
MARCH 2025INFORMATION CURRENT AS OF
SEPTEMBER 2024

**CHRISTIANE
THOMPSON,**

MA, MMAS, MLA,

JSOU Assistant
Professor

JSOU REPORT 25-5

The Gulf of Guinea: A Primer



The Spearhead-class expeditionary transport ship USNS Carson City (T-EPF 7) sits pier-side before departing Naval Station Rota, Spain, in support of the ship's 2019 Africa Partnership Station (APS) deployment, July 2, 2019. Photo by Chief Petty Officer Travis Simmons, Navy Public Affairs Support Element East

Vast Waters, Vital Coastlines: The Gulf of Guinea's Expanse and Landscapes

The Gulf of Guinea (GoG), historically referred to as the Bight of Benin, covers an extensive area of 2.3 million kilometers squared (888,034.6 miles squared) and has more than 6,000 kilometers (3,728.23 miles) of coastline.¹ Defined as a geopolitical region, the gulf stretches from Senegal to Angola, as geographical area scholars define the region as encompassing Liberia, Côte d'Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon.² In its official definition, the United States Geological Survey (USGS) narrows the geographical area

as stretching from Cape Palmas in Liberia to Cape Lopez in Gabon.³

The gulf region is home to several industrialized coastal cities and follows the natural curvature of the Atlantic coastline. In terms of size, the GoG (2.3 million kilometers squared or 888,035 miles squared) is more than three times the size of Texas (695,662 kilometers squared or 268,596 miles squared).⁴ The gulf's size rivals the world's largest island—Greenland, which is 2.16 million kilometers squared (approximately 833,980.32 miles squared).⁵ Furthermore, some of West Africa's key rivers such as the Niger, Volta, and Sanaga drain into the gulf with its sandy beaches, estuaries, deltas, lagoons, and river inlets.⁶ The long coastline features landscapes from flat plains to rugged mountainous

Scan here to see the
digital version.



“

The waters of the GoG are of global importance both as a transport hub and as a shipping route.

”

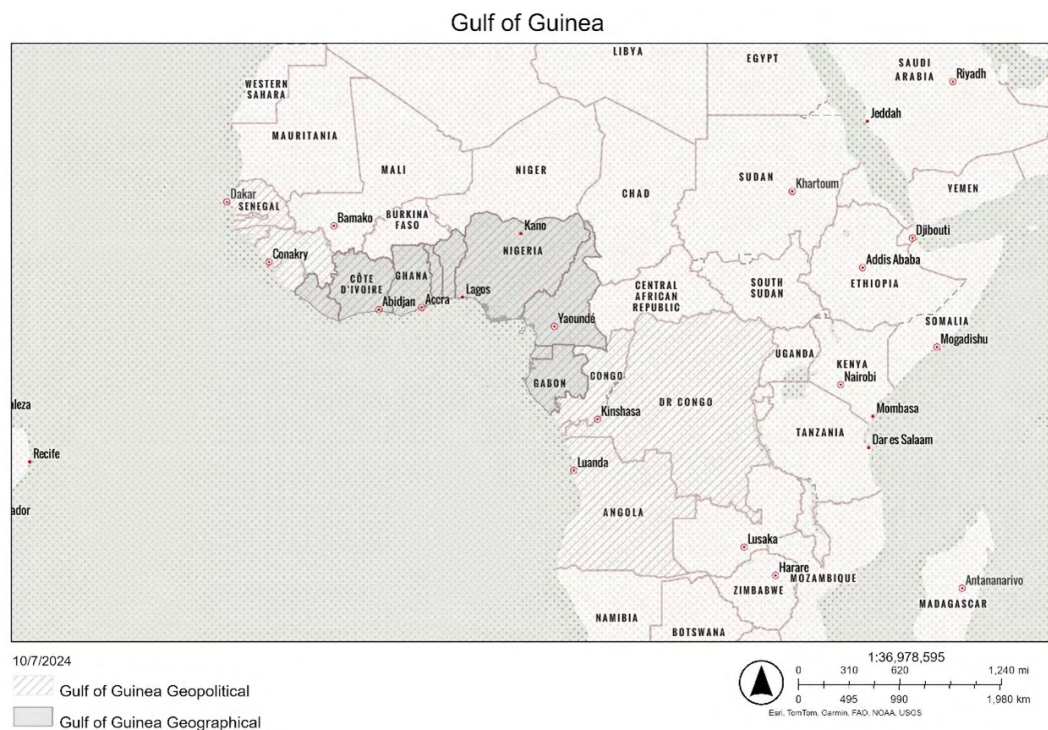


Figure 1. Map of the Gulf of Guinea highlighting geopolitical and geographic coastal countries, as defined by the USGS. Source: Author (Data from Michael E. Brownfield, “Assessment of Undiscovered Oil and Gas Resources in the Gulf of Guinea Province West Africa,” Geologic Assessment of Undiscovered Hydrocarbon Resources of Sub-Saharan Africa, United States Department of the Interior, U.S. Geological Survey, 2016.)

