South African National Defence Force helicopter in the aftermath of Cyclone Idai in Mozambique in March 2019. REUTERS



"eco-tourism in the zoos and parks and to have them meet international standards," Vanguard Media reported. The park service pledged its support for the base zoos.

RWANDA'S MANDATE

The Rwanda Defence Force (RDF) says a cornerstone of its service is civic involvement. "RDF is mandated to support and contribute to government efforts in poverty reduction, infrastructure development, health care, education and other activities aimed at addressing human security challenges," said the RDF in a 2019 news release. In mid-April 2019, the RDF rolled out its 2019 Citizen Outreach Program, sending medical equipment, along with farm and engineering tools, into poor parts of the country. Rwandan medical personnel offered free treatment for the sick while other personnel plowed fields and built houses. The annual program lasts about six weeks.

The Rwandan news agency Taarifa said the program anticipated treating 138,000 patients while also working to improve sanitation. The agency said military workers planned to build 1,141 houses for "the most vulnerable citizens across the country." Soldiers also planned to cultivate 11,139 hectares of farm land while setting aside 45,300 hectares for soil erosion control and environmental protection.

LESSONS FROM AMISOM

Some of these civic duties taken on by military groups have evolved out of peacekeeping efforts. One conspicuous example is the African Union Mission in Somalia (AMISOM), now in its 12th year. It is the African Union's longest-running and largest peace operation, and its results have been heavily studied. Research papers have documented the lessons learned from the operation, and how they can be applied throughout the continent.

AMISOM was mandated to help and protect political leaders in Somalia, reconstruct the country's security forces, support elections, and provide humanitarian assistance. That humanitarian work evolved into reaching out to civilian and government groups in search of ways they could help each other.

In April 2019, AMISOM and civil groups in Somalia resolved to come up with programs that will empower citizens to participate in the affairs of the country.

AMISOM reported that it was working closely with the major players in Somalia to ensure that the transfer of security responsibility to Somali national forces proceeds smoothly and ensures that gains already made in the stabilization process are maintained.

"We want you to take over, and AMISOM is ready to help the people of Somalia make the country a better place to live in," said Francisco Madeira, head of AMISOM.

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CAMEROONIAN FOOTBALL STAR Opens Academy for Girls VOICE OF AMERICA



ameroon's top female football star has opened an academy to teach the sport to girls. The academy is the first of its kind in the country, where football is still largely considered a boys' sport.

Gaelle Enganamouit, a 27-year-old football star, never had any formal training. But she said having a football academy for girls will develop Cameroon's players into world stars.

"The foundation has as its objective to promote women's football so we can see the impact." she said. "In 2016 here with the African Cup, I was so impressed. I said I have the opportunity to open this foundation; I can do it."

As a young girl, Enganamouit had a passion for football. Her family rejected her love of the game because football was considered a boys' sport. But Enganamouit's determination led her to play at the national level and also with a Norwegian club. Gaelle Enganamouit goes after the ball during a World Cup match with China. REUTERS

Ghislain Bebben, one of the coaches selecting players for the academy, said she was impressed with the talent she has seen.

"I was surprised today, and I am very happy because I trained with my young sisters, and all those girls have good talents," he said. "So, I think when Gaelle put that academy, I think those girls will receive good formation, and they are going to have good talents."

Rails Football Academy manager Frank Happy said they will choose 18 players for each age category. He said they've prepared a training program that does not clash with the girls' academic progress. Formal education, he said, will be vital not only in the girls' lives but also to their careers as professional players.

Comic Books SHOWCASE African Narratives

ADF STAFF

To "showcase the best African narratives," some artists and writers have teamed up to publish comic books in print and online. They also are experimenting with augmented reality products.

Nigerians Ziki Nelson and Tolu Foyeh, along with Ugandan Hamid Ibrahim, have started Kugali Media, based in London and Lagos, Nigeria. All three men are under 30. Their flagship product, *Kugali Anthology*, is a collection of comics by contributors from across the continent and the diaspora.

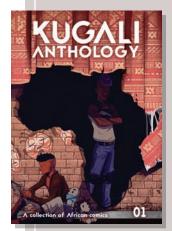
They also are testing augmented reality (AR), similar to Pokémon Go, a game that is downloaded onto smartphones and combines visuals of computer-generated characters with the user's surroundings.

