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#### ON THE COVER

Countries are turning to technology and regional cooperation to protect maritime resources and unlock the potential of the blue economy.

ADF STAFF



oo often, maritime security takes a back seat to land-based concerns. It's easy for the problems roiling the vast seas to remain out of sight and out of mind.

Many African countries are realizing they no longer can afford to take this position. The blue economy is an engine for growth, responsible for \$300 billion in commerce and supporting 50 million jobs. Oceans are critical to food security with 200 million African people relying on seafood for part of their diet.

But this resource is under attack. Foreign trawlers take advantage of areas of weak enforcement to decimate fish stocks. The Gulf of Guinea is a global hot spot for illegal fishing with supertrawlers, largely Chinese, flouting laws and costing the region as much as \$9.4 billion annually.

Other crimes, such as drug trafficking, hazardous waste disposal, piracy and smuggling, thrive in areas where criminals know there is little risk of being stopped by a law enforcement vessel.

In response to these threats, navies with limited budgets are getting creative. New technology and strengthened partnerships help share the burden across borders and maximize resources. Countries are using low-cost maritime domain awareness tools like the web-based SeaVision platform to identify suspicious vessels and hot spots of illegal activity. Regional frameworks such as the Djibouti Code of Conduct and the Yaoundé Code of Conduct are facilitating instant information-sharing, regional alerts and joint action. Tools such as aerial and sea drones are serving as force multipliers for thinly stretched naval forces. Artificial intelligence helps officials decipher the information they receive and act on it.

The blue economy depends on improved security at sea. As security professionals look to build a stable and prosperous future, they know they must protect the continent's fisheries, trade routes, beaches and ports. The ability to do this is now within reach. The determination is there. The partnerships are in place. The tools are available. If navies across Africa can continue to work together and build on this maritime momentum, they can help unleash the economic potential of the ocean and protect precious resources for future generations.

U.S. Africa Command Staff





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Maritime Exercise Embodies
'Spirit of Solidarity'

Rear Adm. António Duarte Monteiro, chief of staff of the Cabo Verdean Armed Forces, spoke in Praia on May 5, 2025, during the opening ceremony of the 14th iteration of Obangame Express, a multinational maritime exercise involving nations along the Gulf of Guinea. Cabo Verde hosted the exercise for the first time. Monteiro's remarks have been edited for space and clarity.



An instructor from Senegal's Forces Speciale de Mer leads subject control training during exercise Obangame Express 2025 in Dakar, Senegal. CHIEF PETTY OFFICER JOHN PEARL/U.S. NAVY



Despite the progress made in recent years, the security challenges faced in the Gulf of Guinea and

mid-Atlantic regions have become increasingly multifaceted and interconnected. In addition to the well-known threats - such as piracy; narcotics, arms and human trafficking; illegal, unreported and unregulated fishing — new risks such as maritime cybercrime, illegal bunkering, illegal exploitation of underwater resources, and the growing use of unmanned technologies for illicit purposes have emerged. These threats, often orchestrated by sophisticated transnational networks, mandate a robust and structured response based on cooperative security, which requires coordination among multiple states and international organizations.

Within the regional and trans-Atlantic context, due to its geostrategic position in the mid-Atlantic, at the crossroads of major international maritime routes and its large exclusive economic zone, Cabo Verde faces significant security challenges. By adopting a holistic and integrated perspective on threats and the structuring of its national security framework, Cabo Verde has been working in close collaboration with its regional and international partners to ensure the protection and stability of our seas.

The Obangame Express exercise series, enriched by the contributions of

partner countries and international organizations, has served as an invaluable platform for strengthening interoperability, sharing best practices and developing

capabilities among participating nations, enabling them to confront the pressing challenges of the maritime sector, particularly in our region.

Obangame Express 2025, which takes place across the Gulf of Guinea, is not merely a demonstration of military capabilities nor solely an exchange of knowledge.

It also embodies a spirit of solidarity, a convergence of efforts, and above all, evidence to the power of unity among nations in pursuit of a common goal: contributing to peace and prosperity to ensure sustainable and balanced exploitation of living and nonliving resources.

Security-wise, we live in a world of constant changes, where the challenges and threats to maritime security are becoming increasingly complex and diffuse.

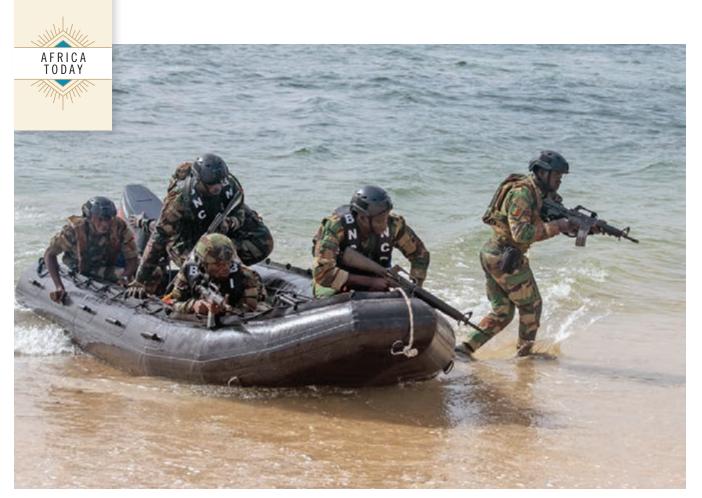
Furthermore, it is well known that maritime criminality and its perpetrators do not recognize and do not respect the delineation of geographical and political boundaries. This renders these transnational phenomena even more challenging, as the threats may have their origin on shore, in a distant country, materialized into crimes committed by means of

another country, under the command of a third one, and perpetrated by citizens of other nationalities.

Thus, the need to cooperate regionally and internationally is fundamental to enhancing maritime security, and also the recommended path to confront transnational threats. The Yaoundé Code of Conduct remains a shining example of how countries in our region, in collaboration and cooperation with international partners, can work together to combat maritime crimes.

I am convinced that if we engage in dynamic regional and international cooperation, we will succeed in ensuring greater security in our maritime domain, a fundamental element for the development of our countries, subregions and continent, subsequently contributing to global security and stability.

It is, therefore, essential to optimize the capabilities of African maritime forces; enhance maritime situational awareness within our areas of jurisdiction; and promote interoperability, resilience, and operational readiness based on the principles of cooperation, knowledge sharing and joint training to ensure maritime security in its broadest sense.



#### Obangame Express Stresses Maritime Readiness, Rule of Law

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Effective communication is key to the success of military training events such as Obangame Express, which builds cooperation to fight sea crimes such as illegal fishing, piracy and trafficking.

Nearly 20 African nations from Cabo Verde to Namibia participated in the two-week exercise. The largest multinational maritime exercise in Western and Central Africa ended May 16, 2025. It included visit, board, search and seizure training in Senegal. Participants practiced tactical ship entries and learned search and evidence-handling procedures. Chief Petty Officer Mass Jallow of the Gambian Navy said the exercise benefited his team.

"We come from different countries, different training backgrounds," Jallow said. "Sharing techniques and experiences gives us stronger ideas to take home."

Cabo Verde hosted the exercise, which stretched across five maritime zones from Angola to Senegal. The United States 6th Fleet led the exercise, supported by U.S. Africa Command.

The exercise included more than 30 ships, multiple aircraft and 21 maritime operations centers. It supports the Yaoundé Code of Conduct, which helps maintain situational awareness and fights maritime crime in the Gulf of Guinea, a hot spot for piracy, illegal fishing, drug trafficking and other crimes.

Senegalese commandos train to secure a beach at Obangame Express 2025 in Dakar. CHIEF PETTY OFFICER JOHN PEARL/U.S. NAVY

Participants also practiced using SeaVision, a tool that lets users track commercial vessels globally with data from automatic identification system transponders. SeaVision helps countries share maritime information and intelligence, enhance operational capabilities, and detect vessels not transmitting a transponder signal, which often is a sign of illegal activity.

The exercise included a six-day rule of law event to improve interoperability in vessel boarding, evidence collection, case building and prosecution. Participating nations provided a legal representative and maritime operators. The event featured multiple tabletop exercises and a mock trial in which maritime operators testified about their findings.

"We are talking about illegal immigration, illegal fishing, unreported fishing, and also drug trafficking, which are threats to our waters," Capt. Francisco Moreira, operations director of the Cabo Verdean Coast Guard, said in a news release. "Cabo Verde also invited all the national agencies that work together in these operations. I think that from now on, we will be better prepared for our missions."



### **Cutlass Express Emphasizes Collaboration, Land Operations**

ADF STAFF

The specters of terrorism, piracy and smuggling loomed as more than 1,000 participants from 20 nations trained to conduct multinational maritime security operations in the Western Indian Ocean during the 15th iteration of Exercise Cutlass Express.

The East African exercise, sponsored by U.S. Africa Command and facilitated by the U.S. 6th Fleet, was held February 10-21, 2025, in Mauritius, the Seychelles and Tanzania.

Maj. Gen. Ibrahim Mhona, chief of Training and Combat Readiness for the Tanzania People's Defence Force, said the event emphasized the need for regional, continental and international collaboration.

Seychelles Special

conduct a visit, board,

search and seizure drill

during Exercise Cutlass

Express in Port Louis.

Mauritius, on February

PETTY OFFICER 2ND CLASS JACOB

Forces personnel

17, 2025.

"When we talk about terrorism, human trafficking and cybercrime, these are global issues," he said during the closing ceremony. "Since we share similar challenges, it is imperative that we tackle them together. However, effective collaboration is only possible if we train together. Interoperability is a fundamental aspect of our preparedness."

Comoros, Djibouti, Kenya, Madagascar, Malawi, Morocco, Mozambique, Senegal, Somalia and Tunisia were among the other participating African nations.

Two national maritime operation centers in Tanzania took part in drills to collaborate on scenarios linked to visit, board, search and seizure (VBSS) training in Tanga.

In the Seychelles, a weeklong rule of law course helped participants share and refine tactics for interdiction operations and for holding offenders accountable for crimes at sea.

Exercise Cutlass Express 2025 linked up with Exercise Justified Accord, which also took place in Tanzania, to improve coordination between land- and sea-based operations.

"This exercise was important for fostering cooperation to address global security challenges," Mhona said. "[It] was designed to involve multiple nations because the challenges we face in Africa are the same as those encountered in other parts of the world."

Seychelles Defence Forces Lance Cpl. Kenny Vidot relished his role as a VBSS instructor in Tanzania. He said 12 of his Seychellois colleagues participated in the same exercise in Mauritius.

"[We are] training to support collaborative maritime security operations in the region," he said. "This exercise is important for us to increase maritime capabilities and to promote regional cooperation in the Indian Ocean."

# **Liberia Launches True Guardian to Bolster Border, Coastal Areas**

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The Armed Forces of Liberia (AFL) in March 2025 launched Operation True Guardian in the nation's west to "restore public trust, bolster national security, and ensure the safety and stability of Liberia's borders and coastal areas," the AFL announced.

The operation began with patrols in the Western Region, which includes Grand Cape Mount, Bomi and Gbarpolu counties. Patrols will continue indefinitely and establish forward operating bases in each county. Security forces will focus on hot spots for crime and other security threats.

"This operation comes at a crucial time when Liberia is facing complex security threats, particularly in the western region where transnational crimes are on the rise," El-Dorado Nyanti Jebbe, the AFL's deputy chief of public affairs, said at the Barclay Training Center in Monrovia, according to The Liberian Investigator.

"The absence of a consistent security presence has created a vacuum that criminal networks are exploiting. We intend to change that narrative."

Local law enforcement and intelligence sources say they have seen surges in crossborder arms, drugs and human trafficking. Liberia also has had an uptick in maritime crimes such as illegal fishing and piracy.

Military forces will patrol to strengthen border security, enhance maritime surveillance and deter crime by engaging with local communities and their law enforcement agencies.

Similar patrols will be conducted quarterly in other Liberian counties, the AFL announced.



# 'A Simple Approach'

ANALYSTS SAY
REGIONAL COOPERATION
IS CRUCIAL IN ILLEGAL FISHING BATTLE

ADE STAFF





frica loses an estimated \$11.2 billion in annual revenue to illegal, unreported and unregulated (IUU) fishing. The challenge is particularly acute in West Africa, which loses up to \$9.4 billion to the scourge.

Illegal fishing by foreign industrial and semi-industrial trawlers, particularly from China, has driven food insecurity and threatened the jobs of more than 10 million men and women who work in Africa's artisanal fisheries.

Security professionals recognize the threat. Col. Roland T. Bai Murphy, commander of the 23rd Infantry Brigade of the Armed Forces of Liberia, has seen firsthand the effects of IUU fishing on his country's artisanal fishermen. Liberia loses \$75 million annually to illegal fishing.

"IUU is serious, because most of our population that lives along the coastal lands are artisanal fishermen," Murphy told ADF during the African Land Forces Summit in Accra, Ghana, in April 2025. "So, when you have these trawlers coming in from Asian countries and some European countries fishing aggressively in our waters illegally, it denies the local artisanal fishermen their livelihood."

share information. You start to share resources. Therefore, you have more eyes on the problem. This also increases transparency. You can see what's on your [country's fishing] license list, so when vessels are apprehended, we can see if they're legally licensed or not. Going regional is really a no-brainer."

There are moves in that direction. In 2022, the Fisheries Committee for the West Central Gulf of Guinea and the Sub-Regional Fisheries Commission signed a memorandum of understanding with the Economic Community of West African States that established a framework for collaboration, partnership and cooperation.



An Ivoirian Sailor guards two Chinese fishing trawlers detained for fishing illegally. AFF/GETTY IMAGES

In Liberia, about 37,000 people work full or part time in the fishing industry, and 80% of the population relies on fish for protein. But industrial "supertrawlers" are putting this way of life at risk, displacing artisanal fishermen and decimating the ocean ecosystem.

"You have these big trawlers, some of them have nets that are a mile long, and they are dragging these sea beds, even damaging the coral reefs so badly that in Liberia you started having coral reefs washed ashore," Murphy said.

Several nations in the Gulf of Guinea implemented a patchwork of initiatives to combat illegal fishing, but they often go unenforced and unintegrated due to weak governance, limited enforcement resources and corruption.

Gareth Johnstone is executive director of Trygg Mat Tracking (TMT), a nonprofit organization that provides fisheries intelligence to countries and organizations. He contends that regional cooperation and collaboration are imperative in the fight against illegal fishing.

"It's a simple approach of coming together," Johnstone told ADF. "That means you start to

Through this framework, the Regional Monitoring, Control and Surveillance Centre in Tema, Ghana, is part of an effort to combat illegal fishing, improve oversight of fishing and fisheries enforcement, increase information sharing, and reduce costs for member states. TMT helps the center identify illegal fishing vessels, track their activities and analyze their connections to other crimes.

#### The Nova Zeelandia Case

Officials in Tema demonstrated the value of successful intelligence sharing and cross-border collaboration in March 2023 when the Dutchowned Nova Zeelandia entered the port. There were no immediate indicators that the vessel operated illegally, but a retrospective monitoring, control and surveillance assessment identified gaps in the ship's use of its automatic identification system, a practice known as going dark. Boats often do this to conceal illegal operations.

An investigation revealed that the ship had operated with Cameroon-flagged donor vessels to illegally transship fish at sea. Cameroon is a flag

## China's Malign Methods

ADF STAFF

China, which commands the world's largest distantwater fishing fleet, has the world's worst illegal fishing record, according to the IUU Fishing Risk Index. Of the top 10 companies engaged in illegal fishing globally, eight are from China. Beijing's trawlers can catch five times as many fish in a day as a small village fleet can in a year.

Chinese trawlers are notorious for "flagging in" to African nations, meaning they use and abuse local rules to flag a foreign-owned and -operated fishing vessel into an African registry to fish in local waters. Flagging in is a common sign that vessels are fishing illegally. Among the most destructive illegal fishing methods practiced by China's fleet is bottom trawling. Around Africa, China's bottom trawl fleet catches an estimated 2.35 million tons of fish a year worth more than \$5 billion, according to the Environmental Justice Foundation. Besides robbing the continent of food and income, bottom trawling wrecks ecosystems that fish need to survive and indiscriminately catches all manner of marine life.

Other illegal methods employed by Chinese trawlers include fishing with explosives, fishing with powerful lights at night, fishing in prohibited areas such as a country's exclusive economic zone, and engaging in "saiko," the illegal transshipment of fish at sea. In saiko, catches are transferred from a trawler to a large canoe capable of carrying about 450 times more fish than an artisanal fishing canoe. Beijing's trawlers also are known to destroy fishing gear used by local fishermen and capsize their

canoes, sometimes resulting in deaths.

In April 2025, Ghana's Ministry of Fisheries and Aquaculture and the Fisheries Commission suspended for 12 months the fishing licenses of four Chinese trawlers for practicing saiko, dumping unwanted fish, fishing in restricted zones and harvesting juvenile fish. IUU fishing costs the country between \$14.4 million and \$23.7 million annually.

"Saiko is precipitating the collapse of Ghana's staple fish stock and with it, poverty and hunger for its people," Steve Trent, executive director of the Environmental Justice Foundation, said in a Dialogue Earth report. "Chinese trawlers are making millions of dollars in an illegal trade which makes up over half of the fish caught by industrial boats in Ghana."

The trawlers, Meng Xin 10, Florence 2, Long Xiang 607 and Long Xiang 608, were flagged to Ghana but are owned by three Chinese companies, Ghana Business News reported.

The Meng Xin fleet, owned by the Dalian Mengxin Ocean Fishery Co., is linked to the 2019 disappearance of Ghanaian fisheries observer Emmanuel Essien. He went missing from the Meng Xin 15 trawler after filming the crew illegally discarding fish at sea and filing a report with the country's Fisheries Commission. He has never been found.