terrain. This environment supports diverse ecosystems and human livelihoods.⁷ The waters of the GoG are of global importance both as a transport hub and as a shipping route.⁸ A myriad of commodities destined for central and southern Africa and Europe pass through these waters. Moreover, the gulf is vital for oil exports from the Niger Delta.⁹

These vast waters and bordering coastal countries face security factors such as environmental conditions, socio-economic deprivation, human safety, and crime that are interconnected. Despite the region’s natural resources, including hydrocarbon revenues, many GoG countries have social and economic challenges.¹⁰ Moreover, the region’s coastal zones, characterized by dense populations, low elevations, and/or inadequate adaptive capacity, are particularly vulnerable to the impact of climate change.¹¹ These atmospheric changes have socio-ecological and economic consequences as well.

Environmental Challenges: Rising Waters, Shifting Sands

Climate change has detrimental and beneficial impacts, yet socio-ecological systems always require time to adapt to changes.¹² For the positive to outweigh the negative in the gulf, it is crucial that species have time to adapt.¹³ The negative effects of climate change include an increase in the frequency and intensity of extreme weather events, such as swells, storms, heavy precipitation, elevated temperatures, as well as rising sea levels.¹⁴

Local factors and the climate-induced rise of sea level make the GoG vulnerable to flooding and similar extreme events.¹⁵ However, empirical data on coastal sea level changes in the region is limited, mainly due to a lack of gauge stations.¹⁶ Between 1993 and 2021, the mean sea level rise estimated by scientists was approximately 8.9 centimeters (3.50 inches).¹⁷ The effects

of these changes concern artisanal fishing communities because climate change can drastically reduce fish stocks.¹⁸ Scientists expect marine ecosystems to continue undergoing changes that impact the livelihoods of coastal populations.¹⁹

Human Factors and Security: Resource Rich, Governance Poor

Some of the countries along the GoG rank consistently low on human development indicators, such as transparent governance, rule of law, free press, and stable elections.²⁰ Ironically, West Africa's resource wealth has become a barrier to building effective governance. The term "resource curse," by economist Richard Autry, refers to the paradox in which populations of countries with a wealth of natural resources, such as oil, minerals, or fish, experience sluggish economic growth, instability, and corruption rather than benefiting from their wealth.²¹ Human ecologist Garrett Hardin developed the "tragedy of the commons," a concept that describes a dynamic in which individuals, driven by self-interest, exploit a shared resource to the point of depletion. For example, when a few people exhaust

their stocks, it causes long-term, collective harm to the community.²² Both dynamics are evident in the GoG region.

Poor resource management at the national level has created a resource curse dynamic. At the community level, the failure of collective responsibility for shared resources has led to a tragedy of the commons. In both cases, unsustainable management practices led to negative outcomes for societies across the GoG coast. For example, the Gulf's fish stock decline is a secondary effect of both dynamics.

Unregulated Water: Threatened Livelihoods

Illegal, unreported, and unregulated (IUU) fishing is a major threat in the GoG. IUU fishing endangers the livelihoods of small-scale fishermen and depletes marine biodiversity.²³ Small-scale fishing is the backbone of the livelihoods of many communities along the gulf.²⁴ Between 2003 and 2020, coastal catches in Côte d'Ivoire declined by approximately 40 percent.²⁵ In Ghana, small fish landings decreased by 59 percent between 2003 and 2020.²⁶ Large-scale catch operations by ships, primarily from China, other Asian countries, and

“

Scientists expect marine ecosystems to continue undergoing changes that impact the livelihoods of coastal populations

”

Illegal, Unreported, Unregulated Fishing (IUUF)



Fishing is **ILLEGAL** if
= without a license
= violating national or international law
= flags of states violate the regulations of a fishery



Fishing is **UNREPORTED**
= not reporting or misreporting to regional or local authorities or violating regulations of the Regional Fisheries Management Organization (RFMO)



Fishing is **UNREGULATED**
= the fishing ship lacks a nationality
= ships fish in areas without conservation efforts in place – jeopardizes fish stocks

1 in every 5 fish caught is **ILLEGAL** or **UNREPORTED**



IUUF negatively impacts ecosystems and economies and increases the potential for food insecurity.