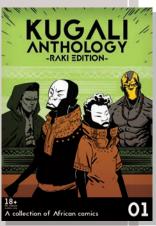
"At present we're looking at ways AR can enhance the comic reading experience, as well as recreating a traditional storytelling experience with a griot or elder appearing before you in AR and recounting a traditional tale," said Nelson in an email to ADF. "We're also interested in film and animation, and our goal is to adapt our comics for these mediums."

Most of their content is published in English, with one book translated to French. Their books are available for ordering at www.kugali.com. The company also launched a subscription service in 2019.

Although their target audience is Africans, they hope to reach a wider readership.

"Many of the stories we tell might resonate with Africans in a way that people outside the culture might not understand," wrote Nelson. "But ultimately, a good story should transcend borders and cultures."





Senegal Unveils Museum of Black Civilizations

BBC NEWS AT BBC.CO.UK/NEWS

Senegal has opened its new \$34 million Museum of Black Civilizations in the capital, Dakar. It follows calls from Senegal and other African nations for France to return art it looted during the colonial era.

Among the first temporary exhibitions to be shown are works from artists from Mali and Burkina Faso as well as from Cuba and Haiti.

The idea of establishing the museum dates back more than 50 years, to Senegal's late poet-president, Léopold Sédar Senghor. Along with Martinican writer Aimé Césaire, Senghor was a creative force behind the philosophy of Négritude, which promoted black culture, heritage and identity.



The museum will be a creative laboratory to help shape a continent's sense of identity. The museum's directors hope they will "be able to turn Senegal into an intellectual and cultural capital of the black world."

"This museum is a step forward for us," Amadou Moustapha Dieng, a Senegalese arts journalist, told the BBC. "I know there are important relics which I'm not able to see unless I go abroad, but now with this space, we can get back the relics and Africans can come here now and see this was their history."

The Museum of Black Civilizations has changed the landscape of downtown Dakar. The circular architecture was inspired by traditional homes typical to southern Senegal. The site has nearly 3,700 square meters of exhibition space.

In late 2018, a report commissioned by French President Emmanuel Macron recommended that African treasures taken without permission be returned to their countries of origin.

Senegalese Culture Minister Abdou Latif Coulibaly told the BBC he welcomed the French report because "every piece from Senegal is in France."

The African state with the most art pieces in France is Chad, another former colony.



NETFLIX REVEALS First African Original Series

BBO NEWO AT BBO.OO.OTY NE

Netflix is to launch its first African original series in 2020.

Queen Sono is "a drama about a secret agent who fights crime while dealing with crises in her personal life," according to entertainment news magazine Variety.

The star of the series, South African actor Pearl Thusi, says it's "going to change the game for every artist on this continent."

Queen Sono is the brainchild of director Kagiso Lediga and executive producer Tamsin Andersson,

who previously worked together on *Catching Feelings*, a romantic comedy.

Netflix plans to invest more of its \$8 billion original production budget on African content.

"We are delighted to create this original series with Netflix, and are super excited by their undeniable ability to take this homegrown South African story to a global audience," Lediga said. "We believe Queen Sono will kick the door open for more awesome stories from this part of the world."



AFP/GETTY IMAGES

Can Drought-Proof Maize Save Zimbabwe's Farmers?

VOICE OF AMERICA

esearchers are betting that a new variety of maize can help farmers in Zimbabwe withstand increasing instances of drought.

The International Maize and Wheat Improvement Center says it is working on ensuring that Zimbabwe returns to its former status as a prosperous, self-sufficient agricultural producer, after erratic rainfall in recent years affected the country's food security.

The El Niño weather phenomenon has harmed crop production across Southern Africa in recent years. But the center believes its technologies can improve small farmers' maize production, said researcher Esnath Hamadziripi.

"Here in Zimbabwe, three in five seasons are expected to be bad for farmers," Hamadziripi said. "El Niño is making that worse. So it is important to make varieties that are climate resistant because maize is the staple crop here in Zimbabwe. In the 2015-2016 season we tested our maize varieties all over Zimbabwe, and they yielded close to double the yield of commercial varieties that are

on the market, so we believe that these varieties work. We actually encourage farmers to get hold of climateresistant varieties."

The United Nations Food and Agriculture Organization has identified the new climate-resilient maize developed by the center as one of the best innovations in agriculture.

Zimbabwe, once considered the breadbasket of Southern Africa, saw farm production fall sharply in the early 2000s. Production has stayed at a low level due to political unrest and repeated droughts.

