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ON THE COVER:

This ADF illustration shows the web of illicit networks that are capturing resources from the African continent.



OVID-19 has slowed global commerce, but it has not stopped criminals intent on stealing Africa's natural wealth.

In fact, some poachers, loggers and maritime criminals see the virus as an opportunity. They are trying to take advantage of the lockdowns and diversion of security resources to expand their operations.

The huge scale of their crimes demands a unified response.

About 11,000 square kilometers of rainforest in the Congo Basin are logged each year — most illegally — so wood can be sent overseas to feed furniture demand.

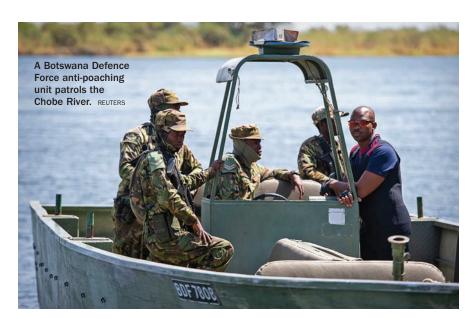
Off West Africa's coast, fleets of foreign trawlers are scooping up fish and decimating a resource that communities have relied on for generations. One estimate says illegal fishing costs West Africa \$2.3 billion per year.

Across the continent, poachers are destroying populations of rhinos, elephants, pangolins and other animals to supply ingredients for the unproven claims of traditional Chinese medicine. These wildlife poachers imperil the continent's rich biodiversity and its \$29 billion annual wildlife tourism industry.

Although the problem is daunting, new technology can give security forces an advantage. Artificial intelligence and computer learning have the potential to make surveillance more effective than ever. Tiny cameras can be programmed to spot poachers or suspicious vehicles the moment they enter game reserves. Customs officials can use machine learning programs to help identify suspicious cargo and focus their inspections on finding illegal wildlife shipments. In the Congo Basin, a radar-based alert system tracks illegal logging operations so security forces can shut them down.

Solving these problems will not be easy. They require attacking financial flows that enable trafficking, prosecuting powerful kingpins, surveilling routes and increasing border enforcement. Trafficking is a global problem, but the willpower exists to dismantle the networks. If security forces can forge alliances with other nations, the private sector and nongovernmental organizations, the continent can emerge from COVID-19 with a renewed emphasis on protecting natural resources for generations to come.

U.S. Africa Command Staff





Criminal TraffickingVolume 14, Quarter 2

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AFRICAN PERSPECTIVE

'Do Not Drop Your Guard'



Dr. Monica Juma is Kenya's cabinet secretary for defence.

She delivered this message to Kenyan troops serving in the African Union Mission in Somalia (AMISOM) on October 14, 2020, in commemoration of Kenya Defence Forces Day. Her remarks have been edited to fit this format.





I take this opportunity to salute our Soldiers who are deployed in various forward operating bases in

Somalia on this auspicious day when we commemorate Kenya Defence Forces Day.

The 14th of October is set aside in the Ministry of Defence to remember the ultimate sacrifice that your colleagues have paid in search for peace in our neighboring country, Somalia.

As your cabinet secretary, I am deeply grateful for the privilege to provide strategic guidance, work, and be associated with patriotic, brave men and women who guarantee our nation's safety and security, who have answered to a higher calling to defend the territorial integrity and sovereignty of our motherland and to protect the freedoms of Kenyans.

Since the Kenya Defence Forces (KDF) entered the Somalia theater, al-Shabaab activities have been significantly reduced, and although this terrorist group remains a threat, its ability to operate has been greatly degraded.

Your contribution to AMISOM remains a game-changer and for this, I salute each and every one of you today. As we recall our journey, I urge each one of you: Do not drop your guard.

Our success each day is key to defeating al-Shabaab and restoring peace and stability to our neighborhood. A secure and safe Somalia, able to provide security in its territory and secure its borders with its neighbors, translates to a peaceful East Africa and continent.

Your ability to operate in a difficult environment, away from your families, is the testimony of your unwavering love for your country and our nation's duty of care for regional and global peace and stability.

Your professional performance continues to make Kenya a respected country among the community of nations.

The theme of this year's KDF Day is "Humanitarian Civil Assistance," and in this regard, I wish to commend you for the support you continue to offer to the Somali communities in your areas of operation.

We must continue to promote the wellbeing of the people amongst whom we live — offer them medical support, water, training, construction of learning facilities and equipping them.

This is because we exist to improve the well-being of the people and to create an enabling environment for productive activities.

As you continue to keep us safe at home, I urge you to continue watching over each other, in the operational areas,

AMISOM Soldiers from Kenya greet children from the village of Kuday after it was liberated from al-Shabaab. AMISOM

every minute of the day. Nothing could have made any Kenyan prouder than a picture circulating during Ramadan of KDF Soldiers standing guard to watch over their brothers pray, because we believe in the freedom and sanctity of religion and worship and stand ready to defend it.

Your families at home have made an equally big sacrifice in offering you to serve our motherland, Kenya. And to them I say thank you very much; you are part of our effort to deliver on peace.

The Ministry of Defence stands steadfast and will continue to support our operations. We have your backs, so go forth, you gallant sons and daughters of Kenya, to defend and protect the Republic of Kenya and all its citizens.

We shall not tire to support you, providing you with the requisite provisions that will make your work easier and efficient.

Once again, thank you for your selfless service to our motherland. As the commander in chief always underscores, our nation remains ever grateful for your loyal service.



ix men in yellow biohazard suits walk in suffocating heat toward a cave in the heart of the Gabonese jungle. Their quest: to unlock new knowledge on how pathogens like COVID-19 leap the species barrier to humans.

In the cave is their goal: a colony of bats.

"Our job is to look for pathogens which could endanger humans and understand how transmission happens between species," said Gael Maganga, a professor at the University of Franceville.

Bats can host viruses that do not harm them but can be dangerous to humans, often crossing via other animals. COVID-19 is the latest microbe believed to have taken the zoonotic path from animals to humans.

Maganga calls on the team to stretch a net across the cave's entrance. One scientist moves forward, shining his flashlight inside. Bats fly out and get caught in the net.

Team members use sterile swabs to take samples from the bats, which then will be analyzed for emerging pathogens. "Human behavior is often the cause of an emerging virus," Maganga said. "Today, with population pressure, intensified farming or hunting, contact between humans and animals is more and more frequent."

An October 2020 report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services said there were up to 850,000 viruses in animals. Seventy percent of emerging diseases circulate in animals before jumping to humans, and each year about five new diseases break out among humans, it said.

Maganga also has uncovered several coronavirus strains circulating among bats, including some that are close to COVID-19.

Despite the obvious risk, people still come to the area to hunt for antelopes, gazelles, monkeys and bats.

In April 2020, Gabon banned the sale of bats and pangolins, another species deemed to be a potential COVID-19 vector. But for many nearby villagers, poverty seems to trump any danger.

"In one night, I can earn a month's money," said Aristide Roux, a 43-year-old hunter.

Cameroonian Activists Celebrate

—END TO TOY— WEAPON GIFTS

VOICE OF AMERICA

ameroonian rights groups and activists are gratified that for the first time since 2016, parents no longer give children and teenagers toy guns as gifts during end-of-year feasts.

In 2016, rights groups launched a campaign to ban toy guns, mostly imported from China, saying they lead to violence.

Instead, an educational toy such as an electronic workbook can help children learn the alphabet and words, not glorify violence. Such gifts have replaced toys like guns, knives and military vehicles that were in high demand and frequently given to children.

During Cameroon's Anglophone separatist crisis and Boko Haram terrorism on the northern border with Nigeria, the rights groups began urging parents not to buy children toy guns.

Activist and gender expert Irene Chinje said toy guns normalize violence.

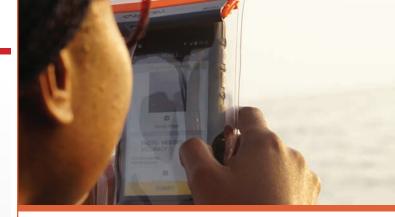
"Children do not know the difference between it being a toy gun and the significance it carries," she said. "They just see it as a sign of bravery for them, and so if they can handle the toy gun, then they are encouraged in the future to handle the real weapon with bullets."

Chinje and other activists have been visiting markets to express their appreciation to Cameroonians for not buying toy guns.

The start of a new year always is widely celebrated in Cameroon, with Christians, Muslims and animists sharing gifts and exchanging visits.



Toy guns have been popular gifts during end-of-year feasts.
REUTERS



App Helps Ghana's Fishermen Fight Illegal Trawlers

ADF STAFF

nraged that foreign trawlers continuously deprive them of food and income, artisanal fishermen in Ghana are using a new smartphone app to detect and report illegal fishing.

A fisherman uses the Dase app to detect and report illegal fishing.

ENVIRONMENTAL JUSTICE FOUNDATION

The app is called Dase, meaning "evidence" in Fante, a Ghanaian dialect. It was developed by the Environmental Justice Foundation, a nongovernmental organization that combats illegal, unreported and unregulated fishing in West Africa.

More than 100,000 fishermen and 11,000 canoes operate in Ghana, according to SteveTrent, executive director of the foundation. The app also is being developed for use in Liberia and Sierra Leone.

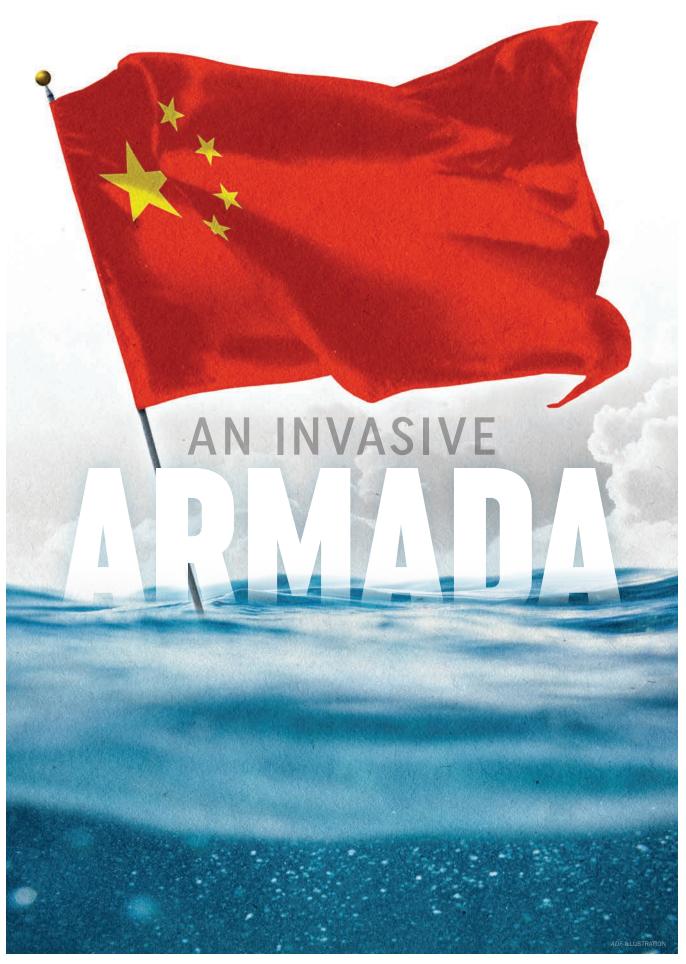
Ghana's "marine fisheries support the livelihoods of over 2.7 million people — almost 10% of the population — and more than 200 coastal villages depend on fisheries as their primary source of income," Trent told *ADF* in an email. "However, fish populations are in steep decline, driven, in large part, by widespread illegal fishing by Chinese-owned industrial trawlers."

When a trawler is suspected of illegal fishing, an artisanal fisherman can open the app and photograph the vessel — including its name or identification number — to record the location. The app uploads the report to a database that authorities can use to catch and penalize perpetrators.

The foundation unveiled the app in November 2020 and will encourage artisanal fishermen to use it regularly.

Over the past 15 years, Ghanaian fishermen have experienced a 40% drop in average annual income per artisanal canoe, according to the foundation.

Frederick Bortey is one of many Ghanaian fishermen who want the government to clamp down on illegal industrial trawlers. "My children are not getting money to go to school," Bortey told Voice of America. "So it is very painful that we are talking about it. They can try and sack those people for us. We would like that, so we can fish, too, in our own country."



THE REACH OF CHINA'S DISTANT-WATER FISHING FLEET CHALLENGES AFRICA AT SEA AND ON LAND

ADF STAFF

he city of Nouadhibou, Mauritania, dangles from the mainland on a tiny peninsula. The city, the second largest in the nation, has nearly 120,000 residents and is a commercial center.

Its harbor is the terminus of the Mauritania Railway line, which hugs the border with Western Sahara for more than half of its transnational length. But the railroad is not the only major infrastructure development in the city. Now Nouadhibou is home to a sprawling port, financed and modernized by a Chinese company, and just one in a series of Belt and Road Initiative (BRI) projects emerging in Africa and elsewhere worldwide.

The project is a clear example of the link between China's BRI and its distant-water fishing fleet (DWF) and how that link embeds Chinese maritime influence far from home, according to a video by the Center for Strategic and International Studies (CSIS). The port work, financed by China's Poly Hong Dong Fishery Co.

with more than \$100 million in investment, hosts large industrial vessels that can scoop up significantly more fish than can the area's small artisanal fishing canoes.

One fish species, sardinella, is prevalent in the region and common in local diets. The increased capacity of Chinese vessels to extract those migratory fish from its base in Mauritania will spell trouble for other African nations — Senegal, The Gambia, Ghana and Liberia — that also depend on it for artisanal fishing employment and to feed large swaths of their populations, CSIS reported.

"If we don't do anything about this problem, we're really dealing with a challenge on two levels,"



The port in Nouadhibou, Mauritania, includes fishmeal production plants and \$100 million in Chinese investments. REUTERS





Fishermen on board a Chinese boat haul in their catch off the coast of Mauritania. GREENPEACE

Dr. Whitley Saumweber, director of the center's Stephenson Ocean Security Project, said in the video. "We're dealing with the challenge of developing coastal states, a challenge that affects their sovereignty, sustainability and security. Sovereignty because they're losing access to their own natural wealth and control over that natural wealth. Sustainability because they're losing the ability to manage those resources in a sustainable way. And security because of the potential damage that that lack of management will have for a resource that's critical to their own food security needs and potential development opportunities."

THE REACH OF THE FLEET

The size of China's DWF is open to debate, but the most conservative estimates put it at roughly 3,000 vessels strong. According to China Dialogue Ocean, the fleet, which benefits from significant fuel subsidies, was scooping up 2 million metric tons of fish per year by the end of 2018. The enormous catch provides food to China's 1.4 billion people, and some is ground into fishmeal for use as aquaculture feed.

China's DWF is a particular threat to Africa, but it is not limited to its shores. The fleet has drained seas near North Korea, throughout Asia and even near South America. Over the course of several years, it stalked the waters off the 21 volcanic land masses that comprise the Galápagos Islands. The famed archipelago, which speckles the Pacific Ocean

off the coast of Ecuador, is the natural birthplace of Darwinian evolution.

It was while sailing on the HMS Beagle that a young Charles Darwin filled his notebooks with observations of the numerous tortoises and finches that lived on the pristine islands.

About 185 years later, the islands again attracted ships carrying men infatuated with wildlife. But they did not seek to fill notebooks with sketches and observations. Instead, they stuffed rusty, salt-crusted cargo holds with indiscriminate amounts of fish and seafood.

In July 2020, a huge fleet of Chinese fishing vessels — at one point numbering more than 350 — began pillaging the sea just outside the island chain's 200-nautical mile exclusive economic zone (EEZ) before leaving in mid-October 2020. The presence was neither new nor surprising. In August 2017, the Chinese-flagged Fu Yuan Yu Leng 999 refrigerated ship was found near the islands with about 300 tons "of rare, near extinct or endangered species onboard, including 600 sharks," according to an article by maritime experts Dr. Tabitha Mallory and Dr. Ian Ralby for the Center of International Maritime Security.