Fishing trawlers are docked at China's Zhoushan harbor. The country commands the world's largest distant-water fishing fleet. REUTERS



state sanctioned by the European Union for fishing violations. Upon review, Ghana contacted Angola via the South African Development Community's (SADC) Monitoring, Control and Surveillance Coordination Centre and confirmed that the ship also had illegally transshipped fish at sea, a practice known as saiko, along with the four other vessels. The Nova Zeelandia's documents also were forged.

Throughout the investigation, the West Africa Task Force regional communications platform arranged real-time collaboration with Angola, Benin, Côte d'Ivoire and Ghana, all areas through which the ship sailed. This led to Angola opening a legal case against Nova Zeelandia and the other vessels involved in saiko. In 2024, the Nova Zeelandia was denied further operations in Angola. Cameroon fined each vessel owner for noncompliance with national fisheries laws.

"The Nova Zeelandia case serves as a model for future multi-regional enforcement efforts, showcasing how robust PSMA [Agreement on Port State Measures] implementation and intelligence-driven enforcement can shut down IUU fishing networks," Johnstone wrote in a TMT report.

#### **Protecting Southern African Waters**

Within the SADC, Madagascar is viewed as a promoter of transparency and regional cooperation in efforts to fight sea crimes and enhance the blue economy. Madagascar's Regional Maritime Information Fusion Center helps identify suspicious vessels. Constant monitoring by the center's watch room helps it warn regional maritime law enforcement agencies of threats in a timely manner.

The Madagascar center shares information with its sister operation, the Regional Centre for Operational Coordination in the Seychelles, and with any country that faces a maritime threat. The Seychelles center mainly conducts joint law enforcement actions at sea.

Analysts have recommended that all countries in the region join the architecture of the Maritime Security Program so they can receive information from the regional centers. Comoros, Djibouti, France on behalf of Réunion island, Kenya,





Artisanal fishermen in Ghana mend a fishing net.

The continent loses \$11.2 BILLION annually due to illegal fishing.

illustrate the scale of the problem:

driven food insecurity for decades. These numbers

**\$9.4 BILLION** is lost in West Africa alone due to illegal fishing.

40% of the world's illegal trawlers fish in West Africa.

**7 MILLION** people in West Africa depend on fish for food and employment.

In Côte d'Ivoire, the yearly overall catch **PLUMMETED ALMOST 40%** between 2003 and 2020, due largely to illegal fishing.

The maximum catch potential for Côte d'Ivoire, Ghana and Nigeria could DROP BY ABOUT 50% by mid-century.

In Ghana, total landings of small pelagic fish, a staple of the national diet, **FELL BY 59%** between 1993 and 2019.

Of the **TOP 10** companies engaged in illegal fishing globally, eight are **FROM CHINA**.

China's bottom trawl fleet catches an estimated **2.35 MILLION** tons of fish annually around the continent worth more than **\$5 BILLION**.

Madagascar, Mauritius, the Seychelles and Tanzania are current program members.

In April 2025, the SADC's Monitoring, Control and Surveillance Coordination Centre; Madagascar's center; Stop Illegal Fishing; TMT; the World Wildlife Fund; and Fitsinjo, a local IUU fishing observatory; engaged in a four day workshop aimed at establishing a regional fishing vessel registry. They introduced fisheries inspectors from six ports in Madagascar to tools and methodology promoted through the SADC center to assess risks of fishing vessels and strengthen decision-making processes to deal with suspicious activities.

In August 2024, Madagascar unveiled a five-year plan to implement fishing quotas, create marine protected areas and diversify income sources for fishing communities.

"By building the capacity of fishermen through training and education, we aim to ensure that small-scale fishing remains a viable and sustainable activity for future generations," Paubert Mahatante, Madagascar's minister for fisheries and the blue economy, told SeafoodSource.



# A Multitude of Challenges

A CONVERSATION WITH MAURITIUS COMMISSIONER OF POLICE

#### RAMPERSAD SOOROOJEBALLY

Rampersad Sooroojebally is a veteran of the Mauritius Police Force, having enlisted in 1971. Before being appointed commissioner on November 15, 2024, he played a key role in restructuring the force's Anti-Drug and Smuggling Unit. He also designed and led the country's Counter Terrorism Unit, which collects and analyzes intelligence before disseminating it to law enforcement. His remarks have been edited for space and clarity.

**ADF:** Despite its small size, Mauritius patrols an exclusive economic zone (EEZ) spanning 2.3 million square kilometers, which is roughly the same size as Africa's largest country, Algeria. Can you describe your country's general strategy to maximize its resources to monitor and secure this area?

**Sooroojebally:** As you said, Mauritius has a very large EEZ, about 1,200 times our land mass. It presents a multitude of challenges. The National Coast Guard [NCG], which is the maritime

arm of the Mauritius Police Force, has the responsibility of safeguarding these maritime zones. The NCG is focused on several key areas, such as intelligence-gathering capabilities, fostering collaboration and capability enhancement. Our ability to monitor and analyze maritime activities has been strengthened to ensure that the operations are intelligence- and information-driven.



In collaboration, the NCG actively engages with domestic, regional and international maritime security agencies to share information and coordinate efforts. Domestically, it closely cooperates with units within the Mauritius Police Force, such as the Anti-Drug and Smuggling Unit and the Passport and Immigration Office, as well as external organizations like the Customs Anti-Narcotics Section, Fisheries, Tourism Authority, and Shipping and Ports Authority. The

NCG also actively collaborates with maritime forces of like-minded countries as well as with multilateral organizations to detect and thwart illicit maritime activities.

Continuous investment in modern technology and equipment for the NCG has been a focus of the government. Over the years, we have acquired new ships, aircraft, high-speed boats, surveillance systems and software,

which have enhanced our capacity to surveil and conduct operations effectively. We are also in the process of upgrading many of these fast-evolving technological systems, such as the coastal radar surveillance system.

**ADF:** How do these technological systems protect your waters?

**Sooroojebally:** They play a critical role in keeping our vast EEZ under surveillance and enhancing our maritime domain awareness. The NCG uses a number of tools and software to track and monitor merchant ships, fishing vessels and other vessels of interest in our maritime zone. The NCG has a multilayered surveillance approach that includes a coastal surveillance radar system, automatic identification system, or AIS, surveillance aircraft, ships and information-sharing mechanisms to monitor vessel movements in real time. We are also in the process of establishing a National Maritime Information Sharing Centre to better leverage technology and streamline the flow of information between various internal and external stakeholders to strengthen our ability to monitor our maritime zones. Adopting and absorbing technology is a continuous process, and we continue to acquire and integrate these tools to strengthen our surveillance and intervention capabilities.



Members of the Mauritius Police Force march during the country's 57th National Day celebration at the Champ de Mars racetrack, Port Louis, Mauritius, on March 12, 2025. REUTERS

**ADF:** Organized crime such as drugs, weapons and human trafficking are prevalent in the Indian Ocean and Mozambique Channel. What kinds of illegal maritime activities does your force deal with?

**Sooroojebally:** We face significant challenges, including illicit maritime activities that threaten our security, our economy and ecology. Among these, drug trafficking remains one of the most pressing concerns for the country. The harmful effects of drug trafficking extend far beyond their immediate impact, contributing to the rise of allied illicit enterprises that undermine societal well-being. The oceans continue to serve as a conduit for drug smuggling, and it has been our consistent endeavor to implement robust measures to counter this menace.

Illegal, unreported, and unregulated [IUU] fishing is another major threat. The Indian Ocean region is home to some of the world's most vital fisheries, which support millions of livelihoods and play a critical role in global food security. Excessive and unregulated fishing can disrupt marine ecosystems, deplete fish stocks and create long-term ecological imbalances. It's a major priority, and we work very hard to safeguard our marine resources and promote sustainable practices.

Other illegal maritime activities, such as human trafficking and unauthorized immigration, also pose significant challenges. These activities not only violate national and international laws but also endanger human lives and undermine regional stability.

The environment is another major issue because of tourism. We need people coming to Mauritius. There's no doubt about it. We coordinate with and assist the government in keeping environmental disasters at bay.

**ADF:** Describe Mauritius' relationship with India on maritime security and how that partnership has grown in importance in recent years?

**Sooroojebally:** Our relationship is deep-rooted and built on cultural, historical, linguistic and strong diplomatic ties. This has also underlined the maritime security partnership between the two countries. Over the years, the shared interest in ensuring safety, security and stability of the Indian Ocean region has further reinforced our cooperation and relationship. India's initiatives such as the SAGAR [Security and Growth for All in the Region] and MAHASAGAR [Mutual and Holistic Advancement of Security and Growth for All in the Region] initiatives, which promote cooperative security and sustainable maritime development, align with Mauritius' interests, and we hope to further strengthen this cooperation for a safe, secure and stable Indian Ocean.

**ADF:** How concerned are you about the millions of dollars in annual financial losses to IUU fishing, and how does that impact Mauritius' economy?

**Sooroojebally:** IUU fishing is a significant threat to Mauritius. It depletes fish stocks, affecting legal fishers' ability to catch and sell fish. It distorts market prices. It threatens livelihoods and also undermines food security. The fisheries sector provides employment to over 20,000 individuals, with the tuna industry alone employing more than 7,000 people. The depletion of fish resources from IUU activities jeopardizes our seafood export industry and undermines economic growth. To counter this, Mauritius has taken strong action, including ratifying the Port State Measures Agreement to prevent the entry of illegally caught fish into our ports. We also are strengthening our surveillance capabilities and enhancing regional cooperation to tackle IUU fishing. The blue economy has emerged as a pillar of our economic prosperity and development. Addressing the issue of IUU fishing is crucial for ensuring the long-term prosperity of Mauritius' economy.



**ADF:** What needs to be done to identify and stop IUU fishing vessels? Which strategies are working best in combating IUU and other maritime crimes in East African waters?

**Sooroojebally:** In the fight against illegal fishing, the NCG coordinates with the Fisheries Department to monitor our waters. We conduct extensive airborne and shipborne surveillance, coupled with coastal patrols, to curb illegal fishing in the area. The efforts of the NCG have also led to the detection and prevention of illegal fishing in coastal areas and resulted in confiscation of illegal fishing nets spanning close to 6 kilometers. These kinds of actions have been instrumental in protecting our marine resources and ensuring the sustainability of our fisheries. Enhancing regional cooperation with other countries in the region which are also affected by similar issues undoubtedly makes the efforts against IUU fishing more effective. The Port State Measures Agreement has been crucial in blocking illegally caught fish from entering ports.

**ADF:** How beneficial have regional organizations such as the Regional Coordination of Operations Centre in Seychelles and the Regional Maritime Information Fusion Centre in Madagascar been for your work in Mauritius? How would you like to see these types of partnerships evolve and expand?

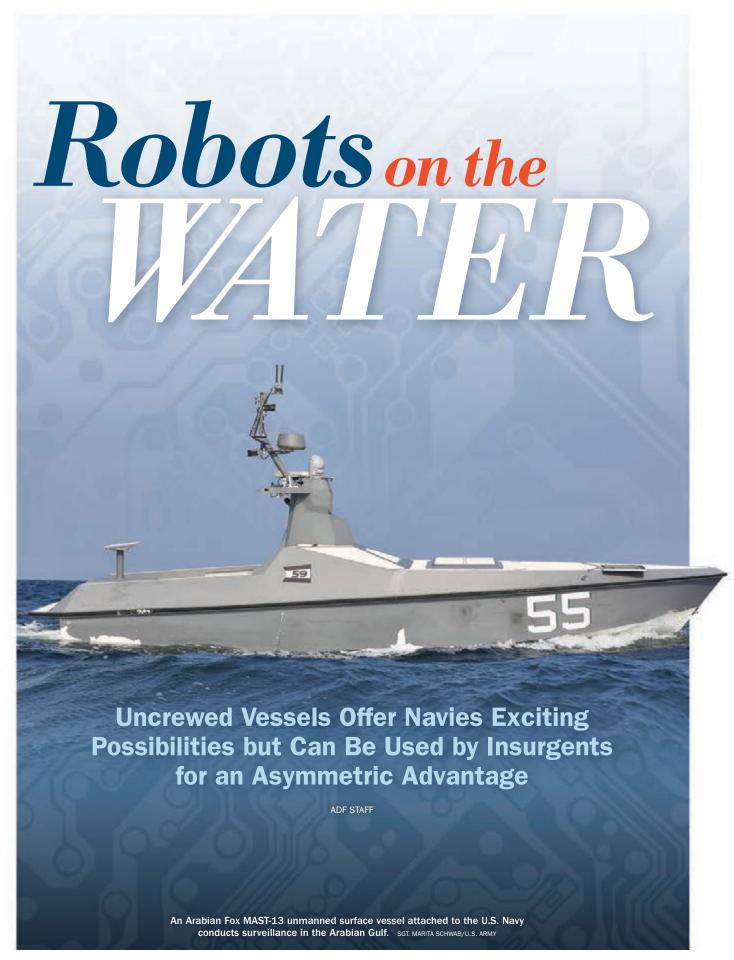
**Sooroojebally:** They have been vital to ensure collaboration with regional countries in the fight against illegal maritime activities. They have been able to provide intelligence, enhance situational awareness, and enable coordinated regional responses to threats like IUU fishing and trafficking. These partnerships strengthen our

Members of the Mauritius National Coast Guard conduct visit, board, search and seizure training during Exercise Cutlass Express in Port Louis on February 20, 2025. PETTY OFFICER 2ND CLASS NATALIA KAI/U.S. NAVY

collective ability to monitor and protect our vast maritime zones. Moving forward, we see great value in continuing these collaborations through greater exchange of information and inclusion of more regional partners. As maritime threats become increasingly complex, these kinds of coordinated, intelligence-driven efforts are essential for ensuring collective security and stability in the Western Indian Ocean.

**ADF:** Mauritius hosted a large cohort of senior leaders at the African Maritime Forces Summit in June 2025. What makes gatherings like this useful?

Sooroojebally: We all want to build a more secure and stable maritime environment, so gatherings like the African Maritime Forces Summit and Naval Infantry Leaders Symposium-Africa are invaluable for fostering collaboration, sharing best practices and enhancing regional maritime security. These events bring together senior leaders, decision-makers and experts. They provide a platform for discussing emerging maritime threats such as piracy, illegal fishing and trafficking that affect multiple countries. There is a wonderful exchange of ideas on new technologies, strategies and operational frameworks. By creating a space for open dialogue, we build trust and improve coordination among African maritime forces, and we ensure that our responses to maritime security threats are more effective. □



hen it comes to unmanned military vehicles, most people tend to think of the sky, where attack and surveillance drones are a fixture in armed conflict. But experts say the next wave of unmanned craft will set sail on the water.

Navies are investing in uncrewed surface vessels (USVs) and uncrewed underwater vehicles (UUVs). If trends continue, more than 40 countries will operate USVs by 2034, and the global USV market will grow from \$1.1 billion to \$2.5 billion, according to the research company GlobalData.

These sea drones can be controlled by operators on shore or sail semiautonomously, following a programmed course and using a suite of sensors to navigate. Advocates say they can save navies money, time and lives by taking Sailors out of harm's way during long, dangerous missions.

The advantages are clear, and private industry has led the way. USVs are already used widely to inspect and safeguard oil platforms, undersea cables and other infrastructure. In Africa, where navies often have small, outdated fleets to patrol sprawling territorial waters, analysts believe it's time to invest in the technology.

"These advances have turned USVs into a genuine force multiplier," Matthew Ratsey of the company Zero USV told South Africa's Engineering News. "They extend the reach of maritime forces, enabling missions over larger areas without ports, offshore energy platforms and subsea cables, providing round-the-clock surveillance and real-time threat detection."



#### **A Long History**

The use of USVs dates to World War I when the United Kingdom's Royal Navy deployed "distance control boats," which were fitted with torpedoes and controlled by nearby aircraft. In subsequent decades, surface drones' use expanded to include tasks such as minesweeping, surveillance, target practice and as kamikaze vessels loaded with explosives. At the turn of the 21st century, however, surface drones remained a niche tool used mainly by scientists for mapping seafloors and monitoring ocean conditions.

The Sea Hunter, a 40-meter trimaran, is one of the first fleet class USVs commissioned by a navy. The U.S. Navy acquired it in 2016 and is testing it for a variety of missions.





It's a useful tool at a fraction of the cost of a conventional tool. But much will depend on which country is using it."

~ **Denys Reva**, maritime security expert at the Institute for Security Studies

A U.S. Saildrone Explorer unmanned surface vessel operates in the Arabian Gulf. SGT. BRANDON MURPHY/U.S. ARMY



A company displays a kamikaze USV during a defense show in London. Navies and terrorists are using USVs to gain a tactical advantage against larger, betterequipped foes.

AFP/GETTY IMAGES

Navies today are in a race to acquire USVs and UUVs, but, according to Jonathan Bentham of the International Institute for Security Studies (IISS), they still are largely at the stage of putting their "toes in the water" when it comes to using them. About 75% of uncrewed platforms evaluated by IISS were determined to be experimental.

The IISS says the platforms fall into four general categories:

- **Maritime security:** designed and used for patrol or interception missions.
- Military data gathering: used to collect information on the maritime environment, including hydrographic or oceanographic surveys.
- **Mine warfare:** vehicles used to identify or dispose of sea mines.
- Technology demonstrator: vehicles that have a clear military capability and operational role, but are built to demonstrate and advance a capability rather than perform front-line duties.

Bentham wrote that the technology is advancing rapidly.