The maize center warns that planting climate-resilient maize alone will not help Zimbabwean farmers. It says farmers should conserve the rains they receive, says agronomist Isaiah Nyagumbo.

"With conservation agriculture we are also minimizing the amount of runoff out of the system; that means reducing the amount of the water that runs into rivers," Nyagumbo said. "Along with it a lot of soil is lost, so with conservation agriculture we help to stop that by ensuring that the soil and water remain in place."

Hong Kong Authorities Stop

RHINO HORN SMUGGLERS

BBC NEWS AT BBC.CO.UK/NEWS

irport authorities in Hong Kong arrested two men accused of smuggling a record number of rhino horns worth \$1 million.
The accused smugglers were headed to Vietnam from Johannesburg, South Africa.
About 24 severed rhino horns weighing 40 kilograms were found in the bust, the largest ever recorded in Hong Kong.

Customs officials said the illegal haul was transported through the terminal in two cardboard boxes. The incident came just two weeks after officials in Hong Kong seized 8 metric tons of pangolin scales and more than 1,000 elephant tusks.

A local environmental group said the rhino horns accounted for 20% of the total amount of Hong Kong's rhino horn seizures since 2013. Hong Kong is a known transit point for the illegal wildlife trade, and conservation groups have urged authorities to crack down on smuggling.

Rhino horn is used in China and Vietnam in some traditional medicine, despite containing little more than keratin, the same protein that makes human hair and fingernails.

The demand for rhino horn has fueled wildlife poaching, particularly in South Africa, which is home to about 80% of the world's rhino population.

Conservation groups say the number of rhinos killed has been gradually decreasing since 2014, but more than 1,000 rhinos continue to be killed in South Africa each year.





GAUTENG HEALTH DEPARTMENT

Surgeons

ear bones

Academic

Hospital in

Africa.

implant middle-

created using

a 3D printer

at Steve Biko

Pretoria, South

SOUTH AFRICAN SURGEONS

MAKE HISTORY

WITH 3D PRINTED EAR IMPLANTS

AGENCE FRANCE-PRESSE

South African surgeons successfully performed the world's first implant of middle-ear bones that used 3D printed components, a research university said.

The technique "may be the answer to conductive hearing loss — a middle ear problem caused by congenital birth defects, infection,

trauma or metabolic diseases," Pretoria University said in a statement.

The surgery replaced the hammer, anvil and stirrup — the smallest bones in the body, which make up the middle ear — with similarly shaped titanium pieces produced on a 3D printer.

"3D technology is allowing us to do things we never thought we could," said University of Pretoria health faculty Professor Mashudu Tshifularo.

Tshifularo operated on a 35-year-old man at the Steve Biko Academic Hospital in Pretoria. The patient's middle ear was shattered in a car crash.

By replacing only the bones that aren't functioning properly, the procedure carries significantly less risk than using known implants, Tshifularo said.

Health Minister Aaron Motsoaledi promised to "do everything in our power to assist and mobilize resources ... for this far-reaching innovation."



WATER PROJECT SIGNALS HOPE FOR MALIAN TOWN

ADF STAFF

Children drink fresh water from a new well in Menaka, Mali. OPERATION BARKHANE he Malian military drilled a well to provide drinking water to school-children in a town badly affected by extremism. The project in Menaka, near the border with Niger, is the latest effort by the Malian government to help restore peace to northern Mali.

In October 2018, members of Mali's civilmilitary team backed by Soldiers from the French Operation Barkhane inaugurated the well at the Tabangout School. The town's mayor, local leaders, police, members of the United Nations mission and other dignitaries attended the ceremony.

When the water started flowing, the mayor tasted it and declared it to be the "purest in Menaka." He told the crowd that it now was everyone's responsibility to maintain the well. The team also handed out 350 kits filled with

school supplies for children.

After the ceremony, Soldiers handed out T-shirts to children with the phrase "We Are the Future" printed on them.

Menaka, a desert town of about 25,000 people 1,200 kilometers northeast of Bamako, was controlled by extremists during Mali's 2012 crisis. The militant Islamist group the Movement for Oneness and Jihad in West Africa closed schools, banned secular music and harshly punished Sharia violations. Although Menaka is now liberated, it has been the site of clashes between various armed groups and has endured recurring banditry and lawlessness.

A July 2018 U.N. report found that, due to insecurity, 650 schools were closed in the central and northern regions of Mali, affecting 200,000 children.