A Chinese presence near the islands can be traced to 2016 when 191 vessels began to prowl outside the Galápagos' EEZ — up from one detected a year earlier, according to Mallory and Ralby. They wrote that China's fishing presence near the islands grew to 298 vessels in 2019.

IT IS HARD TO EVEN THINK ABOUT A PORT CITY IN THE GULF OF GUINEA AND THE WESTERN SEABOARD OF AFRICA IN GENERAL THAT DOES NOT HAVE SOME KIND OF FINGERPRINT OF CHINA ON IT." -DR. IAN RALBY, CEO OF I.R. CONSILIUM

China's presence in waters nearly 15,000 kilometers from its Pacific shore illustrates the nation's willingness to span the globe for seafood to feed its population. Having long since depleted nearby stocks, the nation's DWF isn't limited to the Pacific. Despite the estimate that about 3,000 Chinese vessels ply oceans from Asia, to South America to East and West Africa, a study by the Overseas Development Institute has placed the size of the DWF at closer to 17,000 boats. But Mallory has written that the global fleet probably is no higher than 4,000 vessels, as most of the ships counted in the institute's study stay in the near seas surrounding China.

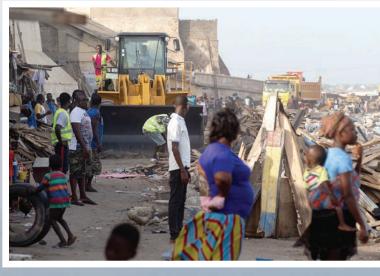
With this highly subsidized, far-flung armada comes a network of supporting mechanisms and infrastructure that further embeds the fishing fleet into every global maritime region. The port in Nouadhibou is

but one example in Africa. "It is hard to even think about a port city in the Gulf of Guinea and the western seaboard of Africa in general that does not have some kind of fingerprint of China on it," Ralby, CEO of I.R. Consilium, told *ADF* in an email.

South of Mauritania in the Gulf of Guinea, China in 2018 signed a \$50 million

deal with Ghana to demolish and redevelop the historic Jamestown fishing village as a modern port complex with berths, a seawall and breakwater, as well as production, administration and support facilities, according to Ghana News Agency.

The project called for dredging 118,000 cubic meters from the harbor and shipping channels. Where once only artisanal canoes plied the waters with nets, larger vessels soon will be able to dock and offload their enormous catches.



Residents watch as heavy equipment clears away rubble during demolition at Jamestown fishing village in Accra, Ghana. AFP/GETTY IMAGES

The project has disrupted Ghana's coastal culture. The Jamestown fishing village, where an old lighthouse still stands sentinel, was a cohesive community in which children romped with makeshift playthings and soccer balls while men ventured out in wood-carved canoes, ever farther with time, to make their catches. Women smoked the fish and dried it on concrete pads and pounded fufu — a dough made with cassava — in large mortars with pestles.

Demolition began in May 2020 in the mostly poor, densely populated enclave when local workers razed more than 300 temporary and permanent structures, including businesses, a school and houses of worship, according to Voice of America. The project is expected to be completed in early 2023.

Ghanaian authorities told VOA that those who lost property will be compensated, and the displaced will be relocated.

"When the fishing harbor is constructed, it is going to boost the economic life of this community and that is what will change the lives of a lot of people in the community," said Seth Raymond Tetteh, chairman of the Ashiedu Keteke Sub Metro district council of the Accra Metropolitan Assembly.

The BRI is closely tied to China's DWF and is just one of the infrastructure program's conduits for moving a range of resources — including fisheries

resources — out of nations and into the Chinese economy. In short, Ralby said, China's work to build ports is part of its BRI strategy and its "general global influence strategy."

The Chinese investments, which often leave African nations drowning in debt, bring with them a sense of entitlement and leverage. "I think that the port construction plan of China writ large is about buying a foothold and buying access through a global maritime presence," Ralby said.

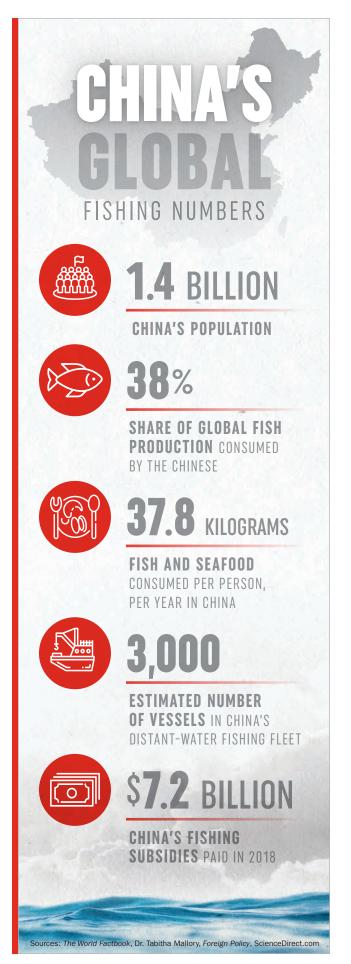
SECURITY AND INTIMIDATION

As China's attempted hegemony extends beyond its own maritime borders and the South China Sea region, observers also see increased evidence of a militarized DWF, protected and advanced by the presence of the People's Armed Forces Maritime Militia. It sometimes sails on rusty fishing boats and adds a note of intimidation to those who would challenge China's new imperialist reach. Such military tactics primarily are seen in the South China Sea and in the near Pacific, Ralby said, and illustrate China's willingness to involve all elements of society in its global strategy.

"That means that whether it's militarized, nationalized in some respect, or heavily financed by the government through subsidies, the fishing fleet tends



The Ecuadorian Navy seized the Chinese-flagged Fu Yuan Yu Leng 999 in August 2017 after it was found in the Galápagos Marine Reserve carrying 300 tons of fish, including several endangered species such as hammerhead shark. ARP/CEITY IMAGES



to end up being an arm of the Chinese state," Ralby said. "And, with respect to illegal fishing, it is increasingly difficult to discern where the state ends and the criminal begins. That blurry line is a real challenge. And from a security standpoint, it also means that through its fishing fleet, China has eyes and ears on the water whose insights and very presence can help facilitate a wide spectrum of activities."

This problem is illustrated by incursions near Indonesia's Natuna Islands in which Chinese Coast Guard vessels escorted Chinese fishing trawlers into Indonesia's EEZ to fish. China's government admitted that its boats had entered the EEZ in December 2019, but it claimed unspecified "traditional fishing rights" and "maritime rights" in the region, according to The Diplomat, an online magazine.



An Indonesian Ministry of Maritime Affairs and Fisheries ship patrols the South China Sea near the Natuna Islands. Chinese vessels have challenged Indonesia's sovereignty in its exclusive economic zone, which overlaps what China calls "traditional fishing grounds."

"This state-protected illegal fishing means that at least some of the illegal fishing is being done with the color of Chinese legitimacy, and the states in which it is occurring are being forced to confront not merely criminals, but the Chinese government in order to stop it," Ralby told *ADF*.

Although such heavy-handedness isn't happening yet in West Africa, China does use commercial and diplomatic pressure in support of certain illicit and unsustainable practices, Ralby said. Recent examples show that if a Chinese vessel is involved in any incident — such as being arrested for fishing violations or victimized by pirates — the Chinese defense attache and ambassador stationed in that African country will be in the relevant government minister's office "within moments."

"The speed with which the government becomes actively involved is rather striking," Ralby said. □

PROTECTING EARTH'S SECOND LUNG Illegal Loggers, Industry and Outdated **Farming Threaten the Congo Basin** ADF STAFF



he Congo Basin rainforest is huge, second only to the Amazon. It sprawls across six nations, but it is shrinking.

The basin is the home to countless species of plants and animals. It also is a key to the health of not just Africa, but the entire world, because it soaks up carbon dioxide from the atmosphere.

Deforestation in the Congo Basin is higher than in recent years. Nearly all primary forest lost in the basin in the past 15 years is in the Democratic Republic of the Congo (DRC). Still, compared to the rainforests in Asia and South America, the Congo Basin remains relatively strong, according to the environmental website inhabitate.com.

The greatest threat to the Congo Basin is poverty. The clearing of trees in the basin to produce charcoal and grow cash crops remains one of the few opportunities for the rural poor to make a living. But such farming and clearing is wildly inefficient. Much of the region has no electricity, and without it, food cannot be stored or processed, businesses cannot be started, and key sectors such as health and education cannot be developed.

Illegal logging also plagues the region. The DRC is well aware of the problem and has established a forest code for safe logging. But in the DRC, as in much of Sub-Saharan

Africa, the code is not enforced. Officials are bribed to look the other way as illegal loggers cut down trees, especially rosewood trees, and ship them to China to be used in fine, handmade furniture.

Chinese merchants have harvested the endangered trees in virtually every African country that has them. It could be worse. Many African forests have been spared illegal logging because the infrastructure is so poor that getting the timber out is too expensive. This is not the case in vast parts of the DRC, because the Congo River is such a good means of transportation.

Critical to World Health

Sometimes known as the world's "second lung," the Congo Basin is critical to a healthy environment.

"Being a major storehouse of biodiversity, it provides huge services to all of humanity," Simon Lewis, a geographer at University College London, told the BBC. He has been doing field work in the Congo Basin since 2002.

"The intact rainforest in the Congo Basin, which until now has suffered less deforestation and shown more climate resilience than the Amazon, has played a very important role," he said.





Lewis has found in his research that increasingly common droughts are reducing the ability of the rainforest to absorb carbon dioxide. His study looked at 135,625 trees across 244 African plots in 11 countries. He found that trees in the Congo Basin, whose growth had been stifled by extreme weather, started to lose their ability to absorb carbon dioxide as early as 2010.

As the Congo Basin's trees become unable to soak up carbon dioxide, the number of trees in the rainforest also is diminishing. Industries such as logging, palm oil plantations and mining are contributing to deforestation, Lewis concluded.

2020 brought great hope of collective action to save tropical forests. Global leaders planned to gather and assess the progress in the past 10 years and set the climate and biodiversity agendas for the next decade.

Writing for Mongabay, a nonprofit conservation and environmental science news platform, founder Rhett A. Butler said there was good reason for optimism. The world's heat and droughts were becoming so apparent that they finally were starting to provoke a response from the public and private sector, he said. Technological advances were improving forest monitoring to the extent that ignorance was no longer an excuse for inaction. Interest in forest restoration was reaching new heights.

But, he said, COVID-19 changed everything. As governments pumped money to prop up financial systems, it resulted in high demand for commodities such as hardwood.

"Some governments put forth bailouts, economic stimulus packages, and other incentives for forest-destroying industries," Butler wrote. "Millions of people left cities for the countryside, reversing a long-term trend of migration to urban areas."

The DRC accounts for about 60% of the Congo Basin's primary forest cover and nearly 80% of its loss. Butler said the country can be viewed as a bellwether for the entire region.

In January 2020, the DRC granted nine forest concessions covering more than 2 million hectares to two Chinese companies, which environmentalists said violated a national moratorium on such new contracts.

It's not just the DRC. Gabon historically has had a low deforestation rate. But the Forest Stewardship Council is investigating whether Singapore-based agribusiness giant Olam has deforested more than 25,000 hectares in Gabon to develop oil palm plantations contrary to sustainability rules it had agreed to. The company also stands accused of deforestation to make room for rubber plantations.

About the Congo Basin

ADF STAFF

- The Congo Basin contains 314 million hectares of primary rainforest, the oldest, densest and most ecologically significant kind. The Amazon contains 519 million hectares of primary rainforest.
- The Congo rainforest plays a crucial role in the stability of the world's climate and spans six countries in Central Africa: Cameroon, the Central African Republic, the Democratic Republic of the Congo, Equatorial Guinea, Gabon and the Republic of the Congo, according to the World Wide Fund for Nature.
- Taller and more resilient to weather than the Amazon rainforest,
 Congo Basin trees soak up 1.2 billion tons of carbon dioxide each year and store one-third more carbon dioxide over the same area than do those of the Amazon.
- There are more tree species in one hectare of the Congo Basin rainforest than there are native tree species in the United Kingdom.
- The Congo Basin houses the world's most extensive tropical
 peatland, an estimated 10,000 species of tropical plants and
 endangered species that can't be found anywhere else. Forest
 elephants, lowland and mountain gorillas, and okapis, a mammal
 that has been described as a cross between a giraffe and a zebra,
 call the basin home.

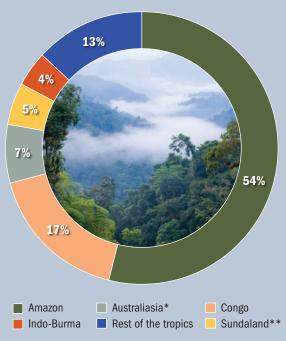


- From 2001 to 2018, **6%** of the Congo Basin rainforest was harvested.
- Satellite data shows that deforestation of tropical primary forests
 has been trending upward worldwide since 2000, with the average
 loss in the 2010s nearly 30% higher than in the 2000s, despite
 work to curb deforestation.



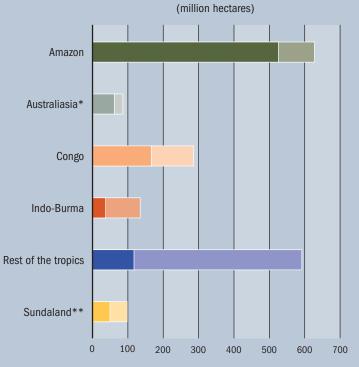
State of Tropical Forests





*Australiasia: New Guinea, northeastern Australia and nearby islands

Extent of primary forest cover and tree cover



Darker shade = primary forest; lighter shade = other tree cover

Source: Mongabay.com



^{**}Sundaland: Peninsular Malaysia, Sumatra, Java, Borneo and nearby islands



REUTERS

"Some governments put forth bailouts, economic stimulus packages, and other incentives for forest destroying industries. Millions of people left cities for the countryside, reversing a long-term trend."

~ Rhett A. Butler, founder, Mongabay

Daunting Task

There is a consensus about certain basic facts related to deforestation and what can be done to reverse it:

It's not an African problem; it's a world problem. The Amazon makes up more than half the world's rainforests, and the Congo Basin totals about 17%. The rest of the world's rainforests are scattered around the tropics, particularly in Asia. It won't be enough to save just the Congo Basin; other countries with rainforests will have to do their parts.

Farming practices have to be modernized. Lacking access to machinery and fertilizer, subsistence farmers have to make use of crop rotation, better irrigation techniques, and find better sources for seeds. Through smart phones, they can get individual planting tips from regional experts. They will need to find sustainable, affordable ways to control weeds and pests.

Start enforcing rules and laws prohibiting illegal logging. Virtually every part of Sub-Saharan Africa plagued by the illegal harvesting of rosewood already has laws to prevent it. But as long as loggers, usually backed by Chinese companies, continue to bribe officials, rampant harvesting will continue.

Start aggressive tree-replanting programs in the Congo Basin. Replanting requires incentives. Researchers from the World Agroforestry center have surveyed farmers in West Africa and found that they prefer planting indigenous fruit trees. The Global Forest Atlas notes that "An important component of agroforestry in the Congo Basin is selecting valuable fruit trees that can produce high yields. Much of this selection is done through a process known as participatory domestication, where researchers work with communities to select varieties and adapt them for local use." □

Flying Money,

The ancient Chinese system of feiqian often is connected to illicit trafficking

ADF STAFF

Mamibian tax authorities made a shocking discovery in 2017. Millions of dollars were leaving the country for China, but only a fraction was taxed.

The scheme was uncovered when Chinese businessman Jack Huang was arrested on charges of tax fraud, and officials discovered he was part of something much larger. Between 2013 and 2016 Huang, who operated a customs clearing business, had imported goods with a declared value of \$14.3 million. The true value of the goods was more than 10 times higher. During the same period, he sent \$209 million to China to pay for the goods.