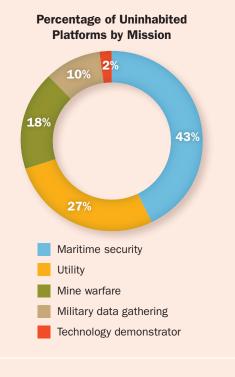
"Navies around the globe ... are embracing the technology across a diverse mission set. While [USVs] appear to be completely different entities from their traditional ship counterparts, they are increasingly being used alongside each other," Bentham wrote for the IISS. "Many [USV] applications are still experimental, but the technology, in some form or another, is here to stay."

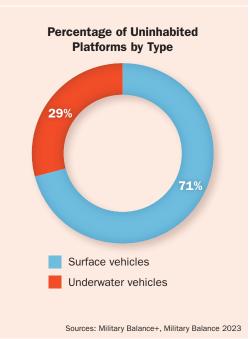
Denys Reva, a maritime security expert at the Institute for Security Studies (ISS), cautioned that USVs are not a cure-all and might not be the right fit for countries with limited capacity to patrol their exclusive economic zones and respond to threats.

#### A Variety of

#### **Missions**

A review of data by Military Balance+ of uninhabited maritime platforms found that the largest number was being used for maritime security, a category that includes patrolling and interception missions. The survey also found that surface vessels outnumber underwater vessels by a ratio of more than 2-to-1.





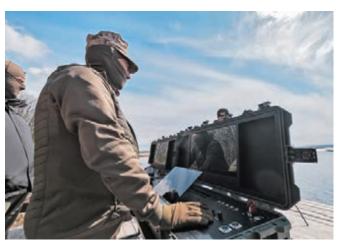
#### **Components of an Uncrewed Vessel** COMMUNICATION **NAVIGATION** Advanced algorithms and • These systems transmit real-time navigation data and sensor readings to a control station, allowing sensor data enable sea for remote monitoring and intervention. drones to autonomously navigate routes, avoid Communication can use a wide range of tools, obstacles and respond to including satellite, radio frequency, underwater environmental changes. acoustic and cellular networks. PROPULSION SYSTEMS **SENSORS** USVs often employ · Sensors such as cameras, thrusters with direct-current, sonar, and light detection fully flooded brushless and ranging enable USVs motors for maneuverability to identify and avoid and speed control. obstacles. Some use rudderless USVs can be equipped systems, such as fourwith sensors for monitoring thruster configurations. water quality, temperature and other environmental data. THE HULL USV hulls are typically made up of strong composite POWER SUPPLY materials or aluminum to Batteries: Batteries are commonly used to power withstand difficult weather. USVs, offering flexibility and portability. Some USVs are built with Fuel cells: Some USVs use fuel cells for longer modular components and endurance. payload bays for easy **Charging and refueling:** USVs require systems for sensor and equipment integration. charging and refueling to maintain power levels. Source: Ocean Engineering Uncrewed surface vessels like the two shown here are being used for a wide range of tasks as navies around the world race to add them to their fleets. AFP/GETTY IMAGES





Many [USV] applications are still experimental, but the technology, in some form or another, is here to stay."

~ **Johnathan Bentham**, International Institute for Security Studies





Ukrainian servicemen demonstrate a naval drone. Ukraine has used drones to sink Russian warships and halt the Russian Navy's advance in the Black Sea. GETTY IMAGES

"It's a useful tool at a fraction of the cost of a conventional tool," Reva told ADF. "But much will depend on which country is using it. Because some countries, their problems are not the kind of problems that can be resolved with additional ability to detect threats. The challenge is responding to them."

#### **Ukraine Shows a Way**

Despite this long history, surface drones have been a rare sight in maritime warfare. That changed with Russia's invasion of Ukraine in 2022. The Black Sea became a hotly contested battle space, and Ukraine, which does not have warships, fended off Russia's Navy using sea drones.

Ukraine deploys a domestically produced vessel known as the Magura V5 for surveillance, reconnaissance, mine warfare and kamikaze attacks.

Viktor Lystopadov, regional director of Ukraine's SpetsTechnoExport, told defenceWeb that the USVs have changed the rules of modern conflict. He said his country has been able to destroy more than 20 Russian vessels valued at \$2 billion using sea drones that cost a small fraction of that. In 2024, a Ukrainian USV shot down a Russian Mi-8 helicopter, he said, which is believed to be the first instance of a sea drone downing a piloted aircraft.

Retired U.S. Gen. David Petraeus called the Ukrainian use of maritime drones and other technology "sheer genius." "For Ukraine to sink over a third of the Russian Black Sea Fleet and force its withdrawal from Sevastopol and the western Black Sea without any substantial naval assets is an extraordinary tribute to both the Ukrainian tech sector and those in uniform operating these systems," he said in an interview with the Kyiv Post.

Navies across the world are monitoring this as a successful offensive strategy that reinforces the need for new defensive strategies.

"Navies and planners will no doubt be looking at the war closely," wrote analyst H I Sutton for the Royal United Services Institute. "It redraws the threat picture for larger navies that are looking to prepare for future operations. And for countries facing similar threats, uncrewed platforms offer significant advantages. The age of naval drone warfare has arrived."

#### **Drones Give Insurgents an Advantage**

At the same time a national navy is successfully using drones, countries are being reminded of the dangers they pose in the hands of insurgents.

In the Red Sea, Iran-backed Houthi rebels have used explosive-laden maritime drones to attack ships and disrupt commerce. An attack on February 18, 2024, was notable because it was the first Houthi attack that included an underwater drone.

Observers say traditional sonar, mine detection capabilities and other tools used in anti-submarine warfare might be needed to protect against this threat. Scott Savitz, an analyst for the Rand Corp., said the Red Sea attacks are a preview of a sort of cat-and-mouse game. As navies get better at detecting and destroying sea drones, adversaries improve their ability to conceal them.

"The age of explosive USVs is just beginning. Navies that can effectively use these systems could have a great advantage over their adversaries," Savitz wrote. "A classic cycle of measures and counter-countermeasures will likely begin."

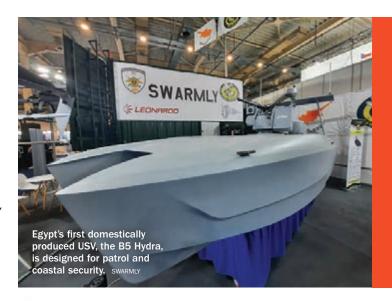
He predicted that naval fleets would deploy sensorstudded aerial drones to detect and destroy USVs. He also said drones could use propeller-entangling fibers to halt the advance of USVs. However, those advantages likely will be short-lived as adversaries adapt.

"Regardless of the specific measures used by both sides, explosive USVs could become a centerpiece of naval warfare in the coming decades, one that navies may ignore at their peril," Savitz wrote.

#### **African Countries Wade In**

With 30,500 kilometers of coastline, sprawling ocean domains, and innumerable deltas, rivers and lakes, African navies have enormous responsibilities. To expand their reach, some countries are investing in aerial, surface and underwater drones. Here are a few examples:

- Egypt announced its first domestically produced USV designed for patrol and coastal security in 2024. The B5 Hydra created by Amstone is 2.1 meters long, has a payload of 600 kilograms and can reach speeds of 85 knots. The USV is armed with a remotecontrolled 12.7 mm machine gun and is equipped with a small aerial drone that can be launched for reconnaissance operations. The ship was built in collaboration with Cypriot company Swarmly and Italian company Leonardo.
- In South Africa, shipbuilder Legacy Marine is building a 9.5-meter vessel that uses artificial intelligence and robotics to navigate. It is believed to be the first sea drone fully built and tested in South Africa.
- The Nigerian Navy acquired two SwiftSea Stalker USVs from U.S. manufacturer Swiftship. The vessels, with a range of 400 nautical miles and a speed of 45 knots, are expected to be used in the Niger Delta, Lake Chad and other difficult-to-patrol waterways.







Observers believe this is just the beginning as militaries look for ways to improve their presence on the water at lower costs. Security forces also need to anticipate the next move from nonstate actors.

"Now is the time for African states to start thinking about what will happen if these technologies are being deployed. Because technology only becomes cheaper and that changes the circumstances," Reva, of the ISS, told ADF. "These tools exist and, even if it's not practical for groups to deploy them right now, you don't know what will happen tomorrow."

# TECHNOLOGY OFFERS CURE FOR AN EXPLOSION OF AFFORDABLE TOOLS GIVES SECURITY PROFESSIONALS A CLEARER PICTURE OF THE MARITIME DOMAIN ADF STAFF A fishing boat sails in the Bay of Algiers. REUTERS

#### "AFRICA MUST INVEST URGENTLY IN COASTAL SURVEILLANCE, MARITIME INTELLIGENCE FUSION CENTRES AND NAVAL

**COMMAND CAPACITY."** - Abdisaid Ali, chairperson of the Lomé Peace and Security Forum

Many countries suffer from an affliction colloquially known as "sea blindness." The phrase describes a general lack of concern about maritime security, but also the inability to monitor what is happening on the water.

Just how much activity is going on in these blind spots? In a report published in the journal Nature, researchers found that about 76% of industrial fishing vessels were "dark" at some point, meaning they were not broadcasting their location or were not tracked by public monitoring systems. The same report found that nearly 30% of energy and transportation vessel movement was not tracked.

The implications are enormous because analysts believe vessels involved in illicit acts such as trafficking, piracy and terrorism are similarly going undetected.

"The maritime environment continues to serve as a silent stage for high-stake activities," Kenyan data science researcher Wekesa Lucas wrote. "The threats found offshore — whether illegal fishing, smuggling or foreign surveillance — are quieter, faster and less visible than those on land but no less consequential."

Ninety percent of African trade moves through maritime routes, but leaders say security concerns continue to focus overwhelmingly on land. In an editorial published in The East African, Abdisaid Ali, chairperson of the Lomé Peace and Security Forum, urged nations to change this approach by investing time and resources in maritime security. Ali wrote that the question is no longer "do the seas matter?" The question is "do we control some of the most strategic corridors" in the world?

"Africa must invest urgently in coastal surveillance, maritime intelligence fusion centres and naval command capacity," Ali wrote. "Maritime security is not simply about defending waters. It is about controlling the flow of goods, data, energy, and influence. In this domain, control is strategy."

The ability to control security at sea starts with maritime domain awareness (MDA). A recent explosion of technology and the creation of frameworks to share data across borders have made MDA something all countries can afford and achieve.

#### **IMPROVED MONITORING**

One of the most important tools for tracking vessels is free and open for all to use. Ships above a certain tonnage are required to operate an automatic identification system (AIS) that broadcasts their location several times per minute. Data from these transponders can be accessed through online tools to chart a ship's movement. Commercial fishing vessels are similarly required to install vessel monitoring systems (VMS), which transmit a ship's position to a satellite, which then relays it to an onshore monitoring station.



Participants in military exercise Obangame Express monitor a live-view operating picture from the maritime operations center in Lagos, Nigeria. U.S. NAVY

However, these data sources are not foolproof. It is common for vessels to disable these systems so authorities and foes cannot detect them. A 2022 report in the journal Science found that 6% of all global fishing, accounting for millions of hours each year, occurs when vessels are "dark," or have disabled their monitoring systems. Researchers found correlations between ships going dark and crimes such as transshipment of fish between boats, fishing without a permit or fishing with illegal gear. Some vessels operating illegally might even send out false or spoofed positions to confuse the system.



"Just as thieves can turn off phone location tracking, ships can disable their AIS transponders, effectively hiding their activities from oversight," Heather Welch, a researcher at the University of California, Santa Cruz, wrote for The Conversation.

To fill those information gaps, countries are turning to radar and satellites. New innovations include synthetic aperture radar (SAR), a satellite-based system that sends radar pulses to Earth, collects their echoes and then processes that data to form an image.

Another cutting-edge tool is the visible infrared imaging radiometer suite (VIIRS), a satellite-based sensor that detects light emitted by vessels to track their movements.

Data from SAR and VIIRS is publicly available, and authorities can use it to track vessels that are otherwise hidden. The more data that is collected, the better authorities can monitor trends and identify hot spots of potential crime.

"This fusion of sources could enable navies and relevant law enforcement to build a more comprehensive and dynamic picture of maritime activities," Ifesinachi Okafor-Yarwood of the University of St. Andrews School of Geography & Sustainable Development told ADF. "Radar provides near-shore, real-time detection, while satellites offer wide-area coverage and can identify vessels that are not broadcasting AIS."

One system being used to synthesize this information is SeaVision, an online MDA tool that incorporates AIS, VMS, SAR, VIIRS, coastal radar and other data. The United States created the system in 2012, and it now is used, free of charge, in more than 100 countries. With little cost and few tools required beyond an internet connection, SeaVision lets users access an immense amount of real-time MDA data.

"A multi-faceted technological revolution is bringing

Maj. Gen. Shaban Mani, Tanzanian Air Force commander, looks through binoculars while touring the USS Hershel "Woody" Williams, an expeditionary sea base that was docked in Dar es Salaam. U.S. AIR FORCE

MDA within reach of even the smallest of countries, potentially giving them the tools to understand and govern their own maritime domains at an achievable price," wrote David Brewster, a senior research fellow at the National Security College at the Australian National University, in an article for the website The Strategist.

#### **NEW TECHNOLOGY OFFERS SOLUTIONS**

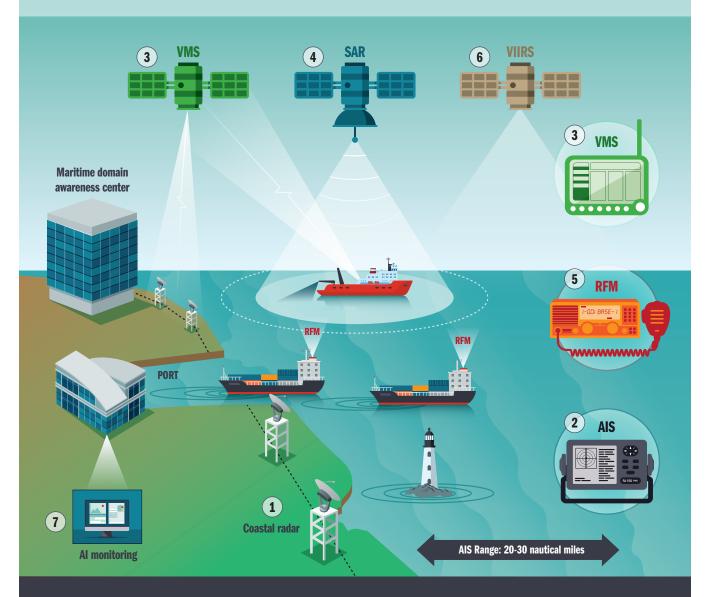
The extensive amount of data captured by MDA tools can become overwhelming. In response, security professionals are using artificial intelligence (AI) to locate the proverbial needle in the haystack of data and prioritize a response. AI systems can enhance MDA by analyzing patterns to identify suspicious vessel behavior that might be associated with a crime. It also can identify data gaps that need to be filled and help overlay information from multiple sources.

"AI can revolutionize the concept of maritime domain awareness since it can analyze big datasets to identify patterns related to illegal activities," said Osei Bonsu Dickson, a senior fellow at the Gulf of Guinea Maritime Institute. "Machine-learning algorithms could, for instance, predict routes taken by smugglers or monitor fishing activities to detect violations of maritime laws."

In Nigeria's Niger Delta, where 400,000 barrels of oil are stolen each day, authorities are using AI predictive analytics to pinpoint oil bunkering and where it is likely to occur. The machine learning synchronizes datasets to detect oil theft quickly.

# DATA SOURCES FOR MARITIME DOMAIN AWARENESS

Security officials have access to a variety of data sources to build a picture of the maritime domain. These sources can complement one another, allowing authorities to maintain a watchful eye and collect information even in bad weather or when vessels attempt to remain unseen.



- 1. Coastal radar: These land-based systems emit microwave pulses and analyze the reflected signals to offer a picture of what is on the ocean.
- 2. Automatic identification system (AIS): This shipboard broadcast system must be installed and active on most large ships. It acts like a transponder operating in the VHF maritime band and notifying other ships of its position.
- **3. Vessel monitoring system (VMS):** A satellite-based surveillance system primarily used to track fishing vessels.
- 4. Synthetic aperture radar (SAR): It uses radar waves to create high-resolution images of Earth's surface. Unlike optical sensors, SAR can penetrate clouds and is effective in the dark.
- Radio frequency monitoring (RFM): It detects and analyzes radio signals emitted by ships, including those used for communication and navigation, to determine their location and movements.
- 6. Visible infrared imaging radiometer suite (VIIRS): A satellite-based sensor observes Earth's surface, atmosphere and oceans in visible and infrared light. It is highly sensitive and can detect faint light sources, including those emitted by ships at night.
- 7. Al monitoring: Computer systems use algorithms to overlay data from multiple sources and look for suspicious or anomalous activity that can be investigated further. This helps security forces focus their efforts.

ADF ILLUSTRATION





"AI can analyze pipeline flow data and identify irregularities that indicate theft," wrote Afolabi Ridwan Bello and co-authors in an article published in IRE Journals. "Unlike conventional pressure sensors, AI algorithms can detect even small leaks or slow siphoning attempts."

Another innovation in its early stages is the use of autonomous sensor networks. These systems of connected sensors are deployed from a range of platforms including buoys, onshore stations, drones, and vessels above and below water. These networks can be particularly valuable in alerting authorities of activity from uncrewed underwater drones.