LOOKING FOR MORE?

Check out all of our publications with one click!



Figure 2. Overview of IUU Fishing definitions, terms, and context. Source: Alisha Rajaratnam, "Understanding IUU Fishing," The Lakshman Kadirgamar Institute, October 20, 2022.

Europe accelerate this depletion of fish stocks.²⁷ In Ghana, for example, Chinese companies collaborate with local elites who operate via Ghanaian front companies, which use the revenue from these deals to entrench their political power.²⁸

Chinese trawlers operate with few restrictions, and despite legal prohibitions, up to 90 percent of trawlers licensed in Ghana are Chinese owned.²⁹ These trawler crews often capture juvenile fish, which reduces their reproductive capacity and further accelerates the decline in fish stocks.³⁰ They show little concern for stock preservation or size restrictions. Furthermore, unenforced labor laws result in unhealthy working conditions on ships, and the fishing industry has links to human trafficking.³¹ Traffickers use laborers, including children, for both work and sexual exploitation.³²

For instance, from April 2020 to April 2021, traffickers used more than 13,000 children between the ages of five and 17 in Boké, Guinea, to work on trawlers.³³ As a result, the fishing industry is akin to a form of organized crime. In the GoG, human trafficking and forced labor are widespread, leading to the exploitation of crews working in dangerous and unsanitary conditions with a pittance of pay.³⁴ Organized crime networks often use fishing vessels as cover for smuggling drugs, weapons, or people and fishing boats provide an effective way to avoid detection while transporting illicit goods. Criminals maximize their gains by combining IUU fishing with other illegal enterprises.

Weak governance allows IUU fishing to use fishing vessels for smuggling and trafficking, and other criminal activities such as piracy and human trafficking. Corruption, greed, and a lack of viable livelihood options for the local populace enable the nexus between local maritime crime and international, regional, and local organized criminal networks, resulting

in many individuals becoming either victims or perpetrators of crime. Fighting IUU fishing protects marine resources and addresses the broader issues of security, corruption, and criminality.

“These Chinese people, they are treating us wickedly when we go for fishing the moment the vessel moves to the sea, we the Ghanaians become slaves for them.” Crew member – Interviewee Environmental Justice Foundation. “On the Precipice Crime and Corruption in Ghana’s Chinese Owned Trawler Fleet.”³⁵

U.S. SOF, allied nation forces, and partner nation forces are connected to IUU fishing in the context of global security and national interests.³⁶ In 2022, the U.S. released a five-year strategy focusing on IUU fishing and associated security threats.³⁷ In the GoG, SOF are involved in maritime security missions that directly or indirectly support international, regional, and local efforts to combat IUU fishing.³⁸ Furthermore, organized crime and violent conflicts are interconnected with the IUU fishing problem set. Therefore, U.S. SOF, with local and international partners, target these networks.³⁹ U.S. SOF regularly conduct Joint Combined Exchange Training with local navies to drill and hone tactical and operational skills in combating maritime crimes.⁴⁰ While international, regional, and national efforts are rendering the GoG safer in 2024 than before these engagements the region remains volatile with a high likelihood of security trend reversals.

“

Weak governance allows IUU fishing to use fishing vessels for smuggling and trafficking, and other criminal activities such as piracy and human trafficking.

”



Ghanian fishermen on trawler. (Photo still retrieved from On the Precipice: crime and corruption in Ghana's Chinese-owned trawler fleet, video, Environmental Justice Foundation.)

ABOUT THE AUTHOR



CHRISTIANE THOMPSON is an assistant professor of interdisciplinary studies at JSOU. She holds a master's degree in political science from the University of Akron; a master's degree in military arts from the U.S. Army School of Advanced Military Studies; a Master of Liberal Arts (MLA) degree in extension studies focusing on socio-ecological security from Harvard University, Harvard Extension School, and has completed advanced military education at the U.S. Army Command and General Staff College. She has over three decades of experience supporting the U.S. DOD, from hands-on operational engagement to strategic analyst and planner positions. Her current research interests leverage innovative technologies such as geospatial information systems and artificial intelligence applications.