The fraud kept millions in taxes from entering Namibia's government coffers.

As officials dug deeper they found that the system involved underreporting the value of shipping containers and moving commodities around the world without leaving a paper trail. It was part of a global system known as *feiqian*, or "flying money," that for centuries has helped conceal the movement of items such as minerals, wildlife parts and timber.







- Goods are imported at an African port and declared at 20% of their actual value.
- The goods are sold to generate cash. The income is not declared to local tax authorities.
- The cash is used to buy contraband such as ivory, abalone, precious gems or rhino horn.
- 4. The contraband is sent to China.
- Containers holding the contraband pass through numerous transshipment points, and bills of lading are changed multiple times along the way.
- 6. The feigian broker takes delivery of the goods and pays the supplier so the cycle can begin again.



Ivory and other contraband are among commodities illicitly exported in a system known as feigian, which avoids taxes and conceals contraband shipments. REUTERS





Namibia is home to more than 7,000 self-employed Chinese businesspeople and other foreign merchants, and it has struggled to track commercial activity and enforce its financial laws. The scope of the fraud led an exasperated Namibian Inspector General Sebastian Ndeitunga to declare "there will be no mercy" and "we will leave no stone unturned."

But feiqian is difficult to police. Namibian journalist John Grobler spent a year investigating it and found that tracing the money is like chasing a phantom. The trick is that most of the currency never leaves China — only the commodities are exchanged.

"It is a system of invisible and untaxed trade that has given Chinese business an edge in Africa's construction sector, the untraceable income used to underbid local competitors and grease palms for contracts," Grobler wrote for the environmental journalism organization Oxpeckers.

How it Works

Feiqian began more than 1,200 years ago in China's Tang dynasty. At its core, it is a system of payment based on trust and relationships.

Grobler said it is similar to the remittance system known as *hawala* used in much of the Muslim world. In this system, people living abroad send money back to their home country through a trusted agent who delivers the cash in exchange for a fee.

Feiqian uses the same type of trust-based, off-thebooks payments but can be much more complex. In the feiqian system, goods are imported with the help of a Chinese broker and declared at a small fraction of their true value. These goods, often building supplies, then are sold to generate currency. This currency is used to buy illicit goods such as wildlife parts or illegal timber. Those goods then are secretly shipped back to China, and the broker is repaid by receiving this valuable illicit commodity.

It's a circular trading route that has no need for traditional banks or institutions.

"It's like a systematic defrauding of authorities on either side of the pond," Grobler told *ADF*. "Because it's a trade-based thing, they can manipulate the figures, and none of this runs through conventional channels. ... It's only between a local trader and his supplier in China. You can't see it; it's not visible anywhere."

Grobler said the Chinese shopkeepers and businesspeople in Namibia virtually all operate on a "cash-only" system. They do not produce invoices or offer receipts to customers. This makes it exceedingly difficult for local authorities to enforce tax policies.

After Huang's arrest, Namibian Finance Minister Calle Schlettwein vowed to crack down on the practice. He insisted that foreigners must not be able to skirt national laws through financial shell games. "Our tax system is not based on nationality but on the source of income," Schlettwein said. "All income received or deemed to be from a Namibian source is taxed in Namibia."

Perfect for Illicit Goods

For feiqian to work, the goods sent back to China must be valuable, untraceable and able to be divided into small units. Some preferred items are ivory, rhino horn, rosewood, gemstones and succulent plants.



Red Flags

Greater awareness of the warning signs or red flags associated with international wildlife trafficking can help countries enforce their laws.

Some of those warning signs are:

- Front companies: These often are general trading companies set up by foreign nationals and registered at residential addresses.
- Exporting low-value commodities: Companies
 exporting commodities such as shells, plastic pellets
 or beans might be using the exports to conceal
 valuable illicit wildlife parts such as ivory.
- Circuitous routes: Shipments that take indirect or inefficient routes, including stops at multiple transit ports, may be a sign that the shipper is trying to avoid being tracked.
- Changes to bills of lading: A bill of lading is a
 document that accompanies a shipment and must
 be signed by the carrier, shipper and recipient of the
 goods. In illicit trafficking, multiple changes to bills of
 lading might be made while a container is en route.
 This can include ownership changing hands multiple
 times before the container reaches its destination.
 This can make tracing more difficult.
- Large withdrawals: Frequent withdrawals of U.S. dollars from Chinese-owned money exchanges, particularly those operating in wildlife trafficking hot spots, could be a sign of illicit commerce.

Source: Environmental Investigation Agency



The key is that the goods can be spread around on the black market to pay off multiple people.

"What makes this form of feiqian so suited to smuggling is that the product — contraband — is fungible," Grobler wrote. "Every kilogram of rhino horn, ivory, abalone and shark fin, or log of hardwood can be divided into smaller parts, which are more easily traded."

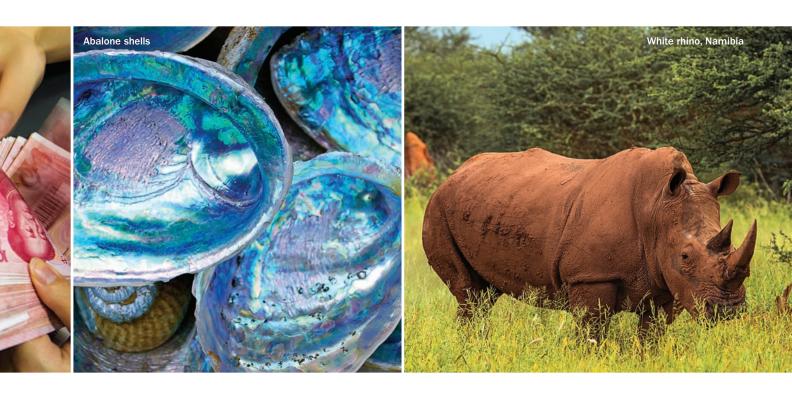
One vivid example of feiqian is the multimillion-dollar illicit abalone trade in South Africa. The sea snails are considered a delicacy and prized by Chinese diners for their buttery taste. To meet this demand, an illicit abalone supply chain has developed that involves sending materials through South African front businesses and turning that material into cash, which is used to pay divers to harvest the abalone and smugglers to transport it. Many of these local operators receive payment in illicit drugs or chemicals to make drugs.

According to the nongovernmental organization TRAFFIC, 96 million abalone shells were illegally harvested from South African waters in the 10 years ending in 2016. The trade, often run by Chinese organized crime syndicates, fuels violence and drug addiction in South African cities.

Kimon de Greef, a South African investigative journalist, said the abalone trade has grown to become a "massive, parallel, underground, multimillion-rand criminalized economy" in which poor people from fishing communities are forced to work.

Can it Be Stopped?

For countries with limited resources, tracking and stopping financial crimes is a challenge. The United



"What makes this form of feiqian so suited to smuggling is that the product — contraband — is fungible. Every kilogram of rhino horn, ivory, abalone and shark fin, or log of hardwood can be divided into smaller parts, which are more easily traded." ~ John Grobler, Namibian journalist

Nations Office of Drugs and Crime (UNODC) estimated that African countries lose \$88.6 billion annually through illicit capital flight. That total is about the same as all of the aid money and foreign direct investment spent across the entire continent. Stopping these illicit flows would be an enormous financial boon to countries and help them protect critical natural resources.

"We need all countries, our partners in Africa as well as transit and destination countries, to join this fight," said Ghada Fathi Waly, executive director of the UNODC.

The UNODC is working with 17 African countries to develop an asset recovery network that will help them seize smuggled currency, combat organized crime, and halt the money laundering used to finance crime and terrorism. The network lets members exchange information and learn about effective legislation to combat these crimes.

"Illicit financial flows are draining away vital revenues from Africa, undermining stability and hindering progress toward the sustainable development goals," Waly said.

In a 2020 report, the Environmental Investigation Agency (EIA) found that many countries do not

investigate or prosecute wildlife trafficking as a financial crime. Traffickers are punished under wildlife protection laws even though money laundering laws carry stiffer penalties.

When countries lack the capacity to follow the money, syndicate bosses escape punishment and can continue their crimes.

"If anyone is arrested it is usually a lowly courier," the EIA reported. "A multi-tonne seizure, which if investigated from a financial perspective could yield important evidence and clues, becomes merely a business expense for the traffickers involved."

For its part, Namibia believes it has made strides against illegal trafficking. After a ban on timber exports, the country resumed the export of rosewood and other timber in 2020 under strict guidelines. The country also has modernized its customs program, adding more scanners and technology to track and inspect containers coming into the Port of Walvis Bay. Customs officials have undergone training to identify wildlife contraband.

However, it remains to be seen how traffickers will adapt and try to avoid these restrictions.

"It's so difficult to investigate something that, by design, is supposed to be invisible," Grobler said. □



COVAX ROLLS OUT VACCINES IN AFRICA

STORY BY ADF STAFF | PHOTOS BY AFP/GETTY IMAGES

A global plan to distribute vaccines equitably is making millions of free doses available on the continent





Workers unload a carton of vaccines delivered to Rwanda through the COVAX distribution plan.

More than 20 African nations have started administering millions of free COVID-19 vaccines through COVAX, the global plan to equitably distribute the shots.

In the initial March 2021 rollout, prominent politicians, security personnel and front-line health care workers were among the first vaccine recipients. The United States has pledged \$4 billion to support COVAX.

In Ghana, President Nana Akufo-Addo and first lady Rebecca Akufo-Addo received two of the first shots.

"It is important that I set the example that this vaccine is safe by being the first to have it so that everybody in Ghana can feel comfortable about taking this vaccine," Akufo-Addo said during a live broadcast. Led by the United Nations, COVAX is part of the Access to COVID-19 Tools Accelerator, launched in April 2020 by the World Health Organization (WHO), the European Commission and France. COVAX negotiates prices to ensure equitable access to COVID-19 vaccines, diagnostics and treatments, regardless of a country's wealth.

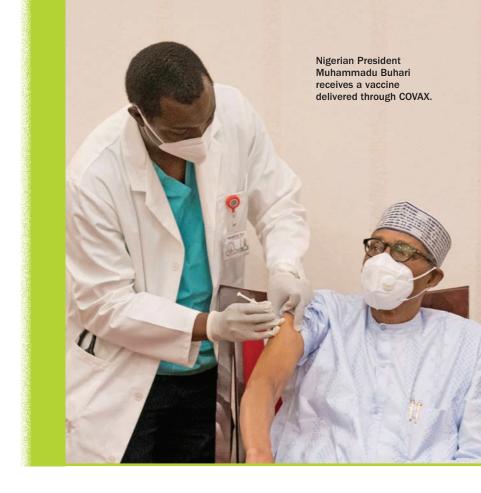
The program aims to distribute 2 billion doses of the AstraZeneca vaccine worldwide by the end of 2021. Of that total, 600 million doses are earmarked for African nations, enough to vaccinate 20% of the continent's population, according to the WHO.

Vaccines are allocated to every country equally after each completes a vaccine readiness assessment. Distribution is supported by Gavi,

Dr. Ngong Cyprian of Nigeria receives a dose of COVID-19 vaccine delivered through COVAX.



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the Vaccine Alliance, and the Coalition for Epidemic Preparedness Innovations. COVAX also supports the research, development and manufacturing of a variety of COVID-19 vaccines.

By March 10, 2021, officials had delivered 10 million COVAX doses to African countries. The vaccines made an immediate impact, protecting some of those most at risk.

Côte d'Ivoire also received vaccine doses through COVAX. Medical personnel, teachers and security force members were vaccinated first.

"Vaccines save lives. As health workers and other front-line staff are vaccinated, we will see a gradual return to normal, especially for children," Marc Vincent, UNICEF representative in Côte d'Ivoire, said in a story on the United Nations' website. "In the spirit of universal health coverage, we must leave no one behind."

In Nigeria, health care and front-line workers were the first to be inoculated.

Peter Hawkins, country representative for UNICEF, told Al-Jazeera that there still was a long way to go in fulfilling "our obligations to the people of Nigeria."

"But close to 4 million is a big amount," Hawkins said of the first COVAX delivery. "It's a fantastic step forward for Nigeria and a fantastic step forward for the whole of Africa, and people will take them. There is no question about that."

Among the first African countries to receive the vaccines through COVAX were Angola, the Democratic Republic of the Congo, The Gambia, Kenya, Malawi, Mali, Rwanda, São Tomé and Príncipe, Senegal, Sudan, and Uganda.

Patrick Amoth, director general of Kenya's Ministry of Health, was one of the first in the country to receive the shot.

"I am feeling great," Amoth told Reuters. "The vaccine is safe."

As other countries received COVID-19 vaccines, Rwanda installed special infrastructure to provide ultra-cold storage required for some doses.

"These doses of COVID-19 vaccine from the COVAX facility represent an unprecedented global effort to have equitable access to COVID-19 vaccines," Dr. Mwinga Kasonde, the country's WHO representative, told Rwandan newspaper *Taarifa*.

Sudanese Health Minister Omar Ahmed al-Najib said the country's vaccination campaign would prioritize health care workers and elderly people.

"The amount [of vaccines] reached today will be enough for a big part of those working in the health professions," al-Najib told Agence France-Presse. "Because they are more susceptible to being infected [they will get vaccines first], for the sake of offering a safe health service for our citizens. The vaccine will be free for all citizens. More shipments will be arriving consecutively, God willing."

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LONG KNOWN AS AFRICA'S 'NARCO-STATE,' GUINEA-BISSAU'S REPUTATION WILL BE TOUGH TO SHAKE

ADF STAFF | PHOTOS BY AFP/GETTY IMAGES

he former Portuguese colony of Guinea-Bissau has been dogged by unrest and instability since its independence in 1974. The government was overthrown about six years later, and its history has been stained by coups, attempted coups and governmental chaos ever since.

Add to that infamy the epithet "narcostate," meant to sum up a criminal enterprise that for years has allowed — in fact, enabled — the free flow of narcotics into national ports on a transnational journey greased by official collusion. The International Monetary Fund defines a narco-state as a nation in which "all legitimate institutions become penetrated by the power and wealth of traffickers."

A United Nations official in the capital, Bissau, estimated in 2018 that at least 30 metric tons of Latin American cocaine enters the country each year, most of it on its way to Europe. Large supplies are flown in, and some enter via legal and illegal international fishing vessels. Sometimes, local fishermen bring it ashore. The military sometimes transports it across borders.

The nation's military often has played a significant role in politics, including coups, the most recent of which was in 2012. The military also has participated in narcotics trafficking. In one high-profile case in 2013, a New York grand jury indicted Gen. Antonio Indjai, at the time the nation's Army chief of staff, on charges of trafficking Colombian cocaine and providing weapons to anti-government insurgents there. He had taken power during the 2012 coup. He was sacked in 2014.

Former Rear Adm. Jose Americo Bubo Na Tchuto, arrested at sea in a U.S. drug sting on charges of trafficking cocaine to the U.S., pleaded guilty in 2014 and was sentenced to four years in prison.

Even Guinea-Bissau's geographical peculiarities make it attractive to drug traffickers. The nation's



Cocaine seizures like this one have increased since new interdiction efforts started in recent years, but political and social conditions still make it easy for traffickers to operate in Guinea-Bissau.

coastline is largely composed of the Bijagos Islands, 88 land masses that mostly are uninhabited. Some have been used by drug traffickers to deposit and store illegal drugs.

Despite the nation's history and culpability with drug trafficking, there have been some significant drug busts in Guinea-Bissau in recent years. In September 2019, Bissau-Guinean police seized more than 1.8 metric tons of cocaine hidden in grain bags that arrived by sea in the nation's northwest, Reuters reported. The two-week Operation Navara investigation resulted in the arrest of six Bissau-Guineans, three Colombians and a Malian. It was the biggest



GUINEA-BISSAU HAS MADE REMARKABLE PROGRESS IN REFORMING AND STRENGTHENING ITS STATE INSTITUTIONS AND MAINTAINING RELATIVE STABILITY."