#### **BREAKING BARRIERS TO SHARE INFORMATION**

To make the best use of the data they collect, African countries are working to overcome historical barriers of mistrust. These barriers exist between countries and between private companies and national authorities. The mistrust causes countries to avoid sharing vital information about ships crossing borders.

"The pursuit of MDA and the bringing into operation of [information sharing centers] is imperiled as long as there continues to be a 'culture of secrecy,'" wrote Timothy Walker for the Pretoria-based Institute for Security Studies (ISS). "The practice of making information freely and openly available is frequently discouraged by states, shipping organizations and shipping companies as many fear that it will lead to interference with and the disruption of the principle of freedom of navigation."

One positive development has been the creation of maritime rescue coordination centers that share data to help search and rescue operations. There are now five regional centers and 26 subcenters covering the entire African coastline.

Other data-sharing initiatives have taken shape with the help of the regional economic communities. In West Africa, the signatory countries of the Yaoundé Code of Conduct have created the Yaoundé Architecture Regional

Sailors participate in Exercise Bull Shark in the Gulf of Aden near Djibouti.  $\,$  u.s.  $\,$  NAVY  $\,$ 

Information System. This platform connects 27 maritime centers to share data about events within 6,000 kilometers of the West African coast. The system, operational since 2020, has led to high-profile interceptions of hijacked vessels, allowing for a coordinated response across multiple countries.

Naval leaders also credit annual maritime exercises such as Obangame Express in West Africa and Cutlass Express in the Indian Ocean with building trust and enhancing information sharing. At Obangame Express, information is shared from national maritime operations centers up through multinational centers, regional centers and on to the Interregional Coordination Center in Yaoundé, Cameroon.

"Exercises like Obangame Express are an opportunity to test some pillars of the regional maritime security and safety strategy for the Gulf of Guinea, notably the exchange of information, the harmonization of operational procedures and the strengthening of cooperation between partners in the maritime sector," said Capt. Emmanuel Bell Bell, head of the Information and Communication Management Division at the Interregional Coordination Center.

Broadly speaking, experts see countries breaking down barriers and showing a greater willingness to cooperate.

"I'm seeing an improvement that states are much better in sharing this information, not just among themselves, but also engaging with international partners and international organizations like Interpol," Denys Reva, a maritime security expert for the ISS, told ADF. "The ability has improved, and there is much more political will from African states to share information and engage with each other."



# **Mauritius Trains to Protect Maritime Domain**

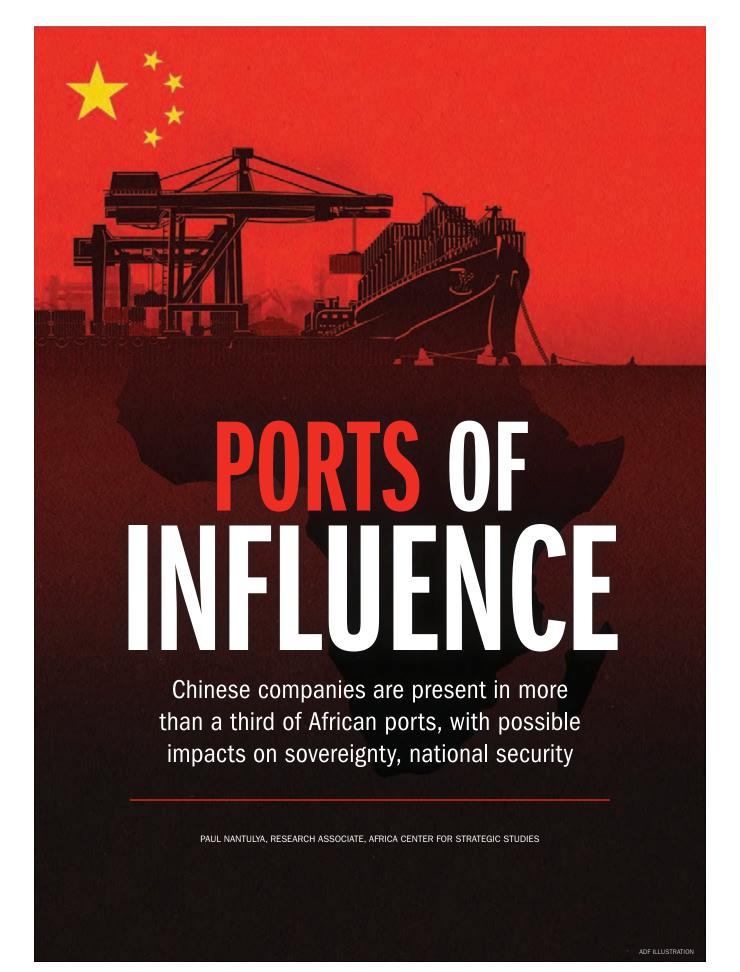
ADF STAFF

Guard Police Sgt. Thomas Shane climbs a hook ladder for visit, board, search and seizure training during Exercise Cutlass Express 2025 (CE25) in Port Louis, Mauritius, on February 12, 2025. The event is one of three regional Express series exercises sponsored by U.S. Africa Command. The exercises provide collaborative opportunities for African nation security forces and international partners to address maritime security concerns. CE25 focused training in Mauritius, Seychelles and

Tanzania, but information sharing and coordination took place across nine maritime operation centers throughout the region. Mauritius, a small island in the Indian Ocean, doesn't have a land force or navy. Instead, its National Coast Guard is a specialized branch of the Police Force tasked with securing the nation's 1.8 million-square-kilometer exclusive economic zone. It's a tall order for such a small nation but vital to protect its economic interests, such as fishing and mineral rights, while preventing the transshipment of heroin from South Asia.







hinese state-owned companies hold stakes in up to 78 of Africa's 231 ports, a presence that raises concerns about national sovereignty and China's designs on expanding its military footprint.

China's port developments are concentrated in 32 African countries. West Africa has 35, compared to 17 in East Africa, 15 in Southern Africa and 11 in North Africa. By comparison, Latin America and the Caribbean host 10 Chinese-built or operated ports. Asian countries host 24.

China's expansive port development in Africa raises concerns about the possibility of repurposing commercial ports for military use given the close relationship between Chinese port-building firms and China's People's Liberation Army (PLA). China's development of Djibouti's Doraleh Port, long marketed as a purely commercial venture, was extended to accommodate a naval facility in 2017. It became China's first known overseas military base two months after the main port opened. There is widespread speculation that China could replicate this model for future basing arrangements elsewhere on the continent.

This raises concerns about China's broader geostrategic aims with its port development and stokes Africans' widely held aversion to being pulled into geostrategic rivalries. There also is a growing wariness of hosting more foreign bases in Africa. This underscores the mounting interest in scrutinizing China's port development and dual-use military basing scenarios.

In some sites, Chinese companies share ownership and dominate entire port development enterprises through financing, construction and operations. Large conglomerates such as China Communications Construction Corp. will win work as prime contractors and hand out subcontracts to subsidiaries such as the China Harbor Engineering Co. (CHEC).

This is the case in one of West Africa's busiest ports, Nigeria's Lekki Deep Sea Port. CHEC did the construction and engineering, secured loan financing from the China Development Bank, and took a 54% financial stake in the port, which it operates on a 16-year lease, although the terminal is operated by a French firm, CMA CGM.

China gains as much as \$13 in trade revenue for every \$1 it invests in ports. A company holding an operating lease or concession agreement reaps not only the financial benefits of all trade passing through that port but also can control access. The operator allocates piers, accepts or denies port calls, and can offer preferential rates and services for its nation's vessels and cargo. Control over port operations by an external actor raises obvious sovereignty and security concerns. This is why some countries

forbid foreign port operators on national security grounds.

Chinese companies hold operating concessions in 10 African ports. Despite the risks over loss of control, the trend is toward privatizing port operations for improved efficiency. Delays and poor management of African ports are estimated to raise handling costs by 50% over global rates. However, most concessions and operating contracts awarded in Africa and elsewhere require open access, so that surface operators cannot provide special access to national interests.



Chinese sailors board a warship at Apapa harbor in Lagos, Nigeria, in July 2023. China is thought to want a West African naval base. AFP/GETTY IMAGES

#### The Plan Behind China's Ports Strategy

China's strategic priorities involving foreign ports are laid out in its Five-Year Plans. The 2021 to 2025 Five-Year Plan talks about a "connectivity framework of six corridors, six routes, and multiple countries and ports" to advance Belt and Road Initiative (BRI) construction. Notably, three of these six corridors run through Africa, landing in East Africa (Kenya and Tanzania), Egypt and the Suez region, and Tunisia. This reinforces the central role that the continent plays in China's global ambitions. The plan articulates a vision to build China into "a strong maritime country" — part of its larger ambition to be seen as a great power.

China's focus on African port development was facilitated by the "Go Out" strategy, a government initiative to provide state backing — including huge subsidies — for state-owned companies to capture new markets, especially in the developing world. The BRI, China's global effort to connect new trade corridors to its economy, is a product of Go Out, sometimes referred to as "Go Global."

Africa has been a central feature of the Go Out strategy, where port infrastructure was a major impediment to expanding Africa-China trade. Heavy Chinese government subsidies and political backing encouraged Chinese shippers and port builders to seek footholds on the continent. They benefited from robust government and party-to-party ties that China cultivated over time. Africa became highly attractive to China's state-owned enterprises, despite the many risks of doing business on the continent.

China's port development strategy also has linked Africa's 16 landlocked countries via Chinese-built inland transport infrastructure, which helps get goods and resources to market and vice versa.

Chinese companies also capitalized on opportunities to export their technologies and expertise. They positioned themselves as dominant players in building export infrastructure that African countries came to increasingly depend on to conduct foreign trade. This has created political windfalls for China. As a senior African Union diplomat said, "African dependence on Chinese export infrastructure makes African countries amenable to supporting Chinese global interests and less inclined to taking sides against it or supporting sanctions."

#### **Military Engagement**

China's growing footprint in African ports also advances its military objectives. Some of the 78 port

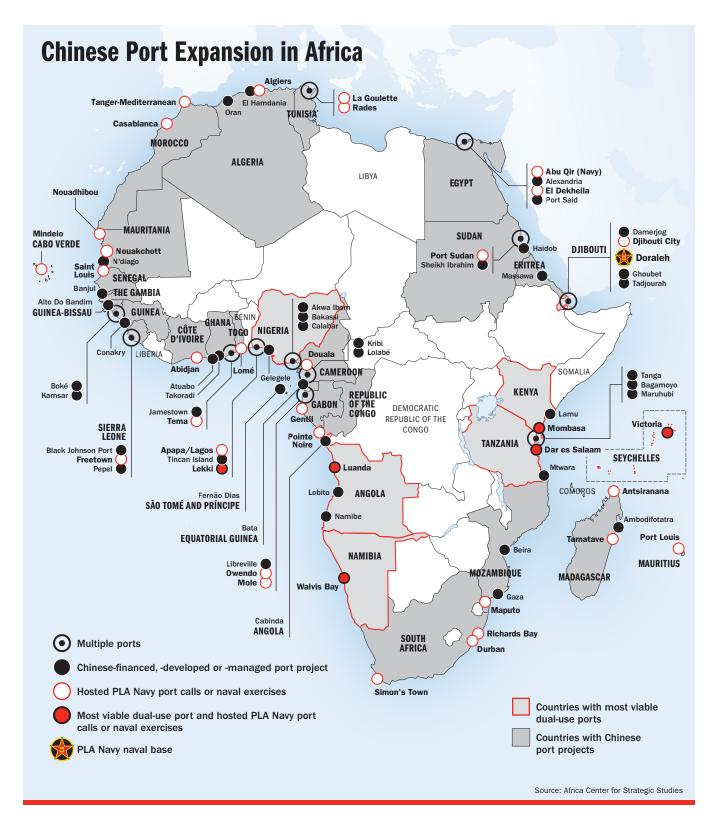
sites that Chinese companies are involved in can berth PLA Navy vessels. Others can dock PLA Navy vessels on port calls.

Some of these ports have been staging grounds for PLA military exercises. These include the ports of Dar es Salaam (Tanzania), Lagos (Nigeria), Durban (South Africa) and Doraleh. Chinese troops also have used naval and land facilities for some of their drills, including Tanzania's Kigamboni Naval Base, Mapinga Comprehensive Military Training Center and Ngerengere Air Force Base — all built by Chinese companies. The Awash Arba War Technical School has served a similar purpose in Ethiopia, as have bases in other countries. In total, the PLA has conducted 55 port calls and 19 bilateral and multilateral military exercises in Africa since 2000.

Beyond direct military engagements, Chinese companies handle military logistics in many African ports. For example, Chinese state-owned enterprise Hutchison Ports has a 38-year concession from the Egyptian Navy to operate a terminal at the Abu Qir Naval Base.

There has been much speculation and debate over which of these ports might be the location for additional Chinese military bases besides Doraleh. Although the available data and understanding of the decision-making criteria are limited, certain measures provide some insight.





As seen in the development of Doraleh, in which Chinese companies held 23% of the stakes, the size of Chinese shareholding alone is an inadequate factor. Nonetheless, it is noteworthy that Chinese companies hold stakes of 50% or more in these West African ports: Lekki (54%); and Lomé, Togo (50%).

Previous PLA engagement is another consideration. Of the 78 African ports with known Chinese involvement, 36 have hosted PLA port calls or military exercises. This demonstrates that they have the design features to support Chinese naval flotillas, potentially making them suitable considerations for future PLA Navy bases. Not all of these have the proven physical specifications to berth PLA vessels, however. These factors include the number of berths, berth length and size, and capabilities for fueling, replenishment and other logistics.

# CHINESE CONTROL EXPORTS RICHES, IMPORTS TROUBLE



ADF STAFF

hinese port involvement in Africa goes beyond political and military concerns. The control China exerts at every stage of development and operations also can adversely affect life for citizens across the continent.

It starts with what maritime expert Ian Ralby calls "elite capture," through which China attempts to co-opt key authorities, who, in turn, surrender their fiduciary and governmental duty in service to themselves. Once China undermines "the structures of governance in a country, it opens the doors to anything else," he said.

Ralby, CEO of I.R. Consilium, a global maritime and resource consultancy, told ADF that once China has control of ports, it can control what comes into and out of the continent — all to its own benefit. "That's where we have to be very clear, that Chinese overseas investment is never altruistic," he said. "It is never for development and aid to the benefit of the jurisdiction in which they are operating. It is for the development, benefit and advancement of China itself."

Nations first lose sovereignty through egregious loan deals to finance infrastructure, including ports. Once port deals are struck, China brings over its own workers and operators to the exclusion of locals. Some of these workers are political prisoners. After ports are built, areas around them can attract unsavory elements, such as prostitution and predatory businesses. China does nothing to mitigate this, Ralby said.

Once in control, China can open nations to illicit trade in drugs, weapons, even people. But it's not just about what China brings in. It also uses port control to take things out of the country, such as valuable minerals and wildlife resources, Ralby said.

The nation's footprint on the continent includes

the large-scale plunder of fishing resources, timbering and logging, the wildlife trade, and mining operations.

"It's monopolized its ability to extract from the African continent and move what it has extracted via roads that it has built, to a port that it has built and operates, to ships it owns and operates, back to China for the ultimate goal, which is to advance China," Ralby said.

It might be tempting to think of improved, modern port facilities as a boon to host countries. But China's involvement at every level, particularly operations and management, makes these facilities more of a benefit to China. For example, African ports tend to be comparatively small, which can cause queues of up to 30 vessels at times. If a Chinese company owns or operates the port, it can allow Chinese ships to skip the queue, thus unfairly benefiting them at the expense of domestic or other foreign ships.

Another major concern is the ramifications of China establishing another naval base on the continent, especially on the West African coast. One thing seems certain, Ralby said: African nations should not expect any direct security benefit from an enhanced Chinese military presence. Even though China has a base in Doraleh, Djibouti, its Navy "has not responded to a single incident" in the Red Sea as Houthi rebels wreak havoc, he said.

Ralby said available evidence shows that the Chinese Navy lacks the competence and desire to assist partner nations in times of peril.

What African nations can expect China to do, Ralby said, is to "provide security for their own supply chains" as they siphon valuable resources from the continent, allowing China to advance itself and "provide protection against domestic efforts to enforce the rule of law."



Beyond the physical specifications are political considerations, such as strategic location, the strength of a government's party-to-party ties with China, its ranking within China's system of partnership prioritization, membership in China's BRI network, and levels of Chinese foreign direct investment and high-value Chinese assets. Commonly ignored, but no less important, is the strength and capacity of public opinion to shape local decisions.

### Whose Interests are Advanced?

Former PLA Navy Cmdr. Wu Shengli noted that "overseas strategic strongpoint" ports always were envisioned as platforms for building an integrated Chinese presence. In other words, China has been highly strategic in its development and management of African ports to advance its interests as part of its geostrategic ambitions. Looking to the future, it can be expected that China will seek to increase its role in building African ports to expand its ownership and operational control toward commercial, economic and military ends.