CHINESE OFFICIALS ARRESTED ON BRIBERY CHARGES IN KENYA

ADF STAFF

enyan authorities arrested seven offienyan authornees arrest Corp. and accused them of bribing investigators who had been examining railway finances, Kenya's Daily Nation reported.

The Standard Gauge Railway is a \$3 billion project that connects Kenya's two largest cities, Nairobi and Mombasa. Launched in 2017 and dubbed the "Madaraka Express," it has been controversial due to cost overruns and allegations of corruption. The arrests mark the first time Chinese officials will face charges relating to the railway.

Agents with the Ethics and Anti-Corruption Commission arrested three Chinese nationals and four Kenyan officials. The bribes totaled \$8,800 and were offered to cover up a scheme to steal and misuse train tickets, which may have cost the railway \$9,700 per day in revenue.

One travel agent said that train tickets were mysteriously sold out as soon as they were made available, but the same tickets were later sold on the secondary market.

"We had the entire train full in five minutes," the agent told the Nation. "After staying late at night and securing clients to take to Mombasa for holidays, we were forced to seek alternative means for them, including one-way flights, which are 10 times more expensive. Later, small shops in downtown Nairobi had bookings for the same date, which they were selling at Sh2,000 [\$20] for economy and Sh5,000 [\$49] for first class. It's a shame."

U.S. GIVES COMMAND-AND-CONTROL FACILITY TO NIGER ADF STAFF

The United States handed over a command-and-control facility and equipment to Niger to support its fight against terrorism. The \$16.5 million node will integrate intelligence, surveillance, reconnaissance and existing Nigerien Armed Forces capabilities.

This new building, along with two deployable tactical operations centers, radios and training, will streamline communication with field personnel, the U.S. Embassy in Niamey said.

"We believe all these capabilities are critical to helping Niger defeat Boko Haram and other terrorist organizations wanting to cause harm within its borders," said U.S. Ambassador to Niger Eric Whitaker.

The U.S. donated equipment for the Base Defense Force in Agadez, four counterterrorism companies and one logistics company. The U.S. also gave Niger armored personnel vehicles and mud boats to help counterterror forces pursue extremists.

"The menace of terrorism is still growing and requires our Army to be innovative and take advantage of all means to permit them to anticipate and react quickly," Interior Minister Bazoum Mohamed said during a handover ceremony, according to Agence Nigerienne de Presse.

Niger has spent the past decade battling extremist groups, including Boko Haram, which has begun attacking refugees in the area bordering Nigeria. In March 2019, Boko Haram killed 88 civilians in Niger, and violence forced 18,000 others to flee, Al Jazeera reported.

"We have a situation where civilians are caught in this crossfire or even being specifically targeted by the Boko Haram," Babar Baloch, spokesman for the Office of United Nations High Commissioner for Refugees, told Voice of America.



U.S. Ambassador to Niger Eric Whitaker, center, and Nigerien Interior Minister Bazoum Mohamed, right, attend a ceremony commemorating the donation of a command-and-control facility and equipment to Niger.



WOMEN POOL SAVINGS TO INVEST IN CATTLE

TOMSON REUTERS FOUNDATION

For the women of a self-help group in Tuluroba, Kenya, the goal was simple: Use their combined savings to buy cattle, fatten them and sell them to the beef industry.

But there was a problem. "We had no land to graze the cattle. Nor could we obtain a loan from a bank to buy land, because as women we do not own title deeds," said Fatuma Wario, who chairs the 13-member group.

That is common. Few women in Kenya have land title documents, and few are getting them: Since 2013, less than 2% of issued titles have gone to women, the nonprofit Kenya Land Alliance said in March 2018.

Because getting a loan from a mainstream bank requires collateral — typically in the form of a land title document — most women are locked out of the chance to start a business.

In the end, the women of the

group borrowed money from an institution that loans money to women's groups without requiring land title. Instead, the cash from their savings underwrites the loan. In Wario's case, that meant switching their savings account to the bank that was prepared to extend a \$1,000 loan. Using that money and some of their savings, "we bought cattle and hired land to graze our stock."

That was in 2017. Doing so meant the group could rent 4 hectares of pasture at a cost of 30,000 Kenyan shillings (\$300) annually.

Interest on the loan is 12% per year. In their first year, each fattened head of cattle brought in a \$30 profit.