- Bintou Keita, then U.N. assistant secretary-general for Africa







Guinea-Bissau's former army chief of staff, Gen. Antonio Indjai, shown in 2012, was indicted on drug charges.

drug operation in the nation's history, and it led to successful prosecutions and prison sentences.

About six months earlier, authorities had seized almost 800 kilograms of the drug in Operation Carapau. Police arrested one Bissau-Guinean, two Nigerians and one Senegalese after finding the cocaine in a refrigerated truck registered in Senegal, Agence France-Presse reported.

The resulting sentences and prison terms in Carapau marked the first time in recent years that the nation's justice system successfully prosecuted a big drug case, according to the United Nations Office on Drugs and Crime (UNODC).

Both drug busts are positives in a country rife with many negatives. But when contrasted with the continuing poverty, unrest and political chaos that persist even now, it's hard to demonstrate that Guinea-Bissau has successfully transitioned out of its reputation as a narco-state, according to several studies and reports. The nation of nearly 2 million has a steep hill to climb, and it's clear that it won't be able to scale it alone.

U.N. POINTS TO PROGRESS

Years of instability attracted a United Nations presence after a civil war in 1998-1999. The U.N. opened its Peacebuilding Support Office in Guinea-Bissau. Ten years later, it gave way to the U.N. Integrated Peacebuilding Office (UNIOGBIS), which continued through the end of 2020.

A U.N. Country Team since has worked with other U.N., regional and international partners to build peace and stability in the nation. "Guinea-Bissau has made remarkable progress in reforming and strengthening its state institutions and maintaining relative stability," Bintou Keita, then assistant secretary-general for Africa, said at a December 11, 2020, ceremony marking the end of the UNIOGBIS mission. "The repositioning of a United Nations mission team to the country is proof of this progress."

Keita and Special Representative of the Secretary-General Rosine Sori-Coulibaly said the political mission helped enable free elections, resolve political disputes, fight drug trafficking and advance



THE DYNAMIC OF TRAFFICKING ORGANIZATIONS IS ALWAYS TO FIND THE POINT OF LESS RESISTANCE."

 Dr. Angela Me, chief of the UNODC Research and Trend Analysis Branch

human rights, including the participation of women and young people in politics, according to DPPA Politically Speaking, the online magazine of the U.N. Department of Political and Peacebuilding Affairs.

The U.N. will keep working to help Guinea-Bissau reach development goals by addressing poverty, injustice, gender inequality, child protection and other issues, according to the magazine.

Still, many challenges remain. The huge drug busts in 2019 would seem to indicate that traffickers still have a network of willing compatriots on the ground in and around Guinea-Bissau and that capacities to strangle the drug pipeline have not yet been achieved. Also, some say continuing political unrest associated with the 2019 presidential election could leave the nation vulnerable to continued drug trafficking.

"Cocaine trafficking — as all the drugs — you have traffickers who want to maximize profit while avoiding risk," Dr. Angela Me, chief of the UNODC Research and Trend Analysis Branch, said in a video. "The dynamic of trafficking organizations is always to find the point of less resistance."

For that reason, any nation with a wide range of weak government, legal and law enforcement institutions will be more vulnerable to co-opting by criminal organizations such as drug cartels and traffickers. Guinea-Bissau has been and continues to be such a country. But the UNODC has worked alongside government authorities to fight the drug trade.

TOUGH CHALLENGES REMAIN

Despite persistent governmental instability, the UNODC said "minimum political conditions" were reached for it to again help the government fight drug trafficking and organized crime.

In June 2018, then-President José Mário Vaz asked UNODC to help strengthen all aspects of the criminal justice system to address drugs, organized crime, money laundering and corruption. Indeed, the UNODC reported that Guinea-Bissau had "shown a renewed commitment to engage in the fight against drug trafficking and organized crime" through the launch of the AIRCOP Joint Airport Interdiction Task Force (JAITF) in April 2018.

The multiagency Airport Communications Program (AIRCOP) seeks to disrupt criminal networks by helping participating airports detect and intercept drugs, illicit materials and high-risk passengers in countries of origin, transit and destination. Since the UNODC-Interpol-World Customs



Domingos Simões Pereira came in second in the 2019 presidential election. His party, the longtime ruling African Party for the Independence of Guinea-Bissau and Cape Verde, contested the results.



Opposition leader Umaro Sissoco Embaló won the presidential election in Guinea-Bissau, but the country's longtime ruling party cried foul.



A Bissau-Guinean Soldier votes during the second round of the 2019 presidential election in Bissau.

Organization initiative set up the JAITF at Osvaldo Vieira International Airport in Bissau, there have been a record number of drug seizures there, the UNODC reports.

These developments are overshadowed by continued political chaos. The 2019 national election resulted in anything but a smooth transfer of political power. Incumbent Vaz did not advance past the first round of voting in November 2019. Former Prime Minister Umaro Sissoco Embaló won the second round in December 2019. Embaló was sworn into office in February 2020, but the majority party of his election rival, Domingos Simões Pereira, claimed the election was fraudulent and swore in its own president — Cipriano Cassamá, the parliamentary speaker — who resigned after just one day in office, citing death threats, according to a BBC report.

"I have no security," Cassamá told reporters. "My life is in danger, the life of my family is in danger, the life of this people [nation] is in danger. I cannot accept that, that is why I took this decision."

Vaz was the first president to serve a full term in office since the nation gained independence. His one five-year term saw nine prime ministers serve, one for only 10 days. The next election raised political

tensions and at one point resulted in two men serving as president simultaneously, if only for a day.

Amid this chaos is evidence that military officials remain closely ensconced with political players, a condition similar to those in 2012 when high-ranking military officials such as Indjai actively participated in the drug trade, according to a May 2020 article for the Global Initiative Against Transnational Organized Crime by Mark Shaw and A. Gomes. The article also notes that the global COVID-19 pandemic may give regional and international observers reason to divert their attention, leaving the nation free to resume business as usual.

Included in the recommendations offered by Shaw and Gomes for addressing Guinea-Bissau's instability is to build a national dialogue among government, military and civil society representatives. One option could include a "truth commission" that could offer amnesty to culpable actors who speak openly about their involvement in drug trafficking and other offenses.

"Those who do not would be subject to prosecution, underscoring that, in the final reckoning, there would be no impunity for those who have been involved in drug trafficking and have undermined the long-term political, social and developmental prospects for Guinea-Bissau," the authors wrote. \square

PRECIOUS RESOURCE

As Violent Extremist Groups Move to Exploit Artisanal Gold Mines, Children Fall Deeper Into Peril

ADF STAFF



uring the four centuries of its rule, the Mali Empire was known around the world for its fabulous wealth in gold. Nearly 700 years later, areas of the former empire are still rich with deposits of the precious metal. Now much of the small-scale gold mining in Mali and Burkina Faso — known as artisanal mining — is marked by dangerous and exploitative child labor, inhumane working conditions, pollution, health hazards and the scourge of human trafficking. All this is happening in a region plagued by violent extremist organizations (VEOs) that see the unregulated mines as ripe for extortion and a source of revenue to fund operations and recruitment. Regional violence is increasing, and the resulting instability and displacement will make such mines vulnerable to increasing exploitation as VEOs expand into new areas and try to corner local gold markets.

For the past year, COVID-19 has mixed with regional violence to produce an increase in child trafficking, forced labor and recruitment in Mali, according to a 2020 study by the United Nations Refugee Agency-led Global Protection Cluster. The cluster is a network of U.N. and nongovernmental organizations that protects those affected by humanitarian crises.

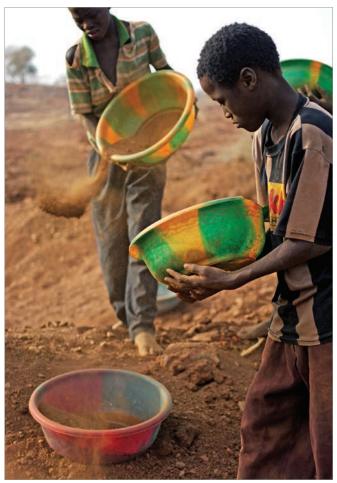
COVID-19 combines with other factors to close schools and acts as a force multiplier for misery in everyday life for an already impoverished and violent region.

The study found 230 cases of child recruitment in the first half of the year, eclipsing the 215 total reported in all of 2019 and doubling the number logged in 2018. Authorities found that about 6,000 children — mostly boys — worked in just eight Malian mines. As armed terrorist groups scramble to control lucrative local mines, human trafficking reasonably can be expected to increase, even in neighboring Burkina Faso.

THE COMMON INDUSTRY OF GOLD

Artisanal gold mines are common throughout Mali, Burkina Faso and Sub-Saharan Africa. With their large numbers often come dangerous working conditions, especially for children. Such mines often find children younger than 15 working long hours wielding heavy tools such as picks and hoisting dangerous loads onto their developing bodies. Shafts can collapse, burying workers alive.

The sites also present chemical and environmental dangers. Miners often add mercury to silt to help form an amalgam with gold. Workers then heat the result with blowtorches or over fires to evaporate the chemical, leaving behind the precious metal. The mercury can be inhaled and settle into the surrounding environment, where it reacts with bacteria in water, plants and dirt to form lethal methylmercury. Exposure in high doses can be fatal, and it can damage the nervous, digestive and immune systems and slow intellectual development.



Boys sift soil for gold in Mogen, Burkina Faso. Studies show that human trafficking and harsh labor conditions are common at such mines. REUTERS

A 2018 survey of satellite imagery found about 2,200 informal gold mines spread across Burkina Faso, according to a Reuters report. The artisanal gold industry there and in neighboring Mali and Niger has a combined estimated value of \$2 billion a year. As VEOs further proliferate into Burkina Faso, a top-10 gold producer in Africa, they will find themselves closer and closer to gold mines where they can hide out, extort taxes and recruit new members.

Human trafficking and exploitation are not recent developments at these artisanal gold mines. A December 2011 report from Human Rights Watch (HRW) indicated that trafficking of children in West Africa in general, and Mali in particular, was increasing. "Most of the trafficking is done through small, informal networks, including families and acquaintances," HRW reported. "In addition to internal trafficking, there is cross-border trafficking between Mali and its neighboring countries."

two groups — the Macina Liberation Front (FLM) and the Islamic State of the Greater Sahara (ISGS) — have been responsible for nearly all of the 2020 attacks, which resulted in 4,122 deaths, a 57% increase over 2019.

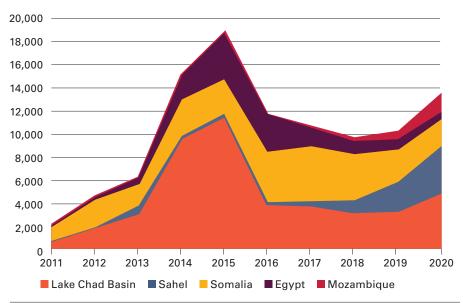
Sahel violence has displaced 1.7 million people, 1.1 million of whom are in Burkina Faso, according to the ACSS. That instability is bound to intensify human trafficking.

"When you have that degree of displacement, then you're also going to have an increase in human trafficking because you have a bunch of communities that have been just thrown to the wind and having to figure out how they can make ends meet, and they become extremely vulnerable," Dr. Daniel Eizenga, ACSS research fellow, told *ADF*.

"Child labor and the trafficking of children in this region is a pretty dominant thing," Eizenga said, noting the long-standing practice of sending children to Côte d'Ivoire to work in cocoa fields. "And that was true

before the onset of violent extremist organizations and violence with which this whole region has been destabilized."

Fatalities Linked to Militant Islamist Groups in Africa



Source: Armed Conflict Location and Event Data Project

AFRICA CENTER FOR STRATEGIC STUDIES

Often children working in artisanal gold mines are migrants, and some live and work there without their parents. This intensifies their vulnerability to further trafficking and exploitation.

The HRW report examined conditions that existed before an explosion of violence and instability that began in 2012 with a Tuareg rebellion in northern Mali. It since has metastasized across the region at the hands of several extremist and terrorist organizations.

That violence has continued to grow. The Africa Center for Strategic Studies (ACSS) reported in January 2021 that the 1,170 violent incidents observed in Burkina Faso, Mali and western Niger in 2020 marked a 44% increase over 2019. Violence has increased steadily since 2015, and

A LUCRATIVE SOURCE FOR EXTREMISTS

Artisanal gold mines operate outside government control and regulation, and although smaller than legitimate industrial sites, their output can be significant. In 2018, Burkinabe officials visited 24 mines near where extremist attacks had taken place, Reuters reported. They estimated that just those few sites produced 727 kilograms of gold annually, worth about \$34 million. The total from artisanal sites in Burkina Faso alone is thought to be 15 to 20 metric tons a year, valued at between \$720 million and \$960 million.

VEO activity started to spill out of Mali and into northern

Burkina Faso in 2017, and by 2019 had flowed into the country's east, Eizenga said. As VEOs proliferated, they forced schools to close, which released thousands of children. Some of these children probably found their way to mines on their own, but it's plausible that many are trafficked to the mines by various groups.

Identifying those groups, networks and trafficking flows is challenging. The ISGS and FLM are the two extremist groups most closely associated with gold mines, but their direct involvement in human trafficking is not clear. ISGS started spreading into areas with gold mines more than a year ago, Eizenga said in February 2021. The group, which has only a few hundred mobile combatants, moves from one mining site to another extorting a tax from the community.



In the long term, government authorities will have to identify and regulate artisanal mining sites in ways that don't disrupt the lives of communities that depend on them.



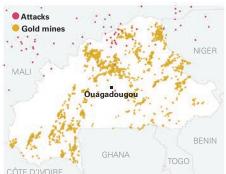
Attacks and Gold Mines

Since 2017, extremists have established a presence across much of Burkina Faso, where small-scale mines produce gold worth up to almost \$1 billion a year. Nearly half of the possible mining sites identified by the government are within 25 kilometers of documented extremist activities, such as clashes with security forces, abductions and roadside bombings, according to an analysis by Reuters and the Countering Wildlife Trafficking Institute.

• 2017 Most militant attacks are in Mali.

• 2018 Extremists launch attacks near the border with Niger.

 2020 As attacks intensify and spread, more gold is within militants' reach.







BURKINA FASO

Note: Possible gold mining sites were identified in a 2018 government survey of satellite imagery.

Sources: Armed Conflict Location and Event Data Project; National Agency for Management of Mining and Semi-Mechanized Operations; Natural Earth

They won't operate or disrupt the mines for fear of losing a revenue source, but they do sometimes deter government authorities from interfering with the mines.

Given the wholesale displacement of people and school closures, "it's not hard to imagine them taking another step of trafficking children to the mines and potentially trying to use that as another way of generating increased revenues for themselves," he said.

FLM, which also is known as Katiba Macina, appears to be trying to expand into southwestern Burkina Faso, an area that also has a lot of artisanal mines, in hopes of cornering the gold market there, Eizenga said.

Tying specific groups like ISGS and FLM to human trafficking of children or others at artisanal mine sites is difficult. Eizenga said he hasn't seen hard evidence of direct involvement by either group. But he agrees that even if such groups are not directly involved in trafficking, they are at best complicit with it because they benefit from the labors of those who have been trafficked.

ADDRESSING THE PROBLEM

Human trafficking in the Sahel region, including Mali and Burkina Faso, is an entrenched practice in an area long known for informal communities and a lack of security and law enforcement capacity. The explosion of extremist violence in the region after 2012 adds complications to any response. The region already has several multinational security forces operating, such as a United Nations peacekeeping mission in Mali, the French-led Operation Barkhane and the regional G5 Sahel Joint Force.

The challenge, Eizenga said, is to provide sustained protection and security to gold mining communities without disrupting the economies the mines provide to locals. "This is a big challenge when looking at artisanal mining, is how do you integrate this way of life — the informal economies that exist around these mines

— without completely disrupting the economy of these smaller communities?"