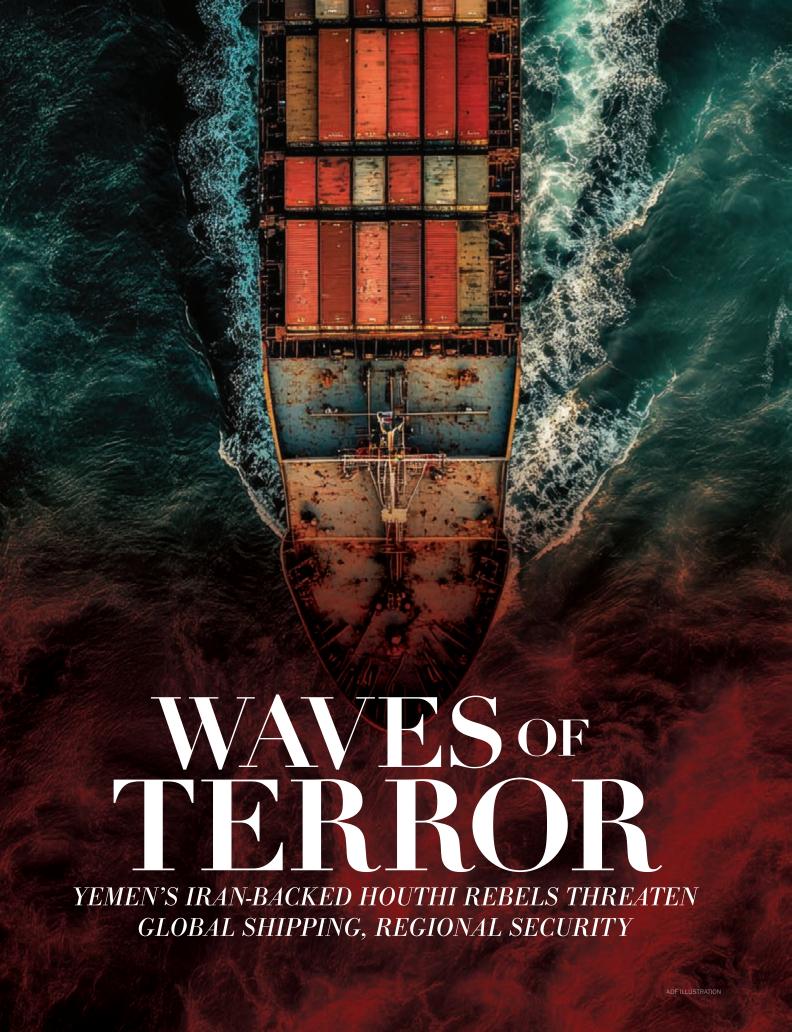
African debates on Chinese-built or operated port infrastructure tend to focus on the impact these ports can have on advancing Africa's economic output by improving efficiencies, reducing the costs of trade and expanding access to markets. Although some concerns are raised as to the implications these projects have on Africa's increased debt burden, rarely do these

discussions publicly address sovereignty or security, or the role that commercial platforms could play in Chinese basing scenarios.

The heightened pace of China's military drills and naval port calls in Africa in recent years has brought increased attention to these issues in the African media, think tanks and policy discussions. The growing militarization of China's Africa policy is stoking concerns about the implications of more foreign bases in Africa. Some are concerned that Chinese basing scenarios could inadvertently draw African countries into China's geopolitical rivalries, undermining the continent's stated commitment to nonalignment.

Ensuring that Chinese port investments do not go against African interests will require that African governments, national security experts and civil society leaders grapple with the policy implications of these choices. Beyond the straightforward desire to expand export infrastructure are tangible issues of maintaining fiscal prudence, safeguarding national sovereignty, avoiding geopolitical alignments and advancing a country's strategic interest.  $\square$ 

About the author: Paul Nantulya is a research associate with the Africa Center for Strategic Studies. His areas of expertise include Chinese foreign policy, China/Africa relations, African partnerships with Southeast Asian countries, mediation and peace processes, the Great Lakes region, and East and Southern Africa. The original version of this article was published by the Africa Center under the title "Mapping China's Strategic Port Development in Africa." It can be found here: https://africacenter.org/spotlight/china-port-development-africa/



he sun beat down upon the pristine, white deck of the Galaxy Leader vehicle carrier as it steamed through the Red Sea about 80 kilometers west of Yemen's port of Hodeidah on November 19, 2023.

The journey surely had the 25 international crew members on edge. Houthi rebels just weeks earlier had begun their lawless assault on global shipping. The Galaxy Leader crew's worst fears were realized when a charging Mi-171Sh helicopter hovered over the 189-meter ship and deposited several masked gunmen onto the deck. They rushed unchallenged to the bridge and ordered crew members there to get on the floor. Several small Houthi boats then flanked the British-owned, Japanese-operated cargo vessel and forced it into Hodeidah, which the Houthis control.

The 25 Bulgarian, Mexican, Filipino, Romanian and Ukrainian hostages lived in uncertainty until the Houthis released them to Oman after two months of intensive diplomatic wrangling.

The Galaxy Leader's saga is just one of the better-known instances of commercial ships falling victim to unrelenting attacks by Iran-backed Houthi rebels. Since late 2023, the Houthis have fired missiles and launched armed drones at container ships, bulk

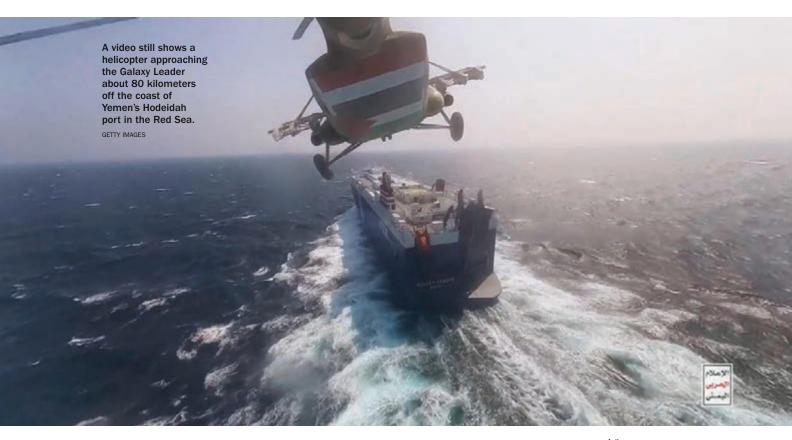
carriers, and oil and chemical tankers.

Some attacks damaged their targets; others missed. The rebels sank two bulk carriers in 2024: the Rubymar on February 18 and the Tutor after a June 12 assault. In all, Houthis have launched more than 100 attacks and killed four seafarers between November 2023 and January 2025.

"The attacks have convulsed shipping from the Red Sea through the Gulf of Aden to the Western Indian Ocean, through which 25 percent of global shipping traffic flows," wrote Francois Vreÿ and Mark Blaine in "Red Sea and Western Indian Ocean Attacks Expose Africa's Maritime Vulnerability" for the Africa Center for Strategic Studies.

"The repercussions have been immediately visible. Global shipping companies have diverted routes away from the Red Sea, altering shipping flows between the huge global markets of Asia and Europe. Insurance premiums for shipping have surged, raising the costs of goods for consumers in Africa and around the world. Diversions around South Africa can add up to 2 weeks and 6,000 extra nautical miles to a vessel's journey."

Observers also note alarming levels of cooperation between the Houthis and Somalia-based al-Shabaab terrorists, who for years have been a threat to ships off Africa's coast.









### A REGIONAL AND GLOBAL SCOURGE

The Red Sea already is an easily disrupted shipping lane with choke points at each end. The sea narrows dramatically in the north as ships squeeze through the Suez Canal. In the south, shipping traffic must traverse the Bab el-Mandeb strait before easing into the Gulf of Aden and the wider Indian Ocean. Any threat to this already-precarious shipping lane can have catastrophic ripple effects worldwide.

The strait sees 15% of global maritime trade pass through it. Shipments of crude oil and related products dropped by more than 50% in the first eight months of 2024, down to 4 million barrels per day from 8.7 million barrels per day in 2023, according to the U.S. Energy Information Administration.

As Houthi attacks on shipping began with the Galaxy Leader in November 2023, the disruption was immediate. One remedy was to bypass the Bab el-Mandeb strait in favor of a spectacularly circuitous route that sent ships around the Cape of Good Hope at Africa's southern tip. The increase in time and distance add to shipping fuel and insurance costs while delaying delivery of crucial goods to ports all over the world.

The attacks also harm African nations directly. For example, Egypt typically depends on nearly \$10 billion in annual revenue from Suez Canal tolls. When ships avoid the Red Sea on the way to Europe or North Africa, those tolls disappear. Egypt's "overall economic impact from the Suez Canal is about \$56 billion pre-Houthis," Dr. Ian Ralby, CEO of I.R. Consilium, a global maritime resource and security consultancy, told ADF. "That is down about

two-thirds. That economic impact is enormous." The potential negative effects would be widespread.

"If the Egyptian economy were to fully collapse, it would cause all kinds of ripples in every direction, and so that affects the Middle East, it affects Africa and it affects Europe," Ralby said.

The inability of ships to safely navigate the Red Sea also has negative ramifications for Sudan. The ongoing civil war there has intensified food insecurity, so if ships can't reach Port Sudan, civilians are more likely to face starvation and be deprived of medical supplies, he said. Delays in shipments of crucial goods also could harm Ethiopia and Somalia, where conflict has persisted for years.

# **WHO ARE THE HOUTHIS?**

Although the Houthis seem to be relative newcomers to worldwide news reports, their roots go back to the 1990s, when they emerged under the name Ansar Allah, which means "Partisans of God." Their common name is taken from their late founder, Hussein al-Houthi. His brother, Abdul Malik al-Houthi, now leads the movement. They represent the Zaidis, a sect of Yemen's Shia Muslim minority, and declare themselves to be part of Iran's "axis of resistance."

By the 2000s, Houthi rebels were fighting then-Yemeni President Ali Abdullah Saleh for more autonomy in their homeland in the north. By 2011, Saleh had handed power to Abdrabbuh Mansour Hadi, and soon Houthis had seized Yemen's capital, Sanaa. As the group continued to capture territory, Hadi fled the country and Saudi Arabia



feared the Houthis would make Yemen an Iranian satellite, the BBC reported. Despite Arab interventions in the war, more than 4 million people have fled and more than 160,000 have been killed.

The Houthis are generally agreed to be an Iran-backed proxy that opposes Saudi Arabia and the United Arab Emirates. Although they have been around for decades, the group didn't gain true global notoriety until they started attacking commercial shipping in the Red Sea. Despite the false narratives that Houthis use for attacking ships, experts agree that the true reason is to galvanize domestic support in a country that's essentially in chaos.

"Politically, the Houthis need a rally-around-the-flag to mute what had been growing domestic discontent," Gregory Johnsen, a fellow at the Arab Gulf States Institute in Washington, D.C., who studied and lived in Yemen for several years, said in an X thread. "Economically, the Houthis want to expand the local war in Yemen, because eventually they need to take either Marib or Shabwa (where Yemen's oil and gas fields are) in order to have an economic base to survive long term in Yemen."

The Houthis are a militia who gained control of a country that they can't govern, so the lack of a war at home makes them "vulnerable to domestic rivals," Johnsen said.

## TERRORISTS COOPERATE ACROSS SEA

The Houthi threat goes beyond shipping lanes between the Gulf of Aden and the Suez Canal. The group also is known to have found common cause with Somalia's al-Shabaab terrorist group. A February 2025 United Nations report noted that the two groups had formed a "transactional or opportunistic" relationship. People from both groups had met at least twice in Somalia: in July and September 2024. Al-Shabaab asked for advanced weapons and training. In return, the Houthis asked for an increase in ransom piracy against cargo ships in the Gulf of Aden and off Somalia's coast.

"During this period, Al-Shabaab was reported to have received some small arms and light weapons and technical expertise from the Houthis," the U.N. report said. On no fewer than 13 occasions between October 2023 and April 2025, various authorities seized or destroyed weapons transiting between Yemen and Somalia, according to the Africa Center.

Ralby said some of this cooperation exists in an area that has seen money, ideology, people, weapons and drugs move back and forth between East Africa and the Arabian Peninsula for decades. These networks date back to when Osama bin Laden was hiding in Sudan and when al-Shabaab was financing terrorism through charcoal sales to the Middle East. "The Houthis are the product of different factors, but they've been around since the '90s," Ralby said. "They're not new. They're new to a lot of people, so that means that they've been building connections for a very long time."

# **HOW AFRICA CAN RESPOND**

Robust maritime domain awareness is key to establishing



Lubomir Tchanev, captain of the Galaxy Leader cargo ship, meets his children and other family members after his release by Houthi rebels.

AFP/GETTY IMAGES

order at sea off the coast of Africa, Vreÿ and Blaine said in their Africa Center paper. Africa already has tools in place to establish that awareness. In 2022, two centers began operations. The Regional Maritime Information Fusion Centre (RMIFC) in Madagascar monitors and shares information on suspicious vessels in the region. The Regional Centre for Operational Coordination (RCOC) in Seychelles uses RMIFC data to coordinate security responses in the Western Indian Ocean.

There are five subregional maritime rescue coordination centers and 26 subcenters that cover the entire continental coastline to coordinate search and rescue operations. Western naval coalitions and the Indian Navy have responded during the Houthi crisis, but African navies could do more, Vreÿ and Blaine argue. "Not even Egypt, which has a very capable navy and stands to suffer significant economic losses from the crisis, has deployed a single vessel."

Despite this, Ralby said African nations have provided crucial support to efforts to counter the Houthi shipping threat. For example, the tiny island nation of Seychelles was among the first 10 nations — and the only African country — to participate in Operation Prosperity Guardian, a U.S.-led multinational naval presence and information-sharing mission responding to the threat.

Information, intelligence and operational support from the RCOC in Seychelles and the RMIFC in Madagascar helped the Indian Navy and multinational naval operations hold the line against piracy, which many feared would surge as the Houthi threat continued, he said.

As Red Sea attacks caused ships to divert, African coastal nations also have done well in providing and managing resources such as fuel while traffic around the Cape of Good Hope increased by 135%, Ralby said. "And so yes, there have been a few incidents that were naturally going to occur when you increase that amount of shipping around an area that has a tendency for high and unpredictable weather. But overall, the African management of the situation has been very good."

# STRENGTH NUMBER OF THE STRENGTH STRENGT

Nations Work Together to Monitor the Continent's Vast Coastline

ADF STAFF



frica has a vast and resource-rich coastline, but its 37 coastal nations often struggle to find the resources to patrol and protect it.

The continent's coastline, which stretches 40,000 kilometers, represents more than 11% of the world's total. The Atlantic Ocean, the Gulf of Guinea, the Western Indian Ocean and the Red Sea are rich in natural resources and offer critical pathways in global shipping. But its marine access also is a security problem, with criminals taking advantage of its expanses. Robbery, hijacking and piracy disrupt shipping lanes and threaten global trade. Illegal fishing devastates coastal economies, depletes fish stocks and even destroys ocean beds. Smuggling and trafficking of drugs, weapons, and people undermine personal, national and corporate security.

Even for countries with large navies, such as several in North Africa, maritime crime is a problem. In other parts of Africa, economic powerhouses such as South Africa and Nigeria struggle to adequately finance national navies and coast guards.

Researchers say many African nations, in constructing their military budgets over the years, have had to put most of their resources in their armies at the expense of their navies and coast guards.

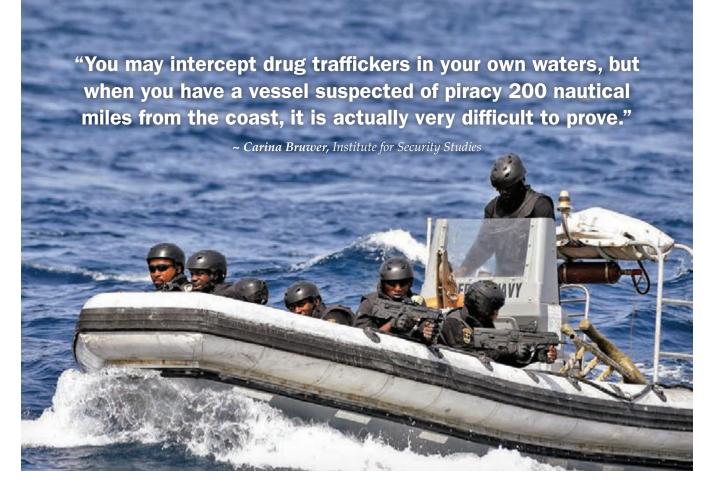
"As African countries and foreign interests seek to unlock the full potential of the ocean economy, they're contending with criminals similarly competing for this geostrategic ocean space," wrote Carina Bruwer, a senior researcher at the Institute for Security Studies in Pretoria, "As African countries and foreign interests seek to unlock the full potential of the ocean economy, they're contending with criminals similarly competing for this geostrategic ocean space."

~ Carina Bruwer, Institute for Security Studies

South Africa. "These actors equally benefit from increased maritime trade and technological developments that make vessels bigger, faster and able to travel longer distances."

Bruwer told ADF that Africa's combination of a wealth of marine resources and a lack of maritime security assets have been made worse by weak governments and high levels of corruption and bribery.

One example, she said, was the rise in Somali piracy in the Horn of Africa, which became a global concern in about 2011. Among other things, researchers blamed a fractured security environment in which countries did not work together or share maritime domain information. It forced navies and other groups to come together in what



Nigerian special forces move to intercept pirates during joint naval training involving Nigeria and Morocco during exercise Obangame Express 2025. Experts say that Africa's navies must work together on patrols. AFP/GETTY IMAGES

many said was an unprecedented response to protect their countries' shipping routes. The result was the near elimination of piracy for a time.

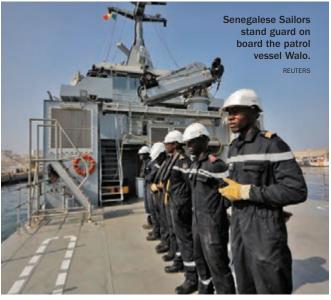
In recent years, the number of incidents has been relatively stable, with the International Maritime Bureau's Piracy Reporting Centre noting that global piracy decreased by 3% in 2024 compared to 2023. But reports of Somali piracy, for the first time since 2017, are again raising concerns.