The first step for Wario's group was to become a partner with the Program for Rural Outreach of Financial Innovations and Technologies, which is funded by

the U.N. International Fund for Agricultural Development and the Alliance for a Green Revolution in Africa. Officials say that about 60 women's groups in eastern Kenyan have benefited from the program. More than 40,000 women in Kenya have benefited from noncollateralized loans. None of those loans has gone bad.

Apart from livestock enterprises, the program also helps women raise poultry and do beekeeping on hired land.

Getting a loan requires that the person be an active member of an agribusiness network. She can then apply to a farmer-lending institution for a loan as an individual — in which case her share in the agribusiness network is her collateral — or with her group, as Wario's collective did.



Ethiopia Allows Refugees to Work

REUTERS

thiopia has passed a law giving almost 1 million refugees the right to work and live outside of camps, in a move praised for providing them with more dignity and reducing reliance on foreign aid.

Home to Africa's second-largest refugee population after Uganda, Ethiopia hosts more than 900,000 people who have fled conflict, drought and persecution in neighboring countries such as Eritrea, Somalia, South Sudan and Sudan.

The refugees — many of whom sought refuge decades ago and have children born in Ethiopia — are largely confined to one of about 20 camps across the country. Most are not permitted to work.

"We are happy to inform that the new refugee proclamation has been enacted by the House of Peoples' Representatives of the Federal Democratic Republic of



Ethiopia," Ethiopia's
Administration for
Refugee and Returnee
Affairs said. "It is strongly
believed that the new law
will enhance the lives
of refugees and host
communities."

With record numbers of people being forced to flee their homes, most of the world's 25 million refu-

gees are hosted by developing countries in camps where funding shortages often leave them short of basics such as food and education.

The new law is in line with Ethiopia's commitment to the United Nations Global Compact on Refugees, adopted by world leaders to increase refugees' self-reliance and ease the pressure on host nations.

The law allows refugees to move out of the camps, attend regular schools, and to travel and work across the country. Refugees can formally register births, marriages and deaths, and will have access to financial services such as bank accounts. It will allow more refugees to live in urban areas, secure limited work permits, give some access to farmland and increase education enrollment for refugee children.

"The law will help refugees feel included and that they can contribute to society," said Dana Hughes, spokeswoman for the United Nations refugee agency in East Africa. "But we must remember that access to education and employment doesn't just benefit refugees; it also contributes to the economy and benefits local communities. Such legislation isn't just the right thing to do — it's the smart thing to do."



ROVING CINEMA —— plays in—— CENTRAL AFRICA

AGENCE FRANCE-PRESSE

A giant screen flickers to life in a remote village in the equatorial forest of the Central African Republic. About 200 villagers take in an evening of films, thanks to a traveling cinema team that aims to entertain and enlighten.

Ambulant Digital Cinema reaches out to people in parts of a country scarred by violence.

"Some people are astounded when they see a car, so imagine what it's like when we're projecting films," said Serge Mbilika, a state television journalist who started the program in April 2018.

Before the show, Mbilika spends afternoons strolling around the streets of the hosting villages with his compact camera, filming villagers as they go about their business. It gets people's attention and spreads the word about the evening's event.

During the show, which comes after an hour of music and dancing, viewers laugh to see themselves on the large screen.

The prime aim of the roving cinema is to raise awareness of issues such as proper hand-washing methods, the need for vaccinations and the ethics of forced marriages. One short film emphasizes the need for girls to have an education.

Mbilika also is convinced that cinema can help people live together with respect after violence between armed groups erupted into civil war in 2012.

UNICEF and the Alliance Française provide the money required for traveling the country and to show some of the films. The bulk of the equipment comes from Cinema Numerique Ambulant-Afrique, which supports mobile teams in nine West and Central African countries.



REUTERS

NOW ONLINE

VOICE OF AMERICA

or the first time, half of the global population — 3.9 billion people — is using the internet. An International Telecommunication Union (ITU) report says Africa is the region with the strongest growth, where the percentage of people using the internet has increased from just over 2% in 2005 to nearly 25% in 2018.

The website Internetworldstats reports that Nigeria has the most internet users, with almost 100 million, followed by Egypt with 49 million and Kenya with 44 million. Kenya has, by far, the highest percentage of users; about 85% of its population has internet access.

The Democratic Republic of the Congo has had one of the most dramatic rates of internet growth on the continent, going from about 500 users in 2001 to more than 5 million in 2018. Still, only 6% of the country's population had internet access in 2018.

Eritrea has the lowest internet penetration, with under 2% of its population having access.