Building trust will be an essential component. Sometimes security forces have been heavy handed in trying to uproot VEOs from communities. Locals who are not part of the violent groups but who have been forced to cooperate with them sometimes get caught in the middle.

Establishing trust will first require establishing sustained security. Generally speaking, counterterrorism forces have been "tactically successful" in degrading VEOs in the tri-border Liptako-Gourma region, where Burkina Faso, Mali and Niger meet, Eizenga said. Holding that territory will require a strategic change in how forces interact with local communities.

Keeping a meaningful presence in mining areas could include finding a way to deploy local police units that are connected to military forces to ensure a quick reaction to VEO threats, Eizenga said.

In the long term, government authorities will have to identify and regulate artisanal mining sites in ways that don't disrupt the lives of communities that depend on them.

Building sustained security will help build trust, he said. Then authorities can use that trust to identify, register and regulate gold mines in a way that adds the legitimacy that will ward off exploitation by extremists.

"That has the added benefit of being able to disrupt the illicit activities of the violent extremist organizations, and so you're simultaneously, when protecting these communities, also disrupting the activities of VEOS," Eizenga said. "And just like with any kind of insurgent force, if you can kind of cut them off from their revenues, eventually that puts pressure on them, and when you put that pressure on them it makes it harder for them to operate, it makes it harder for them to recruit. Adding those challenges is going to have a positive overall effect."



MACHINE LEARNING AND TECH TOOLS HELP OFFICIALS NARROW EFFORTS TO CATCH WILDLIFE TRAFFICKERS

ADF STAFF -

welve years ago, Dr. Andrew Rhyne, a marine biologist and expert on wildlife trafficking, was trying to figure out a better way to track the aquarium fish being imported into the United States.

The system could not keep up with the

The system could not keep up with the trade volume. About 130 Fish and Wildlife Service officers had to inspect hundreds of thousands of shipments of all types of animals. Much of it required manually cross-referencing information on a shipping document with people or businesses on blacklists for previous offenses. There also was the matter of making sure that the fish in the shipment matched what was declared. With about 40,000 marine species to keep track of, this was no easy task.

"There are so many things coming across borders, and inspectors don't have time," Rhyne told *ADF*. "We're asking them to know everything about everything and try to find the illegal stuff that's in there."

Rhyne and his co-creators developed the Nature Intelligence System (NIS), which digitizes documents and uses algorithms to examine buyer and seller histories. It cross-references them against people with criminal backgrounds and examines numerous other pieces of data to make sure shipments are likely to be the correct species, quantity and actually are coming from the country they claim to be from.

"If you have this massive volume of information, you're basically trying to find the needle in the haystack," Rhyne said. "So our system essentially was built to alleviate the bulk of the paperwork that agencies are doing right now."

The system helps agencies target their limited resources by inspecting only the shipments most likely to be illegal. This is important since, on average, inspectors have time to check only about 10% of all shipments that pass through customs. London Heathrow Airport alone processes 28 million live animals each year.

Traffickers take advantage of this lack of capacity to move live animals or animal parts without making much effort to hide them. They believe the odds are on their side.

"The agents get so many things in, and we're asking them to identify 20,000 species of things and derivatives," Rhyne said. "It's so unfair to ask a human to know all that stuff, so the computer just kind of does that for them."

The system won the Wildlife Crime Tech Challenge in 2016 given by the U.S. Agency for International Development. Rhyne hopes it can be adopted widely. NIS is just one way law enforcement agencies are gaining

the upper hand on criminals through the use of machine learning and other technology.

SCANNING SOCIAL MEDIA

on videos.

Illegal wildlife trafficking occurs openly on social media. Although most prominent social media sites now outlaw animal sales, deals continue to be arranged there and traffickers quite brazenly display their activity.

A 2020 study by the Alliance to Counter Crime Online found that, despite restrictions, traffickers continue to sell hundreds of millions of dollars' worth of live animals or parts on Facebook. The alliance said 58% of Facebook pages engaged in the illegal wildlife trade clearly used the words "buy," "sale" or "sell."

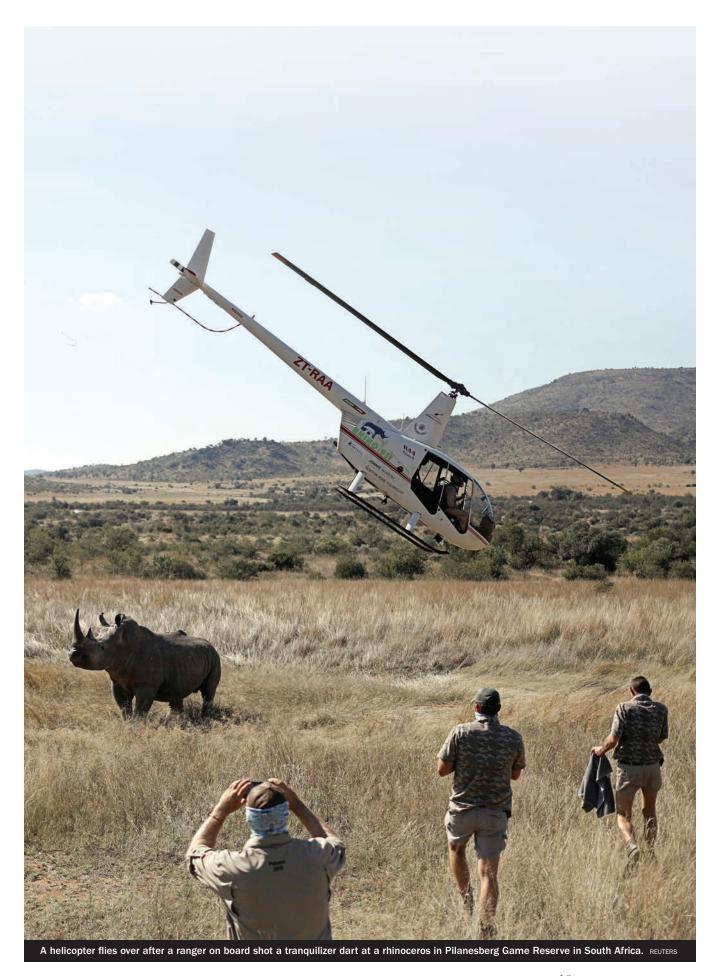
Machine learning can help identify these perpetrators. A study by Finnish researchers Enrico Di Minin and Christoph Fink showed that algorithms can search for key terms, people or even recognize specific species in photos and videos posted on social media. Programs can be made to recognize animals by the sounds they make



Authorities seized these cockatoo parrots in a smuggling bust.

"The whole system can be automated so that data are mined directly from social media platforms," the authors wrote. "The content is filtered and only relevant content is kept for further investigations by a computer or a person."

Machine learning systems also can be programmed to identify traffickers' code words and suspicious travel patterns. For instance, if a person is found on social media to be moving back and forth between trafficking hot spots, that can be flagged for further investigation.



HOWMACHNE LEARNING WORKS

rogrammers create an algorithm, or a set of rules, that teaches a machine to recognize an image, word, sound or other important detail. As the machine receives more information and a human expert manually identifies which pieces of data, like a photo, are significant and which are not, the machine can improve its ability to identify important things. It can sort through video or webpages faster than a human, saving time. It also can be programmed to catch details imperceptible to the human eye.

USES TO STOP WILDLIFE CRIV



Social Media: Algorithms can search social media platforms for key words or images related to trafficking, poaching and the sale of wildlife online.



Surveillance: Cameras paired with machine learning software can spot poachers, vehicles and animals in wildlife reserves, allowing officials to respond faster. They also can detect gunshots and other sounds.



Enforcement: Border control officials can upload customs documents to programs, and algorithms will cross-check to make sure there are no "red flags." This means checking to see whether sellers are blacklisted, ensuring that the country of origin is correct, and confirming details to help officers determine that the animals being shipped match the animals on the paperwork.

"IMAGE RECOGNITION ALGORITHMS CAN QUICKLY ANALYSE THE VAST AMOUNT OF OPTICAL DATA COMING IN FROM SURVEILLANCE STREAMS AND GIVE TEAMS AN EARLY WARNING OF ANY THREATS SO THEY CAN RESPOND."

- THE ROYAL SOCIETY, "SCIENCE: TACKLING THE ILLEGAL WILDLIFE TRADE"

Since traffickers tend to associate with one another. developers can create an algorithm to analyze every photo of a suspected trafficker to gather contact information. Social media profiles offer a treasure trove of information, including locations, methods and phone numbers.

"People involved in the wildlife trade very often have their Facebook profiles open and openly show off their wealth," Stephen Carmody, chief investigator of Wildlife Justice Commission, told *The Independent*, a newspaper in the United Kingdom. "They are operationally very poor. They don't change their phone numbers regularly, they meet customers at the same bars or restaurants and they don't practice surveillance. Rather than organised crime, I would call [wildlife criminals] disorganised crime."

BETTER OPTICS

Advances in camera technology mean law enforcement agencies have the ability to surveil borders, roads and nature reserves. But the question remains: How can investigators sort through and categorize this imagery to find valuable data to stop criminals?



The TrailGuard AI camera feeds video to a system that learns to identify animals, unknown people and poaching signs. INTEL



Game wardens display leopard skins confiscated from hunters at Boma National Park in eastern South Sudan. AFP/GETTY IMAGES

One answer comes in the form of a camera the size of a pencil backed by machine learning. The nonprofit RESOLVE developed TrailGuard AI in partnership with the tech company Intel. The camera feeds video to a system that learns to identify animals, flags unknown people and captures other poaching signs.

During a field test at the Grumeti Reserve in Tanzania, TrailGuard helped authorities arrest 30 poachers and seize more than 589 kilograms of bushmeat. The team hopes to expand it to be used in 100 game reserves across the continent.

"Large park boundaries and rough terrain mean that rangers often only find out about poaching when it's too late," Eric Dinerstein, RESOLVE's director of wildlife solutions, told Al-Jazeera. "TrailGuard acts as an early warning system, transitioning ranger teams into fully mobile, rapid-response units so that they can respond to would-be poachers and stop them in their tracks."

As programs advance they can be programmed to recognize things such as animal carcasses or poachers' snares. Some systems are developing "predictive" technology that incorporates reams of data to predict where a poacher might strike next.

"Image recognition algorithms can quickly analyse the vast amount of optical data coming in from surveillance streams and give teams an early warning of any threats so they can respond," the Royal Society wrote in the report "Science: tackling the illegal wildlife trade." "The algorithms can differentiate between wildlife and human presence. This helps small teams understand where the wildlife is positioned and potential intrusions so they can target resources effectively."

Machine learning also has enormous possibilities at airports and border crossings, making it possible to sort through X-ray images already captured to look for wildlife parts such as bones.

A project led by researchers at the University of New South Wales in Australia was able to use X-ray technology to differentiate between quills on a domestically bred and wild animal known as an echidna. Other technology is being developed to identify items such as rhino horn or ivory when it appears on an X-ray.

Rhyne said there is now a global recognition that border agents and park rangers are overwhelmed by the scope of the trafficking problem. "We put an undue burden on wildlife inspectors and regulatory agencies," he said. "They're not equipped to handle what is coming across borders."

He said it is time to use machine learning as a way to fight back. He encouraged all countries, no matter their financial constraints or technological limitations, to seek out partnerships that will let them use technology to combat wildlife trafficking. There are companies and groups eager to join forces to address this global problem. "There is enough will in the world to fund it and to do it," Rhyne said. \square

FEMALE RANGER TEAMS

SHATTER STEREOTYPES

- ADF STAFF

THE WOMEN HAVE PROVED TO THEIR COMMUNITIES THAT
THEY ARE EQUAL TO THEIR MALE COUNTERPARTS



ildlife ranger work traditionally has been a men's-only club in Southern Africa. So when the nonprofit International Anti-Poaching Foundation created the all-female Akashinga ranger team in Zimbabwe in

2017, it was greeted with skepticism.

The foundation manages Zimbabwe's Phundundu Wildlife Area, a 30,000-hectare range once used for trophy hunting. It is part of the Zambezi Valley ecosystem, which has lost thousands of elephants to poachers over the past 20 years. Zimbabwe is home to about 85,000 elephants.

The Akashinga, or "brave ones" in Shona, patrol Phundundu, which borders 29 communities, according to National Geographic.



Members of Team Lioness keep watch while on a break at the Olgulului conservancy.

REUTERS

Hiring female rangers was the idea of Australian Damien Mander, who has trained Zimbabwe's forest rangers for years. He concluded that animal preservation cannot come without the support of local communities. Rangers, he said, had to be local people.

Mander also believed women had unique skills that would make them good rangers. One of those skills is peacemaking, critical in de-escalating violent situations.

Mander told National Geographic that he sought women who had suffered trauma, reasoning that such women would be more sympathetic and protective of exploited animals. The women he recruited included victims of domestic abuse, sexual assault victims, AIDS orphans and women whose husbands had abandoned them.

He selected his first team by subjecting the women to three days of training exercises while enduring harsh physical conditions. They trained when they were hungry and tired. Starting with 37 recruits, he chose 16 for the ranger training; three eventually quit. The women trained in hand-to-hand combat and learned to fire rifles.

When he had trained men under similar circumstances, almost all of them quit at the end of the first day. The women, he found, were tougher and more determined.

On the job, the Akashinga are strict vegans, a show of respect for the animals they are protecting.

In the field, the rangers sleep in tents. When they are not on patrols and raids, they are training and practicing. On patrols, they are charged

> with protecting elephants, rhinos and lions from guns, snares and cyanide.

One of the women, Petronella Chigumbura, a single mother of two, joined Akashinga after getting divorced in 2016 and struggling to support her family. She is now an assistant instructor sergeant.

"As a woman, I was focused on using Akashinga as a tool to fight my battle for a better life," she told ELLE.com. "I can now feed my kids and pay school fees for them. I acquired a driver's license, which is a big deal for women in Africa. I am also building a big house for my children. Now I have the pride of having my own future."

That family-first attitude is another reason the women have made good rangers. Studies have shown that working women in developing countries invest 90% of their income in their families, while men return only 35% to the family.

"Before, it was commonly accepted that a ranger was always a man, but after the introduction of the Akashinga program, I wanted to prove that no job is only meant for men," ranger Nyaradzo Auxillia Hoto told ELLE.com. "At first, my community couldn't believe a woman could be a ranger. But the sky is the limit, and women can also be rangers."

The women made more than 200 arrests in the first three years of operation, driving down elephant poaching by 80% in Zimbabwe's Lower and Middle Zambezi Valley. If the COVID-19 pandemic doesn't get in the way, Mander hopes for a larger program for the women.



Lioness rangers patrol the Olgulului conservancy.

REUTERS

"The concept has now taken off, and we are in the process of training 240 more women for fulltime positions as we scale towards 1,000 rangers and a portfolio of 20 parks by 2025," he told Mymodernmet.com.

TEAM LIONESS

A similar team patrols the 147,000 hectares of Kenya's Amboseli National Park. Team Lioness consists of eight rangers sponsored by the International Fund for Animal Welfare (IFAW). The patrol unit is part of a larger group of 76 rangers, all from the local Maasai community. Their mission is to stop poaching and trafficking in bushmeat and prevent human-wildlife conflict.

All over Africa, the COVID-19 pandemic has stopped tourism and left many donor-funded wildlife conservation programs struggling for survival. In Tanzania, many rangers have lost their jobs as a result. That has put pressure on Team Lioness and other community rangers because they have to patrol larger areas. The result has been a much higher level of poaching, both for profit and as a means to put food on the table.

Team Lioness was established in early 2019 after Maasai community leader Kiruyan Katamboi, known as "Mama Esther," challenged the IFAW to employ women from the community as rangers, CNN reported. Because

Maasai communities are patriarchal, women are normally excluded from leadership and decision-making.

Unlike the Kenya Wildlife Service, which also patrols the park, Team Lioness is unarmed. The team has to rely on its training when dealing with dangerous animals and its negotiating skills when dealing with violent people. Members of the team can call for backup from the wildlife service if things get out of hand.