Bruwer said the region's initial weak responses to piracy exposed the shortcomings of their resources and procedures.

"It's one thing to criminalize piracy, but then you need the ability to actually capture them," she said. "Then you need the ability and the capacity to successfully prosecute them. You may intercept drug traffickers in your own waters, but when you have a vessel suspected of piracy 200 nautical miles from the coast, it is actually very difficult to prove."

Many of Africa's navies and coast guards are spread too thin, she said.

A shortage of security resources is a common theme throughout coastal countries. That was clear in mid-May 2025, when terrorists attacked a marine research ship off the coast of Cabo Delgado province in northern Mozambique.



The Mozambican Navy is charged with protecting a 2,500-kilometer coastline that stretches along the Indian Ocean from Tanzania in the north to South Africa in the south. It is estimated that the country has fewer than 20 operational patrol vessels. In the terrorist attack, the ship was researching Mozambique's fisheries resources, according to the Centre for Public Integrity. When two nearby speedboats began firing at them, the ship's crew retreated to the high seas. They immediately contacted the Mozambican Navy for help, "but that help did not arrive," one witness told the Club of Mozambique news site.

The attackers eventually gave up because of rough seas and pulled away. The researchers since have said there was no excuse for officials' failure to respond to their calls for help. Weeks after the complaints, Mozambican officials said they still were looking into the incident.

### **POOLING RESOURCES**

Researchers say there are ways to share resources to address transboundary issues, even on a limited basis. Cost-effective resource sharing includes pooling information and intelligence, joint operations and patrols, and integrating legal frameworks and standard operating procedures. Some organizations and tools already are in place to help.

The **Yaoundé Code of Conduct**, which was signed by 25 West and Central African countries in 2013. The International Maritime Organization (IMO) says the code's primary objective is to manage and reduce harm

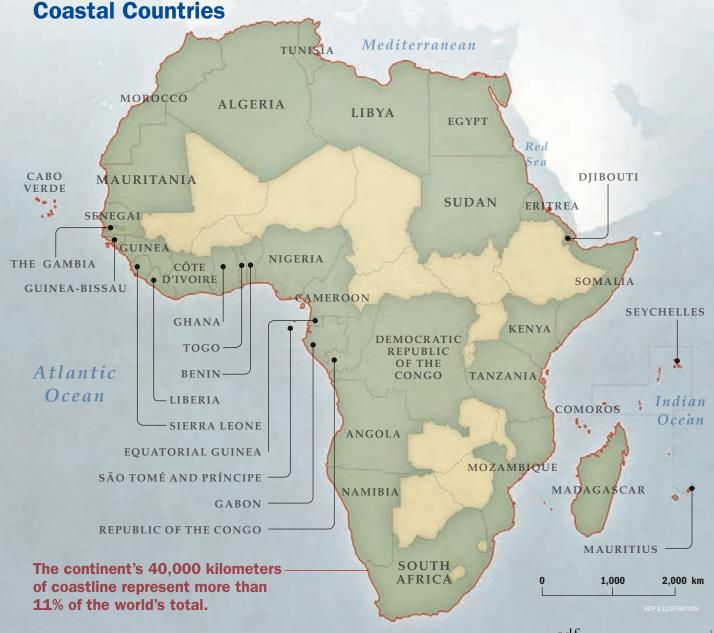
"derived from piracy, armed robbery against ships and other illicit maritime activities, such as illegal, unreported and unregulated fishing."

The code emphasizes collaboration among Gulf of Guinea countries and focuses on national maritime security and contingency plans.

The Africa Center for Strategic Studies says the Yaoundé Code has become "a model for how to do maritime cooperation at the regional level."

"Countries of the Gulf of Guinea work together to address their common challenges and there is a 'culture of collaboration,'" the Africa Center said in 2023. "The creation of trust among participants is the code of conduct's greatest accomplishment. Another important lesson is that a small, motivated community of practitioners can have an impact."

The Africa Center noted that the code still was a work in progress, saying, "The Yaoundé architecture works, but



not optimally or equally across all of the zones." The Africa Center said there still were issues with coordination and information sharing, and that not all of the member nations had created national maritime strategies or funded them adequately.

The **Djibouti Code of Conduct**, established in 2009, focuses on combating piracy and armed robbery, specifically in the Western Indian Ocean and the Gulf of Aden. The Djibouti Code promotes intelligence sharing, joint patrols and capacity building. There are 20 member countries, including Saudi Arabia and the United Arab Emirates. The IMO said member countries have agreed to the following:

- The investigation, arrest and prosecution of people who are "reasonably suspected" of having committed acts of piracy and armed robbery against ships, including those inciting or planning such attacks.
- The interception and seizure of suspect ships and property on board.
- The rescue of ships, people and property subject to piracy and armed robbery, including the proper care and treatment of such victims as fishermen, other shipboard personnel and passengers.
- The conducting of shared operations among member countries and with navies from countries outside the region.

Indian Ocean and the Gulf of Aden area. These activities include human trafficking and smuggling; illegal, unreported and unregulated fishing; trafficking in narcotics and psychotropic substances; arms trafficking; illegal trade in wildlife; crude oil theft; and illegal dumping of toxic waste.

The Combined Maritime Forces (CMF) is the world's largest multinational naval partnership, with 46 member nations, including Djibouti, Egypt, Kenya and Seychelles. The partnership says it is committed to "upholding the rules-based international order at sea, promoting security, stability and prosperity" across 8.3 million square kilometers of international waters, including some of the world's most important shipping lanes. The CMF's main focus areas are defeating terrorism, preventing piracy, encouraging regional cooperation and promoting a safe maritime environment.

The CMF is testing seagoing drones as a cost-effective means to patrol the seas. It deployed four uncrewed surface vessels, also known as sea drones, on a continuous patrol of the Red Sea for more than 50 days in 2025, a first for the organization. Between February and April, the vessels patrolled a 219,000-square-kilometer operating area — about half of the Red Sea — looking for signs of illicit activity. The U.S. Navy supplied the four sea drones, which maintained a constant, all-weather watch while



sharing video feedback and real-time radar with operators at CMF headquarters.

"As well as giving the task force real-time visibility of on-water activity, the deployment produced important observations of maritime traffic that is easily shared with regional partners," said Royal Australian Navy Capt. Jorge McKee. "Nothing beats having eyes out on the water."

McKee, who commanded the task force responsible for the mission, said criminals and other nonstate actors "will exploit any gap they can find."

"The high-seas are shared spaces for the common prosperity of all people, but if nobody is looking we know that smugglers will move drugs and weapons, illegal fishermen will plunder the oceans, and pirates will rob or hijack ships," McKee said, according to the CMF. "This operation demonstrates the value of extra eyes on the water, and

helps us to know where to put warships in the right place to seize illicit cargo, and protect innocent mariners."

The Regional Coordination
Operations Centre (RCOC) in the
Seychelles and the Regional Maritime
Information Fusion Centre (RMIFC)
in Madagascar focus on exchanging
maritime information. The centers were
established in 2018 to manage information exchanges and sharing, and joint
operations at sea. Seven states signed
the original partnership agreements:
Comoros, Djibouti, France, Kenya,
Madagascar, Mauritius and Seychelles.

Working closely with its sister center, the RCOC coordinates regional operations to combat illegal maritime activities with the support of assets contributed by partner nations. The U.S. Navy says the RMIFC "focuses on deepening maritime awareness and facilitat-

ing the exchange and sharing of maritime information with national centers and international information fusion centers, while the RCOC uses the information provided by the fusion center to initiate and coordinate operations at sea."

Authorities displayed that coordination in January 2023 when they seized 3,000 rifles, hundreds of rounds of ammunition and anti-tank missiles from a fishing vessel in the Gulf of Oman. The Iranian weapons were destined for the Houthi militia in Yemen. Days earlier, officials intercepted 2,000 assorted Iranian weapons on a fishing ship bound for Yemen.

Without vessel information the RMIFC shared with local authorities, some of the weapons might have wound up in Somalia and sold to terrorist groups such as al-Shabaab and the Islamic State group in Somalia. The RMIFC fights weapons trafficking by sharing and exchanging maritime security information on ships suspected of committing crimes.

The center helps identify ships suspected of weapons trafficking and other sea crimes, such as drug smuggling, illegal human migration and illegal fishing. Constant monitoring by the center's watch room helps it quickly warn maritime law enforcement agencies of threats.

### **A UNIFIED RESPONSE**

Bruwer and others have pointed to a lack of political will, along with problems of coordinating multiple navies and bureaucracies, as barriers to cooperation. There are issues of overlapping jurisdictions, weak legal systems and a lack of proper interaction among agencies.

The Africa Center and other organizations have pointed out the need for balancing national sovereignty with regional cooperation, requiring a standardization of laws and trust-building. Many countries have incomplete chains of prosecution, from arrest to conviction.

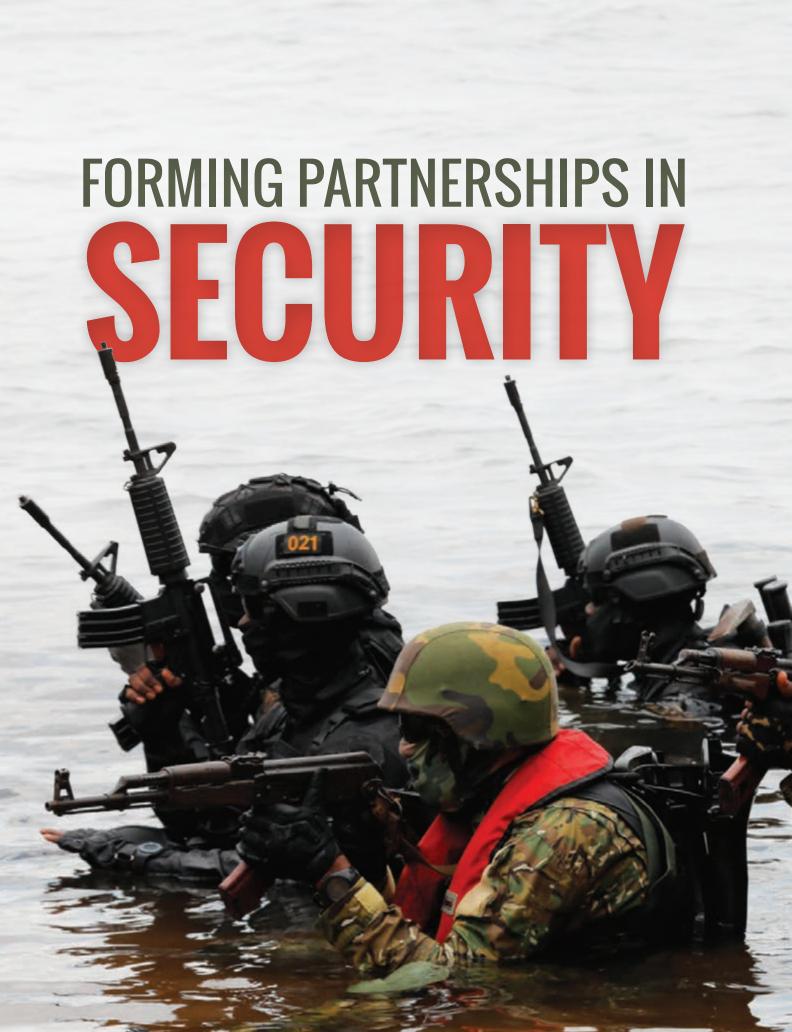


Researchers say Africa's coastal nations must prioritize acquisition and maintenance of patrol boats and surveil-lance equipment. They will need to emphasize training and retention of maritime military and law enforcement personnel. They will have to advance their maritime infrastructure, including communication networks.

But there remains the glaring problem of too much territory to patrol and protect but too few resources.

"We know we often use this cooperation rhetoric, and everyone is keen to cooperate," Bruwer said. "But there is very limited ability to do that. It's great if you say that we will assist our neighboring country to counter maritime crime, but it's difficult to actually allocate patrol resources."

Each country needs a government department to "really champion" maritime security to make sure it is a priority "and therefore well-funded," Bruwer said. She added that sharing capacities and information to collectively safeguard Africa's shores is "nonnegotiable."



# In Managing Coastal Safety, African Governments Are Working With the Private Sector to Maximize Results ADE STAFF

ttacks in the Red Sea by Houthi militia have disrupted world trade on an enormous scale. The terrorists have breached sea lanes through the Gulf of Aden to the Indian Ocean. They have forced ships to alter their courses, adding as much as two weeks and thousands of nautical miles to shipping routes.

The Houthis have hit more than 100 ships in the Red Sea, Gulf of Aden and Arabian Sea. The attacks by the Yemen-based Houthi militia have exposed the problems 37 African coastal countries face in providing security to their vast coastlines and maritime economic zones.

Beyond terrorism, African coastal nations face threats such as piracy, toxic waste dumping, illegal fishing, poaching, smuggling, and trafficking in humans, drugs and arms. Bad actors encounter few patrol ships in the vast waters of Africa's coastlines. "Maritime security is vital to the African continent — sometimes referred to as the planet's largest island," wrote Francois Vreÿ and Mark Blaine in a report for the Africa Center for Strategic Studies. "The sudden escalation in attacks has revived threats ... [and] revealed the threadbare nature of African maritime security — the impacts from which are not just felt in the Red Sea but across the entire continent."

Governments have come to recognize that their maritime security forces are underfunded for the task at hand. African countries traditionally have had to devote most of their security funding to their armies, with their navies and coast guards left with limited patrol fleets and staffing.

One alternative to traditional governmentfinanced maritime security is to bring in partners from the private sector to share the responsibilities.





Public-private partnerships, or PPPs, use academics, private-sector expertise and investment to reduce the financial burden on governments on a range of projects, including energy generation and infrastructure maintenance. Researchers say that African countries can use PPPs to improve maritime security.

Vasu Gounden, founder of the African Centre for the Constructive Resolution of Disputes, says military strategies are moving away from conventional peacekeeping to peace enforcement. Speaking at a PPP conference in South Africa in March 2025, he said PPPs have emerged as a "crucial mechanism for equipping and modernizing defence forces to effectively handle urban warfare, counterinsurgency and counterterrorism," according to defenceWeb.

At the conference, Derrick Mgwebi, a retired South African general, said that regional cooperation in parts of Africa remains inconsistent because of politics and bureaucratic delays. The effect, he said, is a lack of timely deployment of necessary military resources in crisis areas, defenceWeb reported. Other speakers at the conference

stressed the need for PPPs in "peace building" and post-conflict reconstructions.

The Center on Global Energy Policy says that PPPs "have emerged as a key strategy to address financial bottlenecks for infrastructure projects." So far, the center says, the performance of PPPs across Africa has been mixed. Some projects have had failings in preparation, procurement, risk management and transparency.

### **COORDINATED RESPONSE**

Vreÿ is emeritus professor of military sciences at Stellenbosch University in South Africa. He has written and lectured extensively on the subject of PPPs and says the many maritime threats facing Africa demand a "coordinated" response.

"The responses cannot be turned back to governments to do something," he told defenceWeb in a 2025 interview. "Governments must build partnerships with the private sector across the broad spectrum to address the complexities of these kinds of non-traditional maritime security risks and vulnerabilities."

He said that wars, disputes and geopolitical trends in other parts of the world are forcing countries to turn back to "hard" security concerns involving traditional threats. But, he noted, Africa's problems are different.

"I think that in the case of Africa, the greater balance of risks and vulnerabilities still reside on the side of non-traditional maritime security," he told defenceWeb. "This is also where Africa and African decision makers and partners have spent much of their time over the past 10 to 15 years. I also tend to argue that it is still in the domain of non-traditional maritime security risks and threats, and vulnerabilities where African decision makers, its bodies and it littoral states must place its focus, its resources, build its capacity, and build communities of practice. Because Africa, to an extent, stands a little bit on the sidelines when it comes to the big showdowns between major entities with large navies."

The energy policy center says PPPs demand organization and honesty. To build a PPP, the center says, requires robust upfront planning, including feasibility studies, forecasts and cost-benefit analyses. If bids are involved, they must be transparent and competitive. PPPs require "capable institutions, streamlined interagency coordination, and consistent political support" for proper execution, the center said in a May 2025 report.

Vreÿ says the Djibouti Code of Conduct and the Yaoundé Code of Conduct, which involve partnerships among countries, private companies and international organizations, are examples of successful international PPPs.

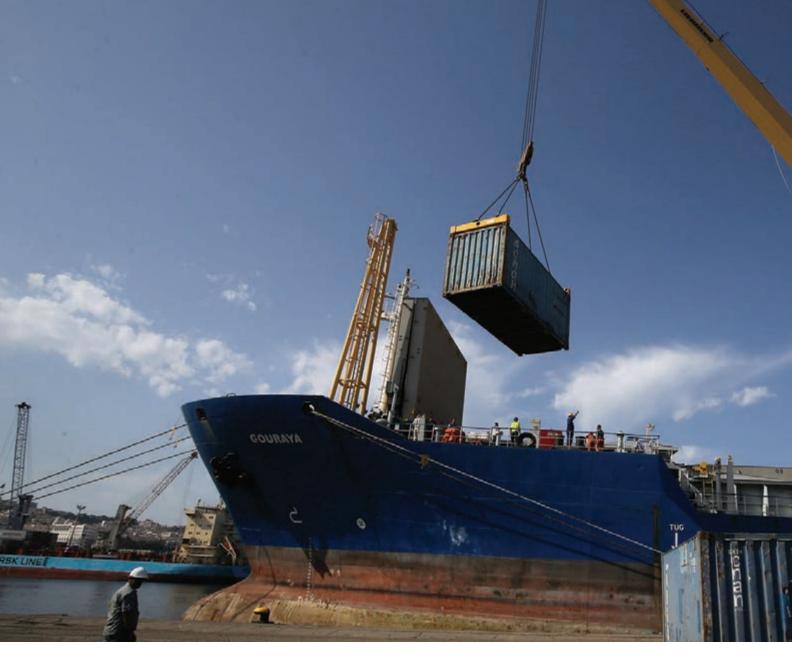
Some countries in Africa, because of their governments and business climates, are better suited for forming PPPs than are others, according to a 2025 report in the North Africa Post. Five countries, the report said, have established themselves as "continental leaders while others face significant challenges in attracting and managing private investment for public infrastructure."