The report finds that access to and use of information and communication technologies around the world is trending upward. It notes that most internet users are in developed countries, with more than 80% of their populations online. But it says internet use is steadily growing in developing countries, increasing from 7.7% in 2005 to 45.3% in 2019.

In addition to data on internet use, new statistics show mobile access to basic telecommunication services is becoming more predominant. ITU senior statistician Esperanza Magpantay says access to higher speed mobile and fixed broadband also is growing.

The ITU says countries that are hooked into the digital economy do better overall. Unfortunately, it says the cost of accessing telecommunication networks is too high and unaffordable for many.

RWANDA GETS METHANE FROM KILLER LAKE'

REUTERS

wanda has signed a \$400 million deal to produce bottled gas from Lake Kivu, which emits such dense clouds of methane it is known as one of Africa's "killer lakes."

The project by Gasmeth Energy, owned by U.S. and Nigerian businessmen and Rwandans, will suck gas from the lake's deep floor and bottle it for use as fuel. This should, in turn, help prevent toxic gas bubbling to the surface. Kivu is the eighth-largest lake in the world.

The seven-year deal was signed in February 2019. Rwanda already has two companies that extract gas from Lake Kivu to power electricity plants.

Clare Akamanzi, chief executive of the Rwanda Development Board, said bottled methane would help cut local reliance on wood and charcoal, the fuels most households and tea factories use in the East African nation of 12 million people. "We expect to have affordable gas which is environmentally friendly," she said.

The deep waters of Lake Kivu, which lies in the volcanic region on Rwanda's border with the Democratic Republic of the Congo, emit such dense clouds of methane that scientists fear they might erupt, killing those living along its shore.

Eruptions from much smaller methaneemitting lakes in Cameroon, one causing a toxic cloud and another sparking an explosion, killed nearly 1,800 people. The shores of Lake Kivu are much more densely populated.

Gasmeth Energy said it would finance, build and maintain a gas extraction, processing and compression plant to sell methane domestically and abroad. The bottled gas should be on sale within two years, Akamanzi said.





The Gambia STRENGTHENS FREE PRESS

THE ASSOCIATED PRESS

ournalists in The Gambia have launched a self-regulatory body they hope will offer legitimacy and more freedom to media emerging from a dictatorship that ruled the tiny West African nation for more than two decades.

During the 22 years of former President Yahya Jammeh's rule, journalists regularly were abducted, tortured and killed. The government has promised new freedoms after he fled into exile in early 2017 after a surprise election defeat. Outdated sedition laws are still on the books, however, and the public is urged to bring complaints about journalists to the new Media Council of The Gambia instead of to the courts.

There is a need to promote higher professional standards, said Saikou Jammeh, secretary-general of the Gambia Press Union, which oversees the new body. He is not related to the former president. "We also set it up to keep the government far away from any attempts to regulate the media," he said. "It's not their business,

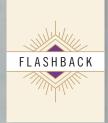
and it shouldn't be their business."

The new media council represents a significant step for press freedom, he said.

Under the former regime, many journalists "had to switch on survival mode, and they would not publish anything that would get them in trouble," Jammeh said. "The relationship of the media and the public was characterized by paranoia and mistrust."

He said a free press has blossomed since the election win of President Adama Barrow in December 2016. New television stations have opened, and online newspapers have returned from exile to fearlessly publish investigations and criticism of alleged government mismanagement.

The Gambia Press Union's president, Sheriff Bojang Jr., spoke of headlines that he said would have been "suicidal during [President] Jammeh's time," but he said the greatest change could be heard on radio talk shows, "where on a daily basis people are blasting the current regime."



A Journey to the Lamol of Punt

ADF STAFF

he pharaohs of ancient Egypt were fascinated by a distant place known as the Land of Punt, or simply Punt. It was regarded as a land of plenty, with rich resources. Some called it *Ta Netjer* — God's Land.

But it was more than a trading partner. The Egyptians revered its culture and regarded it as their ancestral home. Its exact size and location have been lost to the sands of time, but it was almost certainly in what are now parts of Djibouti, Eritrea, Ethiopia and Somalia.

Queen Hatshepsut became the pharaoh of Egypt about 1470 B.C. in a political move shrouded in controversy. Viewing her gender as a liability, for a time she directed that she be portrayed as a man, complete with beard and large muscles, in statues and paintings.