THE VIEWS EXPRESSED IN THIS PUBLICATION ARE ENTIRELY THOSE OF THE AUTHORS AND DO NOT NECESSARILY REFLECT THE VIEWS, POLICY, OR POSITION OF THE UNITED STATES GOVERNMENT, DEPARTMENT OF DEFENSE, UNITED STATES SPECIAL OPERATIONS COMMAND, OR THE JOINT SPECIAL OPERATIONS UNIVERSITY.

**THIS WORK WAS CLEARED FOR PUBLIC RELEASE;
DISTRIBUTION IS UNLIMITED.**

This is part one of a two-part series. For more information, check out **JSOU Quick Look: From Pirates to Power Plays: Geopolitical Strategies and Maritime Security in the Gulf of Guinea and Beyond.**

Scan here to see an associated StoryMap



- ¹ Marangio, Rossella. "Deep Waters: The Maritime Security Landscape in the Gulf of Guinea | European Union Institute for Security Studies," January 9, 2025. <https://www.iss.europa.eu/publications/briefs/deep-waters-maritime-security-landscape-gulf-guinea>.
- ² Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea from Satellite Altimetry." *Scientific Reports* 14 (February 27, 2024): 4759. <https://doi.org/10.1038/s41598-024-55170-x>.
- ³ Brownfield, Michael. "Assessment of Undiscovered Oil and Gas Resources in the Gulf of Guinea Province West Africa." Data Series. *Geologic Assessment of Undiscovered Hydrocarbon Resources of Sub-Saharan Africa*. United States Department of the Interior, U.S. Geological Survey, 2016. https://pubs.usgs.gov/dds/dds-069/dds-069-gg/REPORTS/69_GG_CH_4.pdf.
- ⁴ "Gulf of Guinea | Africa, Map, Location and Facts. Encyclopedia Britannica." 2024. <https://www.britannica.com/place/Gulf-of-Guinea>.
- ⁵ Vaughn, Don. "The Largest Islands in the World" Encyclopedia Britannica." 2024. <https://www.britannica.com/list/the-largest-islands-in-the-world>; Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ⁶ Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ⁷ Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ⁸ Teixeira Ahrens, Carlota and Nogueira Pinto, Jaime. "Maritime Piracy in the Gulf of Guinea." GIS Reports, March 28, 2022. <https://www.gisreportsonline.com/r/piracy-gulf-guinea/>; Maritimescrimes. "Crime and Conflicts of Interest: The Gulf of Guinea under High Tension." *MariTimes Crimes*, July 16, 2024. <https://maritimescrimes.com/2024/07/16/gulf-of-guinea-crime-and-conflic/>.
- ⁹ Yllemo, Jessica Olcott, and Samuel Naujokas. "Illegal, Unreported, and Unregulated (IUU) Fishing Regional Overview." *American Security Project*, 2022. <https://www.istor.org/stable/resrep40557>.
- ¹⁰ Maritimescrimes. "Crime and Conflicts of Interest: The Gulf of Guinea under High Tension."
- ¹¹ Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ¹² Bruley, Enola et al. Historical reconfigurations of a social-ecological system adapting to economic, policy and climate changes in the French Alps. *Reg Environ Change* 21, 34 (2021). <https://doi.org/10.1007/s10113-021-01760-8>
- ¹³ Bruley. Historical reconfiguration of social-ecological systems
- ¹⁴ "Extreme Weather - NASA Science." <https://science.nasa.gov/climate-change/extreme-weather/>.
- ¹⁵ Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ¹⁶ Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ¹⁷ Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ¹⁸ Ojea, Elena, Sarah E. Lester, and Diego Salgueiro-Otero. "Adaptation of Fishing Communities to Climate-Driven Shifts in Target Species." *One Earth* 2, no. 6 (June 19, 2020): 544-56. <https://doi.org/10.1016/j.oneear.2020.05.012>; Ghomsi, Kemgang, et al. "Sea Level Variability in Gulf of Guinea."
- ¹⁹ Ghomsi, Kemgang et al. "Sea Level Variability in Gulf of Guinea;" Ojea, Elena. "Adaptations of Fishing Communities."
- ²⁰ Thompson, Christiane, and Karl Kaltenthaler. "West Africa Project - Enhanced Domain Awareness Data Explorer." ArcGIS Hub Joint Special Operations University. July 2024. <https://jsou.maps.arcgis.com/home/item.html?id=91639dc25b8b4b168a37ebdfa0ebd04>; Ukeji, Charles, and Wullson Mvomo Ela. "African Approaches to Maritime Security in the Gulf of Guinea." Regional Office Abuja: Friedrich Ebert Stiftung, 2013. <https://library.fes.de/pdf-files/bueros/nigeria/10398.pdf>.
- ²¹ Auty, Richard. *Sustaining Development in Mineral Economies: The Resource Curse Thesis* (1st ed.). Routledge. (1993). <https://doi.org/10.4324/9780203422595>.
- ²² Hardin, Garrett. "The Tragedy of the Commons." *Science, New Series* 162, no. 3859 (1968): 1243-48. https://pages.mtu.edu/~asmayer/rural_sustain/governance/Hardin%201968.pdf.
- ²³ Poortvliet, Dave. "Analysis Helps Ghanaian Navy Crack Down on Illegal Fishing." *Global Fishing Watch* (blog), June 6, 2023. <https://globalfishingwatch.org/success-story/analysis-helps-ghanaian-navy-crack-down-on-illegal-fishing/>; ADF. "Gulf of Guinea Countries Join Forces to Secure Maritime Domain." *Africa Defense Forum* (blog), April 3, 2024. <https://adf-magazine.com/2024/04/gulf-of-guinea-countries-join-forces-to-secure-maritime-domain-2/>.
- ²⁴ Environmental Justice Foundation. "On the Precipice Crime and Corruption in Ghana's Chinese Owned Trawler Fleet." December 2022. <https://ejfoundation.org/reports/on-the-precipice-crime-and-corruption-in-ghanas-chinese-owned-trawler-fleet>.
- ²⁵ Trilling, David. "Hooking a New Livelihood? Collapse of West Africa Fisheries Forces Adaptation." *The Salata Institute Harvard University*. February 20, 2024. <https://salatainstitute.harvard.edu/hooking-a-new-livelihood-collapse-of-west-africa-fisheries-forces-adaptation/>.
- ²⁶ Trilling, David. "Hooking a New Livelihood?"
- ²⁷ Poortvliet, Dave. "Analysis Helps Ghanaian Navy;" ADF. "Gulf of Guinea Countries Join Forces."
- ²⁸ Trilling, David. "Hooking a New Livelihood?"
- ²⁹ Environmental Justice Foundation. "On the Precipice Crime and Corruption."
- ³⁰ Trilling, David. "Hooking a New Livelihood?"
- ³¹ ADF. "Human Trafficking Linked to Illegal Fishing in Gulf of Guinea." *Africa Defense Forum* (blog), April 11, 2023. <https://adf-magazine.com/2023/04/human-trafficking-linked-to-illegal-fishing-in-gulf-of-guinea/>; Environmental Justice Foundation. "On the Precipice Crime and Corruption."
- ³² ADF. "Human Trafficking Linked to Illegal Fishing in Gulf of Guinea."
- ³³ ADF. "Human Trafficking Linked to Illegal Fishing in Gulf of Guinea."
- ³⁴ Environmental Justice Foundation. "On the Precipice Crime and Corruption."
- ³⁵ Environmental Justice Foundation. "On the Precipice Crime and Corruption."
- ³⁶ United States Special Operations Command. "U.S. Africa Command Special Operations Forces Train alongside Partners in Benin." September 13, 2024. <https://www.africom.mil/article/34972/us-africa-command-special-operations-forces-train-alongside-partners-in-benin>.