Egypt, Ghana, Morocco, Nigeria and South Africa, the Post said, lead the way, followed by Côte d'Ivoire and Rwanda. Among the countries' strengths are "innovative contract clauses," growth in highways and telecommunications, and "transparent partnerships."

# **UNDERSEA BREAK**

An undersea communications cable break in the eastern Atlantic Ocean in the Congo Canyon in 2023 shows the potential, and need, for PPP cooperation. An investigation showed that subsea mud and rockslides caused the break. Four systems — the West Africa Cable System, South Atlantic 3, Africa Coast to Europe and an Angolan





connection — had been damaged. The Orange Marine, a ship dedicated to repairing cables off the coast of Africa, was in Kenya at the time but sailed south to fix the lines.

Although the cable damage was the result of natural causes, it served as a wakeup call to government officials about protecting subsea infrastructure, including protecting it from human interference. A 2024 study published by Trends Research and Advisory said that a subsea internet failure could pose a serious threat to the security and stability of the digital world. The study warned that terrorist attacks on undersea cables could lead to a "complete halt in digital services on a global scale, causing massive economic and social chaos."

"This could result in disruptions to banks, businesses, and government institutions, as well as interruptions to online medical and educational services," warned Elsayed Ali Abofarha and Hamad Al-Hosani, authors of the study.

"Such events could provoke military responses, increasing the likelihood of conflicts and international

disputes," they wrote. They cited a March 2024 incident in which three undersea cables in the Red Sea were cut, "affecting 25% of the data flow between Asia and Europe." The incident came during Houthi terrorist attacks against international navigation in the Red Sea, "prompting the formation of investigative committees to determine whether the event was intentional or accidental, and its potential connection to Houthi terrorism."

Repair specialists later determined that the cables most likely were damaged by the dragging anchor of the Rubymar cargo ship after it was struck by Houthi missiles, according to Data Centre Dynamics.

Such undersea cables typically are owned by corporations but are essential to modern governance. Such repairs usually are performed by other corporations and show the critical need for governments to have strong, established relationships with specialists in the private sector, even when there are no formal PPP agreements. The relationships are further complicated by the fact that such cable





Above: The Casablanca Port in Morocco is a bustling regional economic hub. Countries throughout Africa are studying ways to improve port security. APP/NURPHOTO

**Left:** The Port of Algiers in Algeria processes a shipment from Senegal. Many African ports have extended waiting times, making ships vulnerable to attacks. APP/NURPHOTO

systems often stretch over multiple national and international jurisdictions.

"The ability to identify threats to, and vulnerabilities in, subsea data cable networks is fairly advanced," said Vreÿ. "They are divided into natural, accidental and systemic. All three offer scope for repair interventions by way of known methods where the private sector tends to take the lead."

# 'DEDICATED ENTITY'

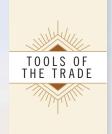
Few countries can handle the expansive, interconnected issues of maritime security on their own. "No East African navy is currently capable of mounting anti-piracy operations in their waters," wrote Vreÿ and Blaine in their 2024 study. The Houthi attacks also have shown the "suboptimal functionality of some African ports, which force ships to wait for prolonged periods outside the harbor, making these vessels more attractive for piracy and other criminality."

Researchers say that total commitment to a security PPP is essential, even if it means adding new levels of bureaucracy.

"Having a maritime security strategy, of course, is great guidance in order to know what kinds of public private partnerships you should build," Vreÿ said, as reported by defenceWeb. "To do this is not a simple task, as high-level public-private coordinating bodies are necessary to overcome the challenges of bureaucratic inertia, lack of trust between public and private stakeholders, and insufficient policy frameworks."

Governments need to make partnerships a priority, Vreÿ said, by appointing a "dedicated entity to run with this," instead of simply making it part of a larger security strategy, or just "an agenda point within a much larger agenda."

"There needs to be a very definite entity that runs reports overseas and helps push forward the development of a maritime security strategy," he said.





An Apache helicopter lands in Morocco during an exercise in 2024.

AVERY SCHNEIDER/U.S. ARMY

ADF STAFF

orocco has deployed the first of its new Apache AH-64E helicopters during a military training exercise with the United States.

The helicopters saw their first action in exercise African Lion in May 2025. The state-of-the-art helicopters, acquired from the U.S., are part of an order for 24 units, of which six are already operational, according to The Africa Report. Twenty-four Moroccan military personnel have been trained under a program offered by the U.S. Defense Security Cooperation Agency.

Boeing is building the new Moroccan Apaches under a contract with the U.S. Army through the U.S. government's Foreign Military Sales process. The AH-64E features an improved modern target acquisition system that provides day, night and all-weather target information, and night vision navigation capability. In addition to classifying ground and air targets, the fire control radar has been updated to operate in a maritime environment.

Morocco in June 2020 ordered 24 AH-64Es in a deal worth \$440 million after requesting the aircraft in late 2019. The agreement includes an option to buy 12 additional choppers made by Boeing. A report by the Moroccan Military Forum



Pilots and aircrew from the Royal Moroccan Armed Forces stand near a newly delivered AH-64E Apache helicopter during a handing-over ceremony on March 5, 2025. JASON JOHNSTON

said the helicopter is known for combat effectiveness and is equipped with "cutting-edge military technologies."

According to The Defense Post, the deal also includes 551 Hellfire air-to-surface missiles, 200 AIM-92H Stinger air-to-air missiles and 558 Advanced Precision Kill Weapon System precision-guided rocket kits. The Hellfire is a laser-guided, subsonic tactical missile used to target armored vehicles, including tanks, bunkers, radar systems and antennas, communications equipment, soft targets, and hovering helicopters. It has 12 variants, according to the Post. Originally designed for helicopters, it now can be launched from air, sea and ground platforms.

# Egypt, South Korea WORKING ON DEAL FOR JETS



ADF STAFF

gypt reportedly is concluding a deal with South Korea for up to 100 FA-50 light combat aircraft. The agreement also could include a significant transfer of technology.

An official from jet manufacturer Korea Aerospace Industries (KAI) said the procurement would "advance the Egyptian aviation industry and strengthen strategic partnerships across Africa and the Middle East," according to Groupe ADIT, an intelligence company. The fighter, which has 70% commonality with the classic Lockheed Martin

F-16 fighter jet, likely would replace aging Alpha Jets and K-8E trainers.

Egypt could start by ordering a first batch of 36 aircraft worth about \$1 billion before potentially procuring more, ADIT reported. If Egypt decides to buy all 100, about 70 would be built in Helwan, Egypt.

The FA-50 is a light combat version of the KAI T-50 Golden Eagle supersonic advanced jet trainer and light attack aircraft. Development of the FA-50 combat aircraft began in October 1997, according to Airforce Technology.

Its compatibility with F-16s is crucial as it minimizes logistical challenges and costs associated with integrating new aircraft into Egypt's current operations, according to Business Korea.

The FA-50 is 13 meters long and 9.5 meters wide. Its cockpit can carry two crew members. It is equipped with a wide field-of-view head-up display.

The global demand for military aircraft like the FA-50 is strong, according to Business Korea, and KAI is taking orders from countries such as Malaysia, Peru, the Philippines, Slovakia and the United States for advanced training aircraft.



ADF STAFF

ozambique's Air Force has taken delivery of an Airbus C-295W as it continues to expand its transport fleet.

Mozambique's Air Force acquired a refurbished Casa medium-range CN-235M and a short-range Let-410 turbojet from South Africa's Paramount Group in late 2022. Air Force officials at the time of delivery said the two aircraft would be used to transport cargo and troops and deploy special forces and paratroopers. Paramount supplied the aircraft as well as training and maintenance, according to defenceWeb.

The company also has delivered several refurbished helicopters to Mozambique and three Mwari multirole aircraft. These have been used in northern Mozambique since December 2022 to combat a terrorist insurgency.

"For Mozambique, the C295W promises to be a game-changer," reported Military Africa. "Its ability to perform in austere environments and adapt to multiple roles — from troop transport to humanitarian missions — will bolster the Air Force's capacity to respond to crises, whether combating insurgencies or delivering aid in the wake of natural disasters. With a coastline stretching over 2,500 kilometers and a history of security and logistical challenges, Mozambique stands to benefit significantly from this strategic addition."

The C-295 is becoming a preferred transport plane throughout Africa. Angola has taken delivery of the first of three new C-295 transports. Two of the aircraft will be equipped for maritime surveillance with an Airbus-developed fully integrated tactical mission system. It includes a search radar, electro-optical sensors, magnetic anomaly detector and other avionics. Weapons can include torpedoes, missiles, mines and depth charges.

The Airbus C-295 is a tactical transport aircraft designed for missions such as troop and cargo transport, maritime patrol, airborne warning, surveillance and reconnaissance, armed close air support, medical evacuation, and firefighting. Airbus says it can carry up to 8 metric tons of payload or up to 70 troops at a maximum cruise speed of 260 knots. It can be equipped for air-to-air refueling of fixed-wing aircraft and helicopters.

Egypt has acquired 26 of the transport planes, and Algeria has six. Equatorial Guinea has two on order, Mali has two, Ghana has three, and Burkina Faso, Côte d'Ivoire and Gabon each have one, according to Airbus. Senegal has one with another on the way. In total, at least 10 countries in Africa operate or have ordered a total of 44 aircraft, and these have reached more than 100,000 flight hours since 2005.



# NIGERIA DEBUTS DOMESTICALLY PRODUCED

# ATTACK DRONE

ADF STAFF

"By manufacturing these drones

he Nigerian military unveiled its first domestically produced attack drone, marking what it calls a major milestone in the continent's ability to develop and manufacture its own defense technology.

Built in collaboration with Nigerian tech company Briech UAS, the drone was showcased at the company's headquarters in Abuja in April 2025. Though technical specifications were not released, Chief of Defence Staff Gen. Christopher Musa emphasized that the drone will be used in the country's battle against terrorists and gives Nigeria a badly needed domestic source for the weapons.

locally, Nigeria reduces its dependence on foreign resources, ensures prompt acquisition and strengthens its ability to respond swiftly to security threats," Musa said. "I'm sure, with the great minds we have, especially with the youths, we can produce something that will be very, very outstanding."

The drone is a kamikaze-style device that is designed to carry

The drone is a kamikaze-style device that is designed to carry explosives and can be directed to detonate upon impact, according to The Defense Post. It is expected to add a new element to Nigeria's counterinsurgency operations, which already include unmanned surveillance aircraft, weaponized drones and piloted attack planes.

Bright Echefu, chairman of Briech UAS, said terrorist groups such as Boko Haram and Islamic State West Africa Province are using commercial, off-the-shelf drones for reconnaissance and attack missions.

"These drones have been used to track and attack our troops. They are being deployed to coordinate ambushes and execute crude aerial strikes," Echefu said. "We have dedicated ourselves to developing good surveillance and attack drones tailored to meeting the unique challenges faced by our country."

Plateau State Gov. Caleb Mutfwang, who attended the launch, said new weapons and technology like the drone are needed to combat asymmetric tactics used by insurgent groups.

"As a nation, we made a mistake by allowing nonstate actors to acquire capabilities that nearly rival those of state actors," Mutfwang said. "It is time to rectify that imbalance."

Nigerian defense company Briech UAS launches the country's first domestically produced attack drone during a demonstration at its headquarters in Abuja. BRIECH UAS





# African Experts Warn of AI-DRIVEN CYBER THREATS

- ADF STAFF -

usinesses in East Africa are turning to artificial intelligence (AI) to make their companies operate faster and more efficiently and to uncover new opportunities.

However, Brian Kiplagat, head of cybersecurity at NTT DATA East Africa, is warning that AI is also supercharging attacks.

"We're seeing a surge in cyberattacks where AI is used to identify and exploit vulnerabilities at unprecedented speed," Kiplagat told a roundtable meeting of industry leaders in Nairobi, according to the website CIO Africa. "Many organisations have strong on-premise controls but struggle with visibility and governance in cloud and remote work environments. This exposes critical gaps that attackers are increasingly targeting."

Cybercriminals can use AI to steal passwords and create more convincing phishing emails to trick users. Hackers use AI-powered malware to get past traditional virus protection software.

"AI enables incredible opportunities, but it's also changing the threat landscape. We're dealing with malware generated by AI, deepfake scams, and autonomous systems that can be hijacked," said Kelvin Mugambi, technical solutions architect at Cisco for Sub-Saharan Africa. "This calls for a radical shift in how we protect digital infrastructure. We must secure systems that can think and act, not just react."

Mugambi said only 4% of organizations worldwide are considered "mature" in cybersecurity readiness, while 86% experienced AI-related security incidents in the past year. The industry leaders also stressed that the continent faces a shortage of cybersecurity professionals.

In an essay for EB.net, Boland Lithebe, security lead for Accenture in South Africa, said companies and governments need to use AI as part of their defenses. He noted that banks use AI to detect fraudulent transactions in real time. He said AI-powered threat intelligence platforms can help automate responses to cyberattacks, improve reaction time and limit damage.

"Just as AI enables cybercriminals, it can also strengthen defences," Lithebe wrote. "AI-driven threat detection systems can analyse patterns, flag anomalies, and predict attacks before they happen. In a country like South Africa, where cybersecurity skills are in short supply, AI could play a crucial role in bridging the gap."

AFRICAN UNION INAUGURATES

# -SPACE-AGENCY

ADF STAFF

early three decades after Egypt launched its first satellite into orbit, the African Space Agency opened its doors in Cairo with a mission to expand the continent's presence beyond Earth.

"Space activities across the continent have been very fragmented," said Meshack Kinyua, the African Union's space applications training officer. "The [agency] ... places all African Union members on an equal footing regarding access to gathered data based on their needs."

At least 21 African nations have space programs. Most of those have started during the past 25 years as the cost of developing and launching satellites dropped. Since Egypt launched its NileSat-1 in 1998, 19 African nations have put 67 satellites into orbit, according to SpaceHubs Africa. Botswana became the continent's newest spacefaring nation when it launched BotSat-1 on March 15, 2025.

The African Space Agency's mission has four pillars: improve Earth observation; support satellite communication, navigation and positioning; promote astronomy; and promote space sciences.

"The African space program is in the embryonic stage right now," Kinyua said in an AU video. "We are working directly to make sure the member states have the capacity in terms of infrastructure and in terms of human capital development."

African nations expect to triple the number of satellites on orbit over the next few years. Space advocates see Africa's growing role beyond the atmosphere as vital to the future. Satellite technology can forecast the weather, establish secure communications and track movements across the continent's borders.

The recently created African Space Agency will coordinate the work of more than 20 national space programs with the goal of improving observation and communications on Earth. AFRICAN SPACE AGENCY





ADF STAFF

he Senegalese Armed Forces is taking aim at illegal logging and trafficking to slow the theft of its precious natural resources.

In May 2025, it approunced that Operation

In May 2025, it announced that Operation Faxass in Military Zone 6 had seized 344 trunks of illegally harvested timber taken from the forests of Pata and Guimara. The operation's name means "theft" in Wolof.

"The army is demonstrating its determination to curb this traffic, which fuels a lucrative cross-border trade, often orchestrated by well-organized networks operating between Senegal and Gambia," the news website Dakaractu reported. "Operation FAXASS, beyond its immediate effects, sends a clear message: the forests will no longer be left in the hands of predators."

The theft of illegal timber costs African nations an estimated \$17 billion annually. One of the most prized and rarest wood types is rosewood, which is used in China for making high-end furniture. An Environmental Investigation Agency study found that more than

3 million metric tons of rosewood valued at more than \$2 billion are taken annually from West Africa and sent to China.

Despite a 2022 government ban on all timber exports, The Gambia remains a major source of rosewood shipped to China each

SENEGALESE ARMED FORCES/DIRPA

A Senegalese Soldier taking part in Operation

Faxass confiscates

illegally harvested timber near the border

with The Gambia.

year. Smugglers move the timber harvested in Senegal's Casamance region and ship it from the port in The Gambia's capital, Banjul, with the help of complicit port authorities and police.

Senegal believes Operation Faxass and other efforts to protect natural resources will deter traffickers.

"By intensifying operations of this type, the armed forces hopes not only to protect the environment, but also to restore state authority in these zones that are often difficult to access and have long been open to illegal exploitation," Dakaractu reported.



# Destroys Deadly 'Remnants of War'

ADF STAFF

a symbolically important display, Libya's Criminal Investigation Department destroyed 2 tons of ordnance, explosives and other war remnants collected from the Al-Heera area.

The move is part of an effort to restore safety to the country after years of conflict. Combatants including mercenaries from Russia's notorious Wagner Group placed land mines and improvised explosive devices in civilian areas they occupied.

Between 2020 and 2025, these types of explosives killed at least 125 people and injured more than 300 people in Libya. "Each incident carries immense human and psychological weight," said Fatma Zourrig, head of the Mine Action Programme for the United Nations Support Mission in Libya.