While on patrol, they note the locations and activities of wildlife and talk with members of the local community to learn of any unusual activity. They look for snares and traps and other signs of poaching and take GPS coordinates. They come to the aid of animals in distress as needed.

A typical patrol will take the team 20 kilometers to visit a local community. It's not unusual for members of the team to climb trees to avoid aggressive animals.

All eight members of Team Lioness have the equivalent of a high school diploma. The IFAW's approach to wildlife security is called "tenBoma," named after an East African saying that a community is safer when 10 houses look out for each other. IFAW partners with ranger teams, community members, Interpol and other nongovernment organizations to gather and analyze local data and intelligence.

WHEN THE TEAM WAS FORMED, ONE WOMAN FROM EACH OF THE COMMUNITY'S EIGHT CLANS WAS CHOSEN.



The members of Team Lioness are particularly skilled at writing reports that are essential to the tenBoma approach.

When the team was formed, one woman from each of the community's eight clans was chosen. Even they had some doubts.

"Before I was thinking like I would not make it," Sharon Nankinyi told CNN. "But after we were training, then we became very strong ladies. We proved to the community that what a man can do, a woman can do better."

Team Lioness rangers typically work three weeks on, when they rotate around the park's six camps and mobile unit, and one week off. The workday begins at 5 a.m. with a briefing and morning patrol, taking about four hours, in co-ed groups. The rest of the day generally is spent at a base on call for emergencies. Other than having

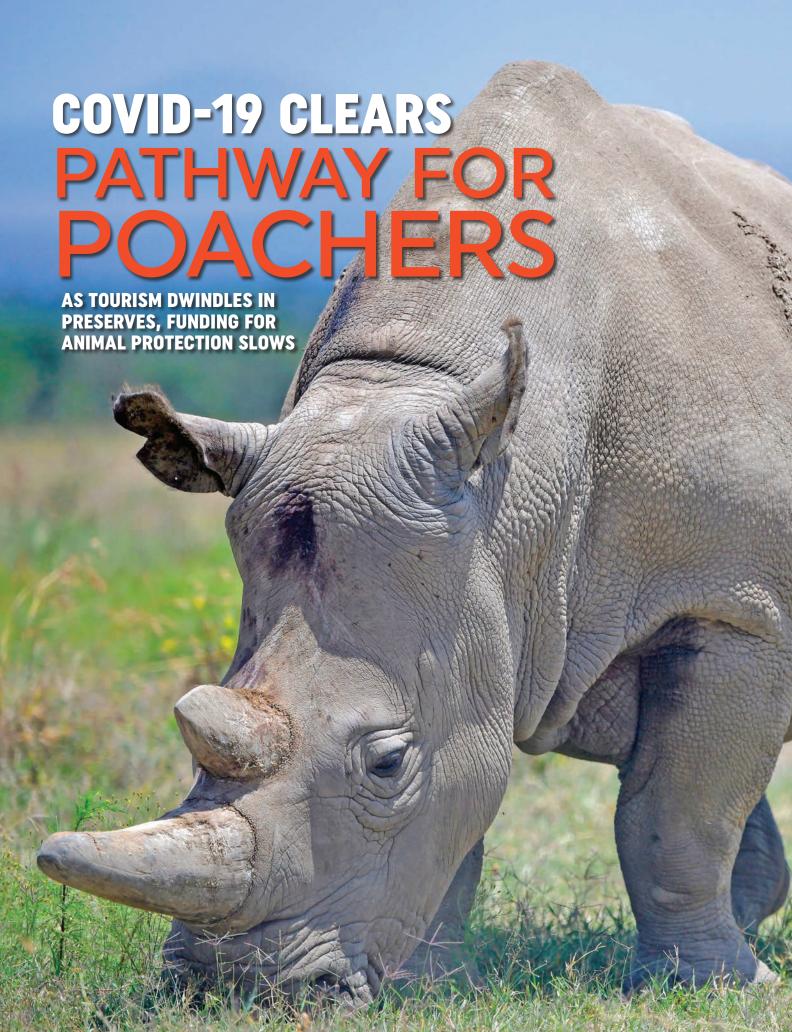
separate sleeping and bathing quarters, Team Lioness members do the same jobs as their 68 male counterparts.

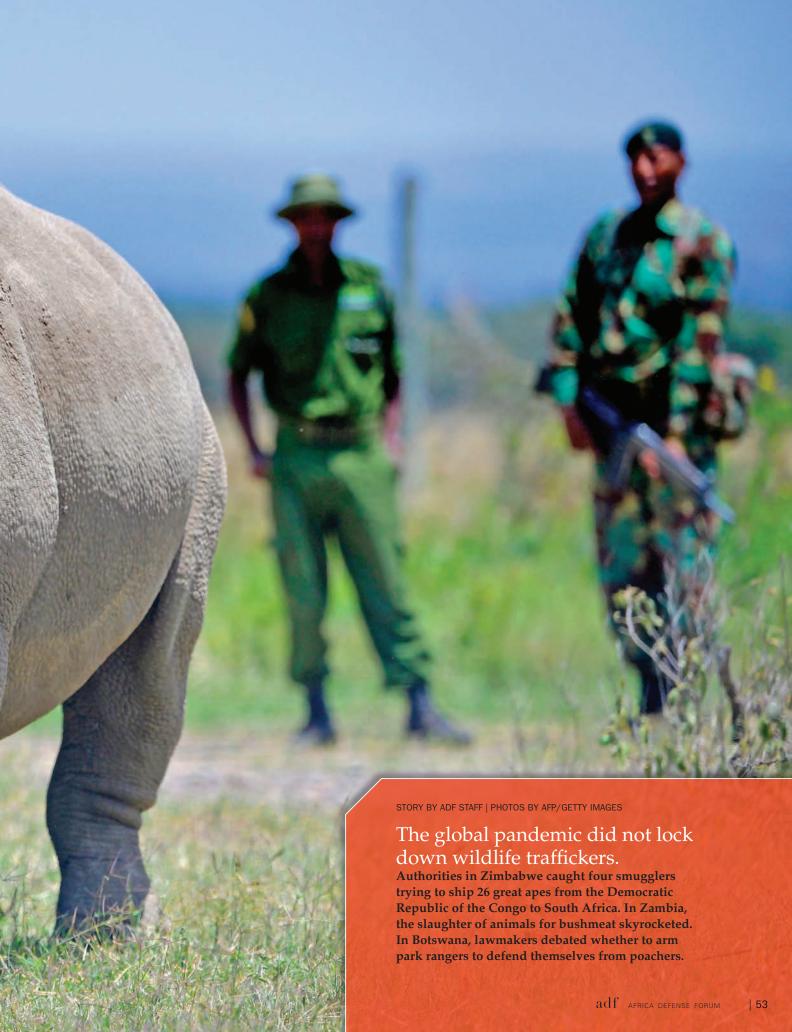
Under the COVID-19 lockdown, visits with their families have been much less frequent; they went four months at one point without going home. During one week when the risk of poaching seemed particularly serious, Team Lioness scaled up to three patrols a day, collectively covering more than 56 kilometers on foot. Close contact with villagers stopped for a time.

The lockdown has caused problems of its own. As one team member told *The Guardian*, "people are sitting idle at home, because of the lack of jobs, so they might engage in poaching to get something to eat, they might sell bushmeat so they can have money to use for food or other basic needs."

New recruits go through the selection process to join the Akashinga ranger training program in Phundundu, Zimbabwe.

AFP/GETTY IMAGES





In Uganda, a poacher desperate for food stumbled upon an endangered 400-pound silverback gorilla and in a panic stabbed it with a spear, leaving it to die, the media group Ensia reported.

COVID-19 has affected almost every aspect of life all over the world. It took away jobs, caused food shortages and severely restricted international travel. Initially, conservationists and law enforcement hoped the restrictions might help endangered wildlife — travel restrictions might deter smugglers, for instance. But so far, COVID-19 has been bad for Africa's wildlife.

"National lockdowns, border closures, emergency visa restrictions, quarantines and other measures put in place to stop the spread of the coronavirus have severely constricted Africa's \$39 billion tourism industry," *The New York Times* noted. "That business motivates and funds wildlife conservation across the continent, leading some experts to fear that threatened and endangered animals may become additional casualties of the pandemic."

Officials warned that without tourism money, normally law-abiding people might be forced to kill protected animals just to put food on the table. Fulton Mangwanya, director-general of the Zimbabwe Parks and Wildlife Management Authority, predicted that "rural communities, accustomed to employment with hunting outfitters, will relapse to poaching for meat and animal parts for the black market as hunting industry layoffs build," fairplanet.org reported.

Conservation teams that were planning longterm projects suddenly were forced to focus on paying salaries, covering unexpected costs such as protective clothing and ensuring that regular bills were paid. Wildlife parks in Africa have struggled to maintain their ranger staffs with no tourists visiting. And fewer rangers mean more poachers.

THE POACHING CONTINUES

In January 2021, Nigeria seized pangolin scales and tusks and bones from endangered species hidden in a container of furniture materials. The seized materials are used in traditional Chinese medicine despite having no medicinal value. Studies have suggested that pangolins, the most-smuggled animals in the world, may have been an intermediate host of the coronavirus that was discovered in an outdoor farmers market in Wuhan, China, in late 2019.

Customs officials said the contraband consisted of 162 sacks of pangolin scales and 57 sacks of mixed animal parts, including ivory and lion bones. The total haul weighed 8,800 kilograms and was valued at \$2.5 million.

In 2020, China raised the protection status of all pangolin species to its highest level. But that has not stopped the demand in China and other parts of Asia for the creatures, as well as other African

animals. As evidenced by the Nigeria bust, large-scale animal smuggling continues.

South Africa reported a decline in the number of rhinos killed by poachers in 2020, which officials said was partly the result of COVID-19 lockdowns.

In 2020, poachers killed 394 rhinos for their horns in the country, a drop of 33% from the 594 recorded in 2019, South Africa's environment ministry said. But other factors also were undoubtedly at work because it marked the sixth year in a row that recorded incidents of rhino poaching had dropped.

One reason fewer rhinos have been poached is because there are fewer rhinos to poach. In South Africa's Kruger National Park, where most of the poaching takes place, the rhino population has declined nearly 70% during the past decade.

In February 2021, Environment Minister Barbara Creecy said strict measures to prevent the spread of COVID-19 in 2020 had led to "a significant reduction in poacher incursions" to Kruger, near the Mozambique border. "However, that changed later in the year as the lockdown levels eased," she said in a statement reported by the BBC.

Creecy added that although the "extraordinary circumstances surrounding the battle to beat the COVID-19 pandemic" had contributed to the decrease in poaching in 2020, rangers, security personnel and government efforts to tackle the issue also played a significant role.

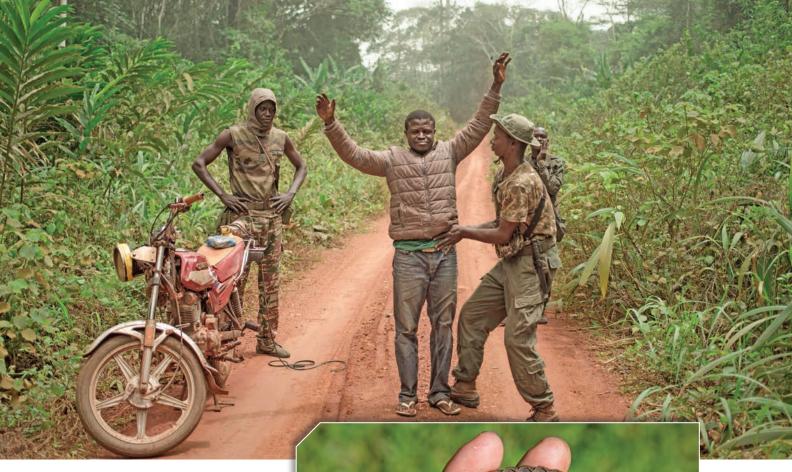
Dr. Jo Shaw of the World Wide Fund for Nature in South Africa told the BBC that although she welcomed a reduction in the number of rhinos lost to poaching, "We are very aware that the apparent (reprieve) provided by lockdown restrictions in 2020 was only a temporary pause."

NO TOURISTS, NO PROTECTION

The loss of tourists because of COVID-19 is a problem for Africa's 7,800 protected land areas in two ways. Tourists provide money to protect the parks, and they also provide extra eyes and ears on the lookout for poachers.

"These animals are not just protected by rangers, they're also protected by tourist presence," Tim Davenport, director of species conservation programs for Africa at the Wildlife Conservation Society, told *The New York Times*. "If you're a poacher, you're not going to go to a place where there are lots of tourists; you're going to go to a place where there are very few of them."

Unlike the United States and Europe, taxpayers in African nations generally do not subsidize their parks and wildlife areas. According to Quartz Africa, in some cases African parks and reserves pay the government a portion of their revenue, the bulk of which comes from tourism and, to a lesser extent, donations and aid. Even in good times with plenty of tourists, most parks struggle with finances.



ABOVE: The rangers of a dog squad search a motorcycle taxi for pangolin scales and hunting ammunition in a Central African Republic park.

A white-bellied pangolin rescued from animal traffickers curls into a protective ball at the Uganda Wildlife Authority office in Kampala.

In May 2020, Save the Rhino planned to have its third Working Dog Workshop in Zambia, bringing together experts to share knowledge and improve the way teams work with dogs to stop poachers. The two

previous workshops "had an incredible impact at a number of dog units across the African continent," the organization reported. The workshop was called off because of COVID-19. Similar training sessions for protecting wildlife across Africa were postponed or abandoned altogether.

Because of the pandemic, rangers at many parks were not allowed to visit their families and even took pay cuts. In rhino sanctuaries, most nonurgent rhino procedures were postponed, including translocations to establish new rhino populations and the ear-notching of calves for identification purposes.

COVID-19 has brought into question the future of Africa's parks and preserves. Some tourism dollars may be gone for good, because even when

international flights resume, reduced airline capacity may mean fewer tourists visiting rhino-range states for years to come. If a reserve collapses into insolvency, wildlife habitats could be lost forever to agriculture, development and poachers.

Map Ives, director of Rhino Conservation Botswana, told the *Times* that until the pandemic passes and tourists return, Africa's parks will be threatened by increasing numbers of poachers.

"We can expect not only poaching of rhinoceros and elephant and other iconic animals, but we can also expect a spike in bushmeat poaching across the continent," he said. "There are going to be a lot of people that are not earning a living and they will turn on the natural world, and you cannot blame them."



Niger Museum Is National 'Mirror'

AGENCE FRANCE-PRESSE

There are few museums in the world with as wide a scope as the National Museum of Niger. It has displays covering art, history, dinosaurs, nuclear energy, craftwork and

The National Museum of Niger includes a zoo.

AFP/GETTY IMAGES

music as well as live animals, for it also is a zoo.

The cultural gem of the country, the 24-hectare museum survives on a budget that is just a fraction of those of its wealthy counterparts. Yet it charges a rock-bottom entrance fee — about 10 cents — so that even the most impoverished can walk in and see exceptional things, including wild animals.

"It's Niger's mirror, its social and cultural reflection," said its director, Haladou Mamane, proudly ticking off its strengths in culture, history, archaeology, paleontology, not forgetting the zoo section, "part of a multidisciplinary tradition."

"Here, every Nigerien, regardless of their background, can gain insights about the country," Mamane said.

Before the pandemic, the museum had more than 100,000 visitors per year, many of them so-called talibe children. These are children who are unique to West Africa — their parents hand them to a type of Islamic school, where they are supposed to learn the Quran. But they typically spend their days begging in the dusty streets with a metal receptacle strung around their neck, and many find the museum a wonderful escape.

"I came from Yantala," a rundown district in northwestern Niamey, "to come and see the animals, the monkey, the lions, the crocodiles," said 12-year-old Ismael Mariama.