At that time, the route to Punt had been lost for decades. Hatshepsut told her subjects that the gods had directed her to find the route by sending a trade mission. The expedition began in about her ninth year as pharaoh, when she dispatched five ships, each 21 meters long. The 210 men sent on the trip included sailors and rowers.

The Egyptians traveled down the Nile, then disassembled their boats and carried them across land to the Red Sea, where they reassembled them. Because the boats were intentionally light, they had to hug the shores for the Red Sea leg of the trip, staying out of the dangerous deeper waters. The trip took about 25 days, covering some 50 kilometers per day.

The people of Punt were amazed at the Egyptians' courage in making the trip. They regarded their land as largely unknown to the outside world. They were eager to trade for the Egyptians' tools, jewelry and weapons.

The trade delegation returned from Punt carrying vast wealth, including ivory, ebony, gold, wild animals, elephant tusks, leopard skins and incense. More notable



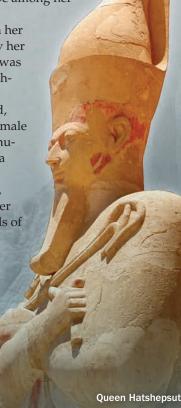
An image in the Temple of Hatshepsut in Luxor, Egypt, depicts the queen as a man, offering food to the god Horus.

were the 31 live myrrh trees, each with its roots in a basket. Hatshepsut had the trees planted in the courts of her mortuary temple complex, where they thrived — the first time in recorded history that anyone had successfully transplanted foreign trees. The roots of the trees can still be seen to this day.

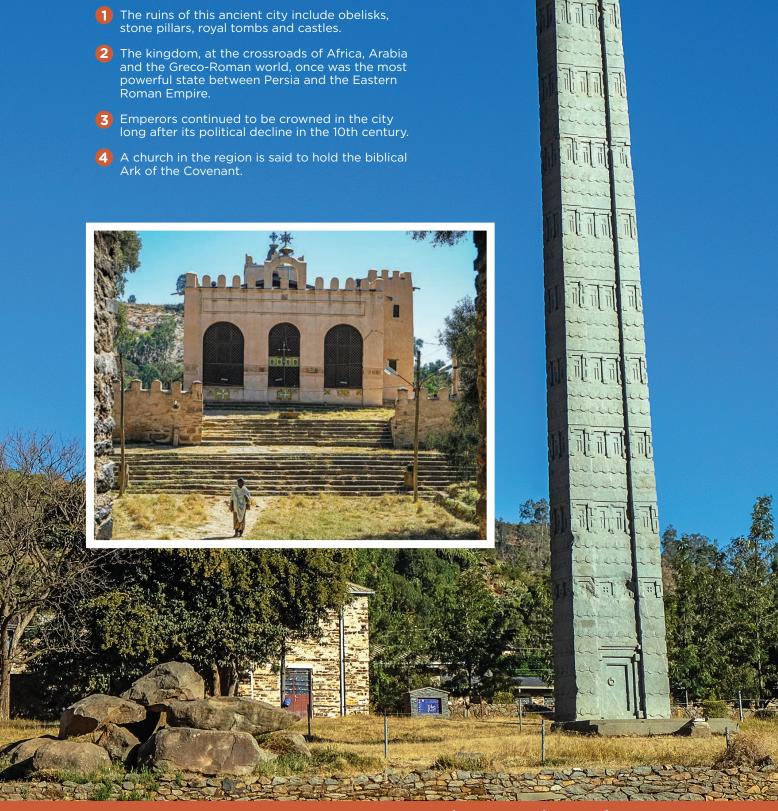
The reign of Hatshepsut was among the most prosperous in Egypt's history, and carvings at the huge memorial temples of Deir al-Bahri make it clear that she considered the Punt expedition to be among her greatest achievements.

When Hatshepsut died in her mid-40s, she was replaced by her nephew, Thutmose III. Such was his jealousy of her accomplishments that he had almost all evidence of her rule removed, including images of her as a male king on the temples and monuments that she had built. As a result, scholars knew almost nothing about her until 1822, when they learned to decipher the hieroglyphics on the walls of Deir al-Bahri.

A team of archaeologists discovered her mummified remains in 2007; they are now housed in the Egyptian Museum in Cairo. These discoveries have restored her rightful place as one of Egypt's greatest pharaohs.



CLUES



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- Include a short biography of yourself with contact information.
- If possible, include a high-resolution photograph of yourself and images related to your article with captions and photo credit information.

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