In 2024, 8,300 explosive remnants of war were disposed of in the

country. Residents have slowly returned to their homes in mined areas, such as the southern suburbs of Tripoli, which Wagner forces had occupied. However, much work remains to clear the weapons. A 2023 report by the U.N. Support Mission in Libya found that 15 million square meters of land still contained explosive ordnance.

daily threat to life and livelihoods."

other explosives for disposal in Libya.

Workers collect munitions,

ordnance and

IASON FOOUNTEN/U.N.

"The indiscriminate use of weapons in civilian areas during the recent conflicts means even urban areas are littered with explosive remnants of war," the U.N. said, "These remnants of conflict obstruct safe access to education, health care and development, and continue to injure or kill long after the fighting has ceased, posing a

# Nigerian Engineers Return Plane to Skies After 23 Years ADF STAFF

ligerian military engineers returned a twin-engine turboprop Dornier DO-228 to the air after it had been grounded for 23 years.

Air Marshal Hasan Abubakar, Nigeria's chief of air staff, commended the efforts of five engineers and 40 technicians who worked for four months on the project. "It is not just an operational gain, it is a testament to the Nigerian Air Force's (NAF) commitment to self-reliance and resource optimization," he said.



The plane previously was operated by the Ministry of Mines and Steel Development and had remained unused at a facility in Kaduna since 2001. The NAF now plans to use the plane for tactical airlift missions. The move comes after a presidential directive to transfer grounded platforms to the NAF for evaluation with the goal of bringing them back into service and decreasing reliance on imported aircraft.

The NAF has made a push to expand its fleet, adding 14 advanced aircraft in 2024, part of a three-year plan to add 64 planes. The country also has worked to return grounded planes to the skies, raising its serviceability percentage from about 34% in 2015 to about 84% in 2020, defenceWeb reported.

At the same time, the NAF has made strides in performing domestic inspections of its aircraft to keep its planes operating safely. In 2024, it conducted the first in-country 4,800-hour inspection of a DO-228 aircraft.

"Together, these milestones highlight the NAF's growing capacity for advanced in-house aircraft maintenance and serve as a foundation for future projects aimed at achieving technical autonomy," said Olusola Akinboyewa, NAF's director of public relations.



# **ECOWAS**

# Celebrates 50th Anniversary

ADF STAFF

he Economic Community of West African States has observed its 50th anniversary as one of the continent's most successful economic blocs and a major force in regional cooperation and peacekeeping.

The community, known as ECOWAS, observed its anniversary in mid-2025. Sixteen member states established it in 1975.

Within three years of its founding, the bloc's mandates were expanded to encompass political and security objectives. These additions were necessary as West African countries adapted to shifting socioeconomic and security challenges, which have come to include terrorism threats.

"We are confronting the greatest challenges we face today, terrorism, climate change and unconstitutional change of government, poverty and economic disparities," ECOWAS Commission President Omar Alieu Touray said, as reported by Reuters. He expressed confidence in overcoming the challenges.

Military coups led to the withdrawal of Burkina Faso, Mali and Niger from the group in 2024. The three breakaway countries have formed the Alliance of Sahel States. ECOWAS has made overtures to the three countries since that time to get them to return. In mid-2025, ECOWAS representatives met in Ghana and began planning the relocation of several key institutions based in the three alliance

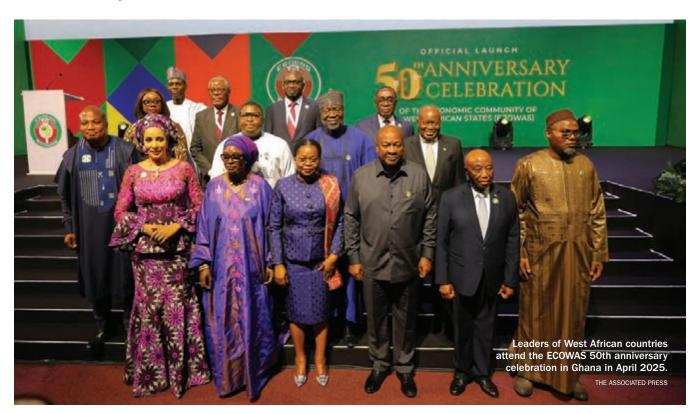
countries, according to Business Insider Africa. ECOWAS officials said they had concerns relating to the free movement of people, goods and services within the alliance.

The stated goal of ECOWAS is to achieve "collective self-sufficiency" for its member states with a single large trade bloc. Its emphasis on peacekeeping includes equality and interdependence of member states, solidarity, nonaggression, promotion of human rights, economic and social justice, and democratic governance.

One particular success has been its Free Movement of Persons, Residences and Establishment Protocol, which gives citizens the right to enter and live in any member country's territory. A second protocol aims to develop and integrate the tourist industry of each member country.

As a peacekeeping force in the region, member states have sent joint military forces to intervene in the bloc's member countries at times of political instability and unrest. The first intervention came as a result of a civil war in Liberia in 1990. That initial 3,000-man contingent was formed with personnel drawn from The Gambia, Ghana, Guinea, Nigeria and Sierra Leone, with additional troops contributed by Mali.

Since that time, ECOWAS also has intervened in Côte d'Ivoire, The Gambia, Guinea-Bissau, Mali and Sierra Leone.



# African Union Advances 'AGENDA 2063'

ADF STAFF

fter a meeting in Tanzania, the African Union Council has recommended improving relations with regional economic communities, strengthening its prevention mechanisms and refining its mediation tools.

The council focused on promoting and defending AU shared values and established instruments for guaranteeing continental peace, security and stability. The three-day session in Arusha included orientation for new members of the Peace and Security Council.

Nigerian Ambassador Bankole Adeoye, AU commissioner for Political Affairs, Peace and Security, emphasized the philosophy of "African solutions to African problems," underscoring the council's pivotal role in advancing the AU's peace agenda.

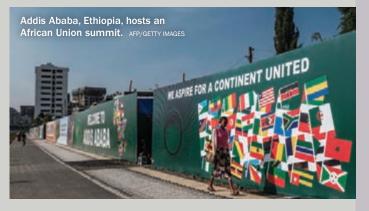
The council also discussed Agenda 2063, which seeks to deliver on "Seven Aspirations" that will move Africa closer to achieving its vision for 2063. The aspirations are:

- A prosperous Africa based on inclusive growth and sustainable development.
- An integrated continent, politically united and based on the ideals of Pan-Africanism and the vision of "Africa's Renaissance."
- An Africa of good governance, democracy, respect for human rights, justice and the rule of law.
- · A peaceful and secure Africa.
- An Africa with a strong cultural identity, common heritage, shared values and ethics.
- An Africa whose development is people-driven, relying on the potential of African people, especially its women and young people, and caring for children.
- Africa as a strong, united, resilient, and influential global player and partner.

Officials said the Seven Aspirations reflect the AU's desire for shared prosperity and well-being, for unity and integration, and for a continent of free citizens and expanded horizons.

Tanzanian Ambassador Innocent Shiyo told the council that Tanzania "has always championed peace and security" in Africa.

"We remain steadfast in our support for the work of the African Union Peace and Security Council," he said. He added that through cooperation and "unwavering political will," the council can collectively advance the AU's peace and security agenda.





A man wears a virtual reality headset showing the work of United Nations peacekeepers in South Sudan as part of an event at U.N. headquarters in New York. THE ASSOCIATED PRESS

# VIRTUAL REALITY OFFERS NEW LOOK AT U.N. WORK

UNITED NATIONS

United Nations Security Council members have tested virtual reality (VR) devices in examining the lifesaving work of peacekeeping forces in South Sudan.

Officials set up the VR demonstration to deepen Security Council members' understanding of the operations carried out by the U.N. Mission in South Sudan (UNMISS). Using VR headsets at the Security Council roundtable, delegates could observe flood-affected regions in Bentiu, view land and river patrols along the Nile, and gain insights into the mission's peacebuilding initiatives within conflict-affected communities. One representative described the VR session as a "field visit" to the peacekeeping mission.

VR gives users the sense of being in a different place or time, thanks to computer-generated graphics or 360-degree real-world video footage. In the U.N., it is being used by those involved in conflict resolution and reconciliation efforts to share perspectives and promote mutual understanding.

One Security Council official called the experience "incredibly valuable for deepening our understanding of the situation in South Sudan and the operations of peacekeeping missions, as it allows us to engage with the circumstances firsthand."

Special Representative of the Secretary-General and Head of UNMISS Nicholas Haysom said, "This experience provides a tangible sense of the responsibilities undertaken by peacekeepers." He added, "There is now a significantly greater understanding and empathy for the peacekeeping efforts than previously existed."

The VR experience is available to visitors taking a guided tour at U.N. headquarters in New York, providing a powerful glimpse into the work being carried out by peacekeepers around the world.

The UNMISS VR tour is not the first for the U.N. It is increasingly turning to VR for immersive storytelling to brief decision-makers on international affairs. In December 2022, the U.N. invited diplomats to try out VR on the work of the U.N. Verification Mission in Colombia.



ADF STAFF

he 2026 African Air Chiefs Symposium will include a live-fly exercise, a first for the intracontinental organization.

In past years, the symposium has been limited to indoor "tabletop" demonstrations. A live-fly exercise is a real-time, full-scale training event designed to simulate combat scenarios and refine aircrew readiness. Such exercises involve flying aircraft in real-world conditions, often involving multiple nations and simulating various operational challenges.

The chiefs of Africa's air forces made the decision during their 2025 meeting in Zambia. Co-hosted by the Zambia Air Force and U.S. Air Forces Europe-Air Forces Africa, the 2025 event saw more than 240 participants from 38 nations, including air chiefs, liaison officers and senior enlisted representatives. The theme was "Strategic Collaboration and Operational Excellence: Enhancing Effectiveness of the Association of African Air Forces."

"During the African Air Chiefs Symposium 2024 in Tunisia, it became abundantly clear that the Association of African Air Forces needed to redirect its efforts toward fostering multilateral collaboration and interoperability to confront these shared challenges effectively," said Zambia Air Force Lt. Gen. Oscar Nyoni, the 2025 association chairman. "Air forces across Africa possess a unique capability to do more than just safeguard our skies. With diverse air assets and skilled personnel, we have the potential to provide vital support to nations in distress."

During the 2025 event, air force chiefs conducted a tabletop exercise focused on a humanitarian assistance and disaster response scenario. The exercise was a key step in advancing the association's exercise series, the Zambia Air Force Lt. Gen. Oscar Nyoni, right, speaks during the opening ceremony for the 2025 African Air Chiefs Symposium in Lusaka, Zambia. SENIOR AIRMAN SELEENA MUHAMMED-ALI/U.S. AIR FORCE

tactical means by which the association will achieve its goals of developing each member's capacity, capability and interoperability.

Other symposium highlights included a joint senior enlisted and commander panel, in which African senior enlisted representatives and air chiefs discussed the professional development of their enlisted corps.

The association is a voluntary, nonpolitical organization focused on collaborative engagements to promote African-led air power solutions among 29 African member nations and the U.S. Air Force.



# Mozambique, Italy PARTNER FOR MARITIME SECURITY

**DEFENCEWEB** 

fter a four-day visit to the port of Maputo, Italy and Mozambique have agreed to work together to safeguard commercial shipping along the Indian Ocean.

During the visit by the Italian Navy frigate Luigi Rizzo, Italy and Mozambique signed a military cooperation agreement. The deal, coinciding with the 50th anniversary of diplomatic ties between the two countries, outlines joint training, capacity building and potential expansion to other armed forces sectors.

The pact aims to improve Mozambique's ability to counter maritime threats such as piracy and illegal trafficking. Not long before the agreement, the Italian Navy thwarted two pirate attacks off the Horn of Africa.

While visiting Mozambique, the Luigi Rizzo conducted a joint simulation with the Mozambican Navy, showcasing maritime interdiction techniques crucial for protecting trade routes and local fishermen. The European Union Military Assistance Mission in Mozambique also took the visit as an opportunity to strengthen ties with its naval counterparts, Seaforces online reported.

The mission mandate runs through June 2026. Its aim is to support the Armed Forces for the Defense of Mozambique in protecting civilians and restoring safety and security in Cabo Delgado province.

The Luigi Rizzo is the flagship of the European naval mission. Before arriving in Mozambique, the ship and a Kenya Navy patrol vessel conducted a joint operation off the waters of the port of Mombasa, Kenya.





# South Africa Hosts India in Submarine Training

ADF STAFF

South African Navy submarine component, has hosted the first joint operational sea training for underwater craft with India.

exercise.

CAROLINE DAVIES/
U.K. MINISTRY OF DEFENCE

South African Navy submarine SAS

Charlotte Maxeke

surfaces near a

frigate during an

The two-week training session included collaboration in establishing what South African Chief Petty Officer Nkululeko Zulu

termed a "block training programme," according to defenceWeb. It was designed to test and evaluate the operational readiness of submarine platforms in service with both navies.

"The collaboration between the Indian and [South African] Navy for work-up of ships and submariners has shown immense progress in the last two years," Indian Rear Adm. Srinivas Maddula told Sailors after training, defenceWeb reported. "The enthusiasm, determination and willingness of crews to adapt has been truly commendable. During this training period, we have not only reinforced your operational skills but have also strengthened the work culture and camaraderie between our two navies."

South Africa is one of the few countries on the continent with a submarine fleet. However, its three submarines reportedly are out of service for maintenance.

The submarine sea training comes after India and South Africa signed an agreement in 2024 on submarine rescue cooperation. India has agreed to deploy one of its two deep submergence rescue vehicles to aid the South African Navy as needed. That agreement gives the South African Navy a deep-water rescue capability it did not previously have with only the South African-designed and built tower escape safety system available to submariners.

This tower escape system allows for two submarine crew members at a time to climb into the conning tower of their ship, wait for the tower to be flooded and then rise to the surface. The tower is then refilled with air, ready for the next two escapees. The current system was first tested in 2019 from a depth of 20 meters, according to Naval News

India and South Africa have a history of frequent high-level military visits, training exchanges, military exercises and exchanging best practices. Indian Navy warships also regularly visit South Africa, and the Indian Navy took part in Exercise Ibsamar in October 2024 off Saldanha with South Africa and Brazil.



was almost inevitable that Phoenician settlers would establish a trade center more than 2,200 years ago in what is now the Tunisian port city of Tunis.

The Phoenicians named it Carthage, which means "new town." It juts into the central part of the Mediterranean Sea, and its sailing access to ports along the European and African coasts made it critical to trade routes. It also made Rome and Carthage competitors in a rivalry that lasted for centuries.

The Phoenicians, from what is now Lebanon, chose their maritime colonies carefully, focusing on the quality of their harbors and how well they could be defended from attacks. They discovered that Carthage was an ideal spot, on a triangular peninsula covered with low hills.

The Phoenicians learned to use their renowned seafaring and trading skills to full advantage in their North African post. The city-state grew into a sprawling Mediterranean empire that dominated trade in textiles and precious metals.

But the Phoenicians' influence was not to last. By the seventh century B.C., Carthage had begun to assert its independence while Phoenicia was dealing with a series of Babylonian sieges. Carthage's wealth and power grew, built on a combination of maritime trade, agriculture and mineral resources.

By the fourth century B.C., Carthage had expanded its power across the western Mediterranean, becoming the dominant force in the region. The Carthaginian empire included North African coastal regions from Morocco to western Libya, Sardinia and the Balearic Islands, the western half of Sicily, and parts of the Iberian Peninsula.

The Carthaginian empire, also known as the Punic empire, was based on its financial and political influence, not on its military power. Punic magistrates directly controlled some territories, while treaties, alliances or tributary relationships helped Carthage control other regions. As Carthage expanded, its culture incorporated its surrounding influences: Phoenician, African, Greek and, later, Roman.

The empire's craftsmen were considered some of the best in the world. Europe regarded Punic beds, cushions and mattresses as luxuries, and craftsmen copied Punic furniture throughout Europe.

At its peak, Carthage boasted a population of nearly 500,000 people. Its vast infrastructure included a harbor with a docking capacity of 220 ships.

Carthage's power and expansion eventually brought it into conflict with the rising Roman Republic. This rivalry led to the Punic Wars, a series of three bloody conflicts that would come to define the era and ultimately decide the fate of the western Mediterranean.

An engraved illustration of Roman Gen. Publius Cornelius Scipio Africanus Aemilianus after defeating Carthage in the Third Punic War in 146 B.C.

Carthage fought the First Punic War, from 264 to 241 B.C., over control of Sicily. Rome won as a result of its emerging naval power. The Second Punic War, from 218 to 201 B.C., is famous for Hannibal's crossing of the Alps and his initial overwhelming victories against Rome. But he eventually lost a war of attrition, and Carthage surrendered its overseas territories to Rome.

The Third Punic War marked the destruction of the Carthaginian empire. Rome, led by the forces of Gen. Publius Cornelius Scipio Africanus Aemilianus, won in a three-year campaign that ended in 146 B.C. with the near-total destruction of Carthage.

But the city's legacy lived on, with Julius Caesar establishing a Roman colony on the ruins of Carthage in 44 B.C. It grew to become one of the most important cities in the Roman Empire.

The rivalry between Carthage and Rome is a major part of African and European history. It shaped the political landscape of the world for centuries. In history, the empire has come to be defined by the three Punic wars, but it always was more accurately defined by its maritime trade, agriculture and exploration, which helped make the region what it is today.



# CLUES

- 1 This area is considered the heartland of the Kingdom of Kush.
- 2 The site includes pyramids, temples, palaces and industrial areas.
- The architecture reflects Mediterranean, Middle Eastern and Sub-Saharan African influences through what was a major trade corridor.
- 4 Though not an island, its name comes from its proximity to the confluence of the Atbara, Blue Nile and White Nile rivers.





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