The museum, founded just before Niger gained independence from France in 1960, is planning a refurbishment and an expansion with the help of international donations. The museum promises that once the building work is complete, the 111 species in the zoo will enjoy improved living conditions.

Sudanese Cinema Is Reborn After Revolution

AGENCE FRANCE-PRESSE

After the 2019 revolution, Sudanese filmmakers suddenly enjoyed greater openness and have won multiple international awards. But the artists have yet to receive the same recognition at home.

Cinema languished in Sudan through three decades of authoritarian rule by Omar al-Bashir. But Sudanese took to the streets to demand freedom, peace and social justice, and Bashir's rule came to an end in April 2019.

"We started realizing how much our society needs our dreams," said director Amjad Abu Alala.

His 2019 film *You Will Die at Twenty* was Sudan's first Oscar entry and the first Sudanese film broadcast on Netflix, winning prizes at international film festivals such as Italy's Venice and Egypt's El Gouna. The film tells the story of a young man a mystic predicts will die at age 20.

As Sudan undergoes a precarious political transition, the country's filmmakers have found more space in which to operate, Alala said. Young filmmakers act "without the complexes, the lack of self-confidence or the frustration that we suffered in previous generations," he added.

Talal Afifi, director of the Khartoum-based Sudan Film Factory program, has trained hundreds of young people in filmmaking. Afifi began work long before the 2019 revolution, with advances in digital camera technology making filmmaking far more accessible.

The filmmaker attended a 2008 short film festival in Munich, where the winning film, an Iraqi documentary shot on a palm-size videocamera, inspired him to return home and set up a training center and production house.

In the past decades, the Film Factory has organized 30 screenwriting, directing and editing workshops and produced more than 60 short films honored at international festivals from Brazil to Japan. The Film Factory launched the Sudan Independent Film Festival in 2015.



The Sudan Independent Film Festival features a week of screenings in Khartoum. AFP/GETTY IMAGES

Football Returns To Libya BBC NEWS AT BBC.CO.UK/NEWS

Libya is playing league football for the first time since April 2019 when civil war ended the season prematurely.

The new season kicked off in 2021 without issues, but security is precarious. A cease-fire is in place in the country.

"Libyan football has suffered greatly in the absence of the league, and its return will be a positive for the Libyan national team ahead of our upcoming matches," said Abdul Nasser Ahmed, secretary-general of the Libyan Football Federation. "This has been a joint effort by all the stakeholders who have encouraged this move and have been working in cooperation with the Libyan Football Federation to overcome all obstacles, whether security or health."

He said health authorities agreed to the start of the league "on the condition that the clubs adhere to several precautions and in particular that the league will be held without fans in stadiums."

After a seven-year ban, Libya has begun hosting international matches. The Libyan national football team's season



The Libyan national football team prepares to take the field for a 2021 African Cup of Nations qualifier. Libya hosted Tunisia after a seven-year ban on home football international competition.

began by hosting a 2021 African Cup of Nations qualifier match with Tunisia in the eastern Libyan city of Benghazi on March 25, 2021. Tunisia won 5-2 in the match played behind closed doors due to the continuing COVID-19 pandemic. The loss ended Libya's bid to play in the next Africa Cup in Cameroon in 2022.

AFRICA'S ANIMATION SCENE IS BOOMING

BBC NEWS AT BBC.CO.UK/NEWS

igerian animator Ridwan Moshood was so determined to learn how to make cartoons, he spent hours in internet cafes in Lagos, watching YouTube lessons and taking notes.

"I would go to a cyber cafe, watch video tutorials and write down whatever I'd learnt," he says.

Today, the 26-year-old is a rising star in Africa's blossoming animation scene.

In 2018, he was recognized by the Cartoon Network Africa Creative Lab for his animation Garbage Boy and Trash Can.

He has since formed a production company, and he now hopes to have his latest idea, a cartoon set in Lagos called In My Hood, commissioned into a series.

Ridwan Moshood's journey into animation is not unique.

"All over the continent we hear these stories." says Nick Wilson, founder of the African Animation Network, who is based in Johannesburg, South Africa.

He reels off a list of countries where local animators are starting



to make their mark: Burkina Faso, Egypt, Ghana, Kenya, Mozambique, Nigeria, South Africa and Uganda.

"Wherever we've been able to scratch the surface and connect the community, we've found pretty exceptional talent and the majority of this talent is self-taught," he said.

Although stories of self-taught animators breaking into the

industry are inspiring, more formal training opportunities do need to be developed, he said.

Recently, partnerships have been announced with international animation studios Toonz Media Group and Baboon Animation. Both companies plan to establish animation academies in Africa, adding to the handful that exist already.

Despite the scarcity of formal training opportunities, locally made productions already are starting to take off. Chris Morgan of Fundi Films was able to draw on a pan-African talent pool for his recent production. My Better World.

The educational series aimed at African schoolchildren and young teenagers involved a team of creatives working remotely across the continent.

"We had over 100 producers working in seven different countries, and this was pre-COVID," he said, speaking from Mpumalanga, South Africa.

The result is a series of 55 short animated films that are available in English, Hausa, Somali and Swahili.



U.S. EMBASSY LUANDA

ANGOLA MOVES TOWARD A MINE-FREE FUTURE

ADF STAFF

fter three decades of civil war, Angola is left with a deadly legacy: land mines. Although fighting ended in 2002, Angola remains one of the most heavily mined countries in the world. Land mine explosions killed 76 people in 2019.

An estimated one-fifth of the country's population lives in areas with mines, which affect every aspect of their lives.

"Land mines not only kill and maim innocent people, but also isolate communities from basic needs such as water sources and travel routes and productive land crucial for growing crops and grazing livestock," the demining group APOPO said.

The country set a goal of removing all mines by 2025 and made significant progress by removing and destroying nearly 10,000 explosive devices in 2019. But it has experienced setbacks due to lost revenue from dropping oil prices and the economic recession caused by COVID-19.

To help keep Angola on track, the United States is donating \$11.1 million for demining and weapons stockpile management. Since 1995, the U.S. has contributed \$145 million to these causes in Angola.

"Twenty-five years of committed U.S. support for humanitarian demining has resulted in the destruction of over 218,000 land mines and other explosive hazards, and the safe return of over 463 square kilometers of land to the people of Angola," U.S. Ambassador to Angola Nina Marie Fite said.

Part of the funding will help rehabilitate and build 16 storage facilities for weapons and munitions and train experts in stockpile management. Since 2006, the U.S. has helped Angola destroy nearly 108,000 excess weapons and 588 metric tons of obsolete and unneeded ammunition.

One of the groups supported by the funding, HALO Trust, has recruited and trained all-female demining teams in the country. HALO's 100 Women in Demining project offers empowerment and opportunity to women from low-income areas, many of them single mothers.

"The difference we make to the community is huge because people can go about their lives. They are much happier because they feel safe," Rita Kassova Kachiponde, a deminer, said in a HALO Trust video. "I will feel very, very happy when Angola is cleared of mines."

GHANA LAUNCHES OPERATIONS CENTER TO FIGHT CYBERCRIME

ADF STAFF

Ghana opened a security operations center (SOC) to monitor and respond to cyberattacks.

The center, run by the National Information Technology Agency under the Ministry

of Communications, will protect data from Ghana's governmental ministries, departments and agencies.

"The SOC will offer services, including network monitoring, which will ensure that government networks are monitored consistently in real time and will contribute to the identification of patterns and prioritization of problems for optimized resource and threat management," Communications Minister Ursula Owusu-Ekuful told GhanaWeb.

The center is expected to partner with the national Computer Emergency Response Team (CERT) and the National Cyber Security Centre (NCSC). Ghana has a history of cybercrime mostly related to credit card fraud, identity theft and advance-fee scams. The country lost \$105 million in 2019 due to cybercrime, the center reported.

Ghana has made cybersecurity a priority in recent years. In 2020, its Parliament passed the Cybersecurity Act to protect critical national infrastructure, regulate online activity and protect children from online exploitation. In November 2020, the cybercrime unit of the Ghana Police made headlines when it arrested the administrator of Empressleak, a website that extorted people by posting revenge pornography.

"Staying one step ahead of cybercriminals requires diligent work to identify, report and ultimately eliminate vulnerabilities," said Christopher Lamora, charge d'affaires at the U.S. Embassy in Accra.

The head of the center, Dr. Albert Antwi-Boasiako, is confident that the country is making gains against criminals. He credited citizens who reach out to the center to report incidents through email, WhatsApp, text messages or phone calls.

"Between January and August of [2020] alone, more than 5,000 residents made contact with the NCSC, through the National CERT, for guidance and advice in addressing cyber security issues of which most of them involved online fraud," Antwi-Boasiako told GhanaWeb.

Ending Herder-Farmer Violence Aim of South Sudan Dialogue

ADF STAFF

Conflicts caused by the annual cattle migration are common in South Sudan. Cows sometimes eat or destroy the crops of farmers, who may react by killing the cattle. This escalates to warfare between families or villages. The United Nations Mission in South Sudan (UNMISS) is supporting an effort that travels from village to village facilitating dialogue to resolve disputes.

"Our objective in coming here today is to encourage you to opt for dialogue to resolve any disagreements instead of resorting to violence," said Joseph Ngoriakou, UNMISS civil affairs officer, as he addressed a gathering in Warrap State in early 2021, according to ReliefWeb.

About 200 people, including women, young people and local leaders from the region, gathered to discuss how to make the ongoing cattle migration season as peaceful as possible for herders and farmers.

"Please, do not let your cows destroy our crops. We [farmers] are ready to share the resources that exist with you in a peaceful way," Wol Ngong Uchala, a resident of Bab-Chok in the Malual Muok area, said when speaking to cattle herders at a UNMISS event.

The U.N. also is supporting a mobile court to issue judgments in disputes that can't be resolved through dialogue alone. The groups signed the Marial Bai agreement in 2016 that states how conflicts should be resolved, how herders should seek permission to move cattle and how compensation should be paid in the event of a loss.

Speakers at the event stated a need to reduce the amount of illegal weapons circulating in the region.

"In the past, humans would run for safety from lions attacking them. These days, humans run for their lives because of other humans," said Kerubino Mayar, a cattle herder from Tonj. "They have guns and kill each other. It must stop. Let there be reconciliation, let us stop these problems from happening."





Police Officer of the Year Empowers Women as Peacemakers U.N. MISSION IN SOUTH SUDAN

hief Inspector Doreen Mazuba Malambo of Zambia believes in a simple motto: "When you teach a woman, vou teach a nation."

She has brought that wisdom to more than a decade of service in peacekeeping missions on the African continent where she has helped protect women and children caught in conflict. Now serving in the United Nations Mission in South Sudan (UNMISS), she has been named U.N. Woman Police Officer of the Year.

"I've always believed that women need to be heard on any issue that has a direct bearing on their day-to-day life," she said. "My work as a gender advisor allows me to make efforts toward empowering

South Sudanese women and girls every day. Being able to build capacities of local law enforcement agencies is a bonus."

Malambo has served in South Sudan since 2016, beginning as a Joint Integrated Police Force trainer. Three months after she arrived in the country, war broke out. Before long she found herself helping the people who flocked to the UNMISS camp looking for protection.

"I was scared myself, but I knew that if a police officer in uniform shows fear, then there will be no hope for these women," she said. "So, I started encouraging them and telling them that the fighting will stop, it will end."

Malambo is a single mother and empathized with the plight of those separated from their families

or attacked in the conflict. She encouraged the women to become peacemakers. "I must have influenced a few of them because soon enough, many women started calling upon their husbands to stop fighting," she said. "We began seeing men coming in to the UNMISS compound and surrendering their weapons."

She said she was "overwhelmed and honored" to receive the award but believes serving those in need is the greatest privilege. "The true reward for me as a peacekeeper, as a police officer and as a woman is the opportunity to serve a cause that transcends all boundaries — sustainable peace for all, including the marginalized, the displaced and the disabled."

Nigerian Air Force Trains Crime Scene Investigators

The Nigerian Air Force (NAF) is improving its ability to investigate, arrest and prosecute criminals, including those who traffic illicit goods.

The NAF graduated 15 people from the Advanced Crime Scene Investigation Course at the 057 Provost Investigation Group in Lagos. The intensive four-week course taught Air Force personnel how to approach crime fighting scientifically.

The course covered topics such as evidence recovery, crime scene photography and fingerprinting. Graduates learned how to lift and preserve DNA evidence and how to present evidence during legal proceedings.

During the graduation ceremony, Air Vice Marshal Lawal Alao told graduates that this training was part of a larger push to position the NAF as a professional and disciplined fighting force.

In 2018, the NAF opened a remodeled and fully equipped forensic crime laboratory. At the inauguration ceremony, then-Inspector General of Police Ibrahim Idris said evidence preservation is key to law enforcement. "Without the objective evidence obtained through scientific analysis, many crime cases would have gone unsolved and



the perpetrators unpunished," he said. "It is thus a veritable tool for not only detection and prosecution, but also deterrence."

He applauded efforts by the NAF to make strides in law enforcement. "It is a testimony of the Nigerian Air Force leadership's commitment to push the boundaries and improve on the methodologies and technological platforms to detect and analyze evidence of crime in the service," he said.

Chadian Military Launches Farm Project to Support Troops

ADF STAFF

A pilot project by Chad's Armed Forces aims to create a self-sustaining food supply for the military by developing farms on military outposts.

Graduates of the Chadian Army Farm School started the first on-base farm at the military's training center in Koundoul. The tilled and irrigated farm, which covers about 6.5 hectares within the military compound, has raised crops such as rice, okra, beans, melons, hibiscus, tomatoes, eggplant and onions.

"The creation of the Land Forces Farm jump-started skills we learned at Koundoul," Lt. Adam Eritero Cordubo, a 2019 graduate of the farm school, told *ADF*. "Our skills from the school are used daily here."

The produce grown on the farm feeds Soldiers at the Koundoul base and at the headquarters of the Chadian Land Forces in N'Djamena. Part of the crop goes into long-term storage and into a seed bank for future plantings.

"In this way, the pressure on the Army to take food from the markets around the capital, N'Djamena, is reduced, which is a definite advantage for civilians," Ladiba Gondeu, a social anthropologist at the University of N'Djamena, told *ADF*.

Chadian Land Forces include 28,000 Soldiers in 12 zone commands and eight training centers spread across nearly 1.3 million square kilometers. Chadian forces are key to the G5 Sahel Joint Force, which is fighting extremists across the region between the Sahara and tropical Africa.

"Logistics of any sort is a highly challenging topic to address," Stuart Bracken, an advisor to the Land Forces with U.S. contractor Apogee Systems Corp., told *ADF*. Bracken provided financial and logistical assistance to launch the farm program.

The Army Farm School began in 2008 with financial help from the French Embassy to give Soldiers skills they



Chadian Soldiers sort through produce grown on the Land Forces' outpost in Koundoul. Graduates of the Army Farm School developed the nearly 6.5-hectare farm. STUART BRACKEN/APOGEE SYSTEMS CORP

could use to make a living after they left military service. Since then, the school has trained 100 people to farm.

Agriculture makes up about 52% of Chad's economy and employs 80% of its labor force. Despite that, food security is a constant challenge. Droughts, regional conflicts and a lack of arable land often reduce the amount of food the country can produce, leading to shortages, according to the United Nations World Food Programme.

The Koundoul project ensures a reliable food source for the nation's military while putting to use the skills Soldiers develop at the farm school. Along with the 6.5 hectares under plow, the Koundoul project also added a 47-square-meter farm building with an office and storage space.

The first farm was developed as a test case. If military leaders support it and it finds funding, the farm project could be replicated across all 12 zones.

The Land Forces' skilled farmers are ready to make their mark.

"We hope through our work to make the command better, but we need support," said Capt. Mohammed Ismael Ahamet, another 2019 farm school graduate. "With further support we will be able to support the command and country at full power."





SAVINGS GROUPS GIVE LIFELINE TO KENYANS

VOICE OF AMERICA

he COVID-19 pandemic has wiped out an estimated 2 million jobs in Kenya, forcing many into the informal economy. Kenyans, however, also have a secret that is keeping many of them financially afloat — the largest cooperative savings and loan movement in Africa.