- ³⁷ Loch, Patrick. "U.S. Strategy Includes Partners, Whole-of-Government to Counter Illegal, Unreported, and Unregulated Fishing," October 2022. <https://www.africom.mil/article/34818/us-strategy-includes-partners-whole-of-government-to-counter-illegal-unreported-and-unregu>.
- ³⁸ Richard, Thomas. "US, NATO Provide Maritime Interdiction Training for West African Nations - Naval Technology." September 4, 2024. <https://www.naval-technology.com/news/us-nato-provide-maritime-interdiction-training-for-west-african-nations/>.
- ³⁹ United States Special Operations Command. "U.S. Africa Command Special Operations Forces Train alongside Partners in Benin."
- ⁴⁰ Gardener, Christiopher. "U.S. Partnering with Benin to Combat Piracy in Gulf of Guinea," December 2022. <https://www.africom.mil/article/35046/us-partnering-with-benin-to-combat-piracy-in-gulf-of-guinea>.



**United States Special
Operations Command**

ATTN: JSOU Press

7701 Tampa Point Blvd.
MacDill AFB, FL 33621-5323

jsou.edu/press

**JSOU PRESS
EDITORIAL TEAM**

Melanie Casey,
Editor in Chief

Beth DeGeorge, *Editor*

Alina Alvarez Perez, *Editor*

Layout and design by
Arianna Czesler