With more than 14 million members making monthly contributions, Kenya's cooperatives offer loans during tough times, helping many to ride out the pandemic or even start their own businesses.

Judy Muthama was selling shoes and utensils in the Mukuru Kwa Njenga slum in central Nairobi. Sales were good until the pandemic wiped out her business. But she is restarting her business with a \$600 loan from a savings and credit union, where she has had a membership for three years.

Muthama said that if it were not for the cooperative, she would have closed her business. She said the cooperative improved her situation each time she encountered financial constraints.

Austin Oduor is the chairman of Uprising Housing Cooperative, whose savings union has 834 members. He said the union has seen an 80% drop in monthly collections since March 2020, but it still is helping members get through tough economic periods.

"While they appreciate the cooperative, we have worked with them in a number of things," he said. "We have given them meal vouchers, hand washes, masks. We gave some of them loans to take their children back to school."



A Nairobi shopkeeper closes his business for the day as a curfew begins as a result of the COVID-19 pandemic. AFP/GETTY IMAGES

Kristin Wilcox, director of a United States Agency for International Development program that works closely with the cooperative societies in Kenya, said she admires the initiative that drives the groups.

"By their very nature there is no one from outside assisting these members to achieve their goals. It's purely based on their own energies and own abilities to collectivize," she said. "I think that's exciting because there is no one, no man behind the curtains, there is no one there at the end of the day to take the bulk of the profit. What they are able to achieve is on their own."

Sudanese Christian, Muslim Leaders Promote Religious Freedom

VOICE OF AMERICA

Sudanese Muslim and Christian leaders have joined to promote religious freedom in the country, now that the government of Omar al-Bashir is out of power. The groups signed a peace deal declaring freedom of religion a human right.

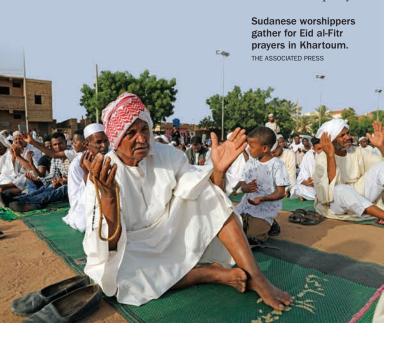
At the end of a two-day conference, the religious leaders agreed to promote peace and freedom of worship among all Sudanese communities and to encourage community dialogue among people of different faiths.

Khartoum Catholic Archbishop Michael Didi said the declaration will help create space for more religious freedom in Sudan as the country embarks on a new era after the revolution that led to military leaders removing Bashir from power.

Didi said three decades of religious oppression created social stigma among different communities across the country, and change will not happen overnight.

Jibril Bilal, a member of the Darfur-based rebel group Justice and Equality Movement, said the declaration's resolutions are in line with the peace agreement mediated in Juba, South Sudan, which call for a secular system of governance in Sudan with equal rights for everyone.

William Devlin, co-chair of the Khartoum-based organization Unity International, said the declaration paves the way for religious freedom in Sudan after decades of strict Islamist rule. He called on Muslims and Christians to forget the past and work together to build a new Sudan where citizens are treated equally.



Somali Women Get \$1 Million Prize

VOICE OF AMERICA

A Somali mother and daughter who have dedicated their lives to rehabilitating victims of conflict are gaining international acclaim, receiving a \$1 million award.

Fartuun Adan and her daughter Ilwad Elman operate Elman Peace, an organization that helps victims of sexual violence and works to rehabilitate and provide job training to child soldiers in Somalia.



Fartuun Adan

They were the 2020 recipients of the Aurora Prize for Awakening Humanity, given each year to a person or group risking their lives to protect people in conflict. The award is given on behalf of victims of the Armenian genocide. They are the fifth recipients since the award was created.

The pair created Sister Somalia, the first rape crisis center in the country to offer protection, counseling and medical treatments to victims. In 2010, when the crisis center began its work, Somali politicians, including the president, denied that rape existed in the country. Discussing it was considered taboo.

When the group opened a hotline that victims could call for help, operators received threats of violence from people who did not want the issue discussed.

"Our staff were arrested, harassed. Our centers were shut down. This was just a mere 10 years ago," Elman said. "There was no profile of what a survivor of sexual violence was like in Somalia then, from a 70-year-old woman to a 2-year-old child. Complete impunity."

The crisis center has grown to include locally supported facilities in nine regions of Somalia. The issue, once ignored, is now being debated in Parliament by female elected officials.

"We have so far to go, but we came from a place where you couldn't even talk about it," Elman said. "There were no services available at all to now having multiple service providers where we have a surge of 11% women participation [in Parliament] to 24%."

"We have a conversation that actually acknowledges that this is happening in the country," Elman said. "And now try to figure out what to do about it, as opposed to denying it. So, there's tremendous progress."

The family's activism began with Fartuun Adan's late husband, Elman Ali Ahmed. A peace activist, he operated auto repair shops in Mogadishu where he offered employment and job training to young people who decided to leave clan-based militias. He was known for his slogan "Drop the gun, pick up the pen."



Cycling Takes Off in Nairobi AGENCE FRANCE-PRESSE

growing trend in Nairobi, Kenya, sees more people switching to cycling since the onset of the COVID-19 pandemic, despite a critical lack of bike paths.

It's a promising sign in the capital city where air pollution has increased 182% since the 1970s, and traffic jams cost an estimated \$1 billion in lost productivity every year.

In his store for used bikes in the city, Jimmy Karumba said he experienced a more than 50% rise in sales in 2020. The shopkeeper, who mainly sold children's bikes before the pandemic, said he welcomed many adult customers looking to avoid public transport and stay fit.

Without the protection of bike lanes, cyclists must navigate between antiquated trucks, speeding SUVs and motorcycles crisscrossing the lanes on a busy highway during rush hour. Nevertheless, some still see several benefits to this mode of transportation.

Despite two minor accidents, videographer Steven Odhiambo is a big believer in the benefits of biking. He says he lost 20 kilograms from cycling alone and saved significantly on transportation, thanks to a used bike he bought for about \$140.

"The fear was there about trying to maneuver these roads of ours where a big percentage of the drivers are usually careless," he said. "They can push you off the road; they don't care about you. But I just look at the pros and cons. I'm much safer on a bicycle, I am social distancing, I take less time."

Cyclists take part in the monthly

Cyprine Odada of Critical Mass, an alliance of cyclist groups that holds a monthly ride of up to 1,000 people in Nairobi, said the pandemic has shown policymakers that biking is popular among Kenyans and not exclusively a means of transportation for those of less financial means.

"Weirdly, COVID has been good for cycling," she said. "It has shown policymakers that people want to walk, people want to cycle. And they have to — whether they like it or not! They have to find a way of ensuring people can get to their destinations safe and sound. It's no longer us forcing ourselves to share roads with motorists; we do need a space dedicated specifically for cyclists and for pedestrians."

Kenyan's Plastic Bricks

STRONGER

Than

CONCRETE

REUTERS

Nzambi Matee hurls a brick against a footpath constructed from bricks made of recycled plastic that her factory produces in the Kenyan capital.

It makes a loud bang, but it does not crack.

"Our product is almost five to seven times stronger than concrete," said Matee, the founder of Nairobi-based Gjenge Makers, which transforms plastic waste into durable building materials.

"There is that waste they cannot process anymore; they cannot recycle," she said. "That is what we get."

Matee gets the waste from packaging factories for free, although she pays for the plastic she gets from other recyclers. Her factory produces 1,500 bricks each day, made from a mix of different kinds of plastic.

These are high-density polyethylene, used in milk and shampoo bottles; low-density polyethylene, often used for cereal or sandwich bags; and polypropylene, used for ropes, flip-top lids and buckets.

The plastic waste is mixed with sand, heated and then compressed into bricks, which are sold at varying prices, depending on thickness and color. The common gray bricks cost 850 Kenyan shillings (\$7.70) per square meter.

Matee, a materials engineer who designed her own machines, said her factory has recycled 20 tons of waste plastic since its founding in 2017. She plans to add another, bigger production line that could triple capacity, and hopes to break even by the end of 2021.

Matee set up her factory after she ran out of patience waiting for the government to solve the problem of plastic pollution.

"I was tired of being on the sidelines," she said.





Africa Forges Ahead With

Continental Trade Bloc

VOICE OF AMERICA

frica has launched the world's largest trade bloc after the World Trade Organization. Every African nation except Eritrea has signed on to the African Continental Free Trade Area, and countries are developing

Nigerian President Muhammadu Buhari signs the African Continental Free Trade Area agreement.

AFP/GETTY IMAGES

safety guidelines for trade during the pandemic.

The launch of the African Continental Free Trade Area initially was scheduled for the middle of 2020 but postponed due to the pandemic.

African governments decided to proceed with the launch in hopes that the trade bloc could boost African economies affected by COVID-19.

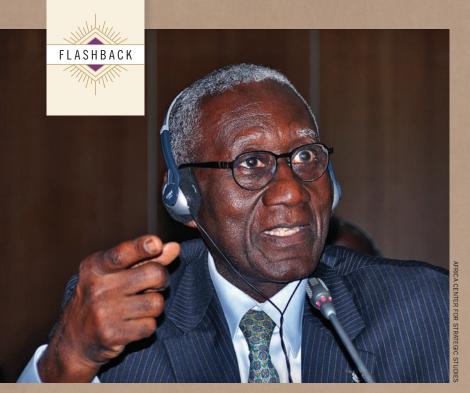
In some countries, such as Nigeria, authorities are dealing cautiously with trade by screening people and goods. Nigeria is among more than 30 African nations that ratified the treaty by December 2020.

The idea is to boost "Rules of Origin" goods, meaning that all the goods traversing borders must be made in Africa, not imported. The goal is to increase intra-Africa trade, which is about 16% of all trade.

The continent has a combined gross domestic product of \$3 trillion. Experts say the trade deal could expand intra-Africa trade by more than 50%, and the accord contains a dispute resolution mechanism to handle trade disputes.

Many African countries are counting on Nigeria's participation to boost the pact. Nigeria has the continent's largest economy.

Nigerian authorities have created a National Action Committee consisting of customs, security and health officials to oversee the country's trade dealings with other members and advise the government accordingly.



The General Who Became a PEACEMAKER

ADF STAFF

t was just before midnight at the end of a long election day in 2000, and Lamine Cissé, Senegal's minister of the interior, had the unenviable task of telling the president he had lost.

In a historic phone call, Cissé, a retired four-star general, found just the right words to let President Abdou Diouf know that the people had spoken and it was time to accept their decision.

"Mister President, the situation is difficult for you and for your party. The trends going against you are now irreversible," Cissé said, according to his memoirs. "If you congratulate your opponent like you promised to your campaign director, you will be the moral victor of this election."

Diouf accepted the results and left office peacefully in what was Senegal's first democratic transition. The newly elected President Abdoulaye Wade later said that Diouf deserved the Nobel Peace Prize for his actions.

The elections marked the beginning of a second career for Cissé.

Cissé was born in 1939 in Sokone, Senegal. His education included graduating from the Special Military School of Saint Cyr, France; the National Defense University in Washington, D.C.; the Center for Higher Studies in National Defence in Paris; and the the U.S. Army Command and General Staff College in Fort Leavenworth, Kansas.

After the 2000 elections, then-Secretary-General of the United Nations Kofi Annan appointed him as a special representative to the conflict-torn Central African Republic, where he served until 2007. He also was the head of the U.N. office in Central Africa.

At the time, Cissé told the news service IRIN that the Central African Republic's "salvation" depended on the opposing forces sitting down at the negotiating table.

"The country's sons and daughters must talk among themselves around a table," he said. "Dialogue is the only way out for this country."

In 2007, then-U.N. Secretary-General Ban Ki-moon appointed Cissé as special representative of the U.N. in West Africa, where he presided over the disputed border between Cameroon and Nigeria in the Bakassi Peninsula.

In 2010, Cissé was appointed head of the International Security Assessment Team in the Republic of Guinea, where he also was the U.N. coordinator for security sector reform until 2015. In Guinea, he worked with a team of experts in evaluating the security sector to prepare for a restructuring of the armed forces.

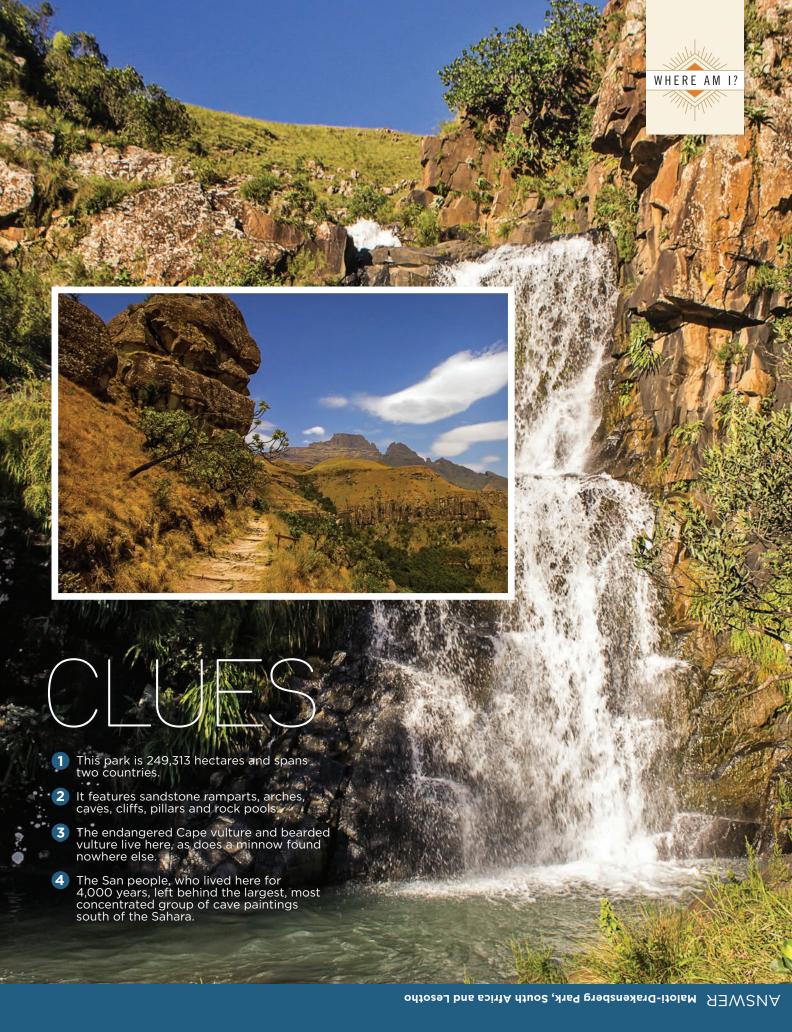
He was the first Senegalese person inducted into the Hall of Fame of the U.S. Army Command and General Staff College, and the first African inducted into the Hall of Fame of the National Defense University.

Senegal and other countries honored Cissé for his work. His home country awarded him the Grand Cross of the National Order of the Lion and the Grand Cross of the Order of Merit. France awarded him the Officer of the French Legion of Honor and Grand Officer of the French Order of Merit.

Cissé also was a longtime friend of the Africa Center for Strategic Studies (ACSS) in Washington, D.C. Over the course of 20 years, he participated in more than two dozen of the center's events as an organizer, facilitator and guest speaker. He also was the president of the Senegal Chapter of the ACSS' community chapters.

He died in Dakar, Senegal, in 2019 at age 80. In February 2021, PartnersGlobal, Partners West Africa Nigeria and Partners West Africa Senegal decided to award research fellowships to two young female African researchers and practitioners working in the civil society and security sectors. The fellowships will fund "innovative research around the prevention and peaceful resolution of conflicts in Africa," specifically for women.

They are named the General Lamine Cissé Women, Peace and Security Research Fellowships.



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