



Sea Piracy in Maritime Transportation: A Study of The Gulf of Guinea

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Abstract. Sea piracy poses a significant threat to seafarers and the economic well-being of nations. While the international coordinated fight against piracy resulted in a significant reduction in attacks around the Gulf of Aden, a similar effort among countries within the Gulf of Guinea is yet to achieve the desired result, as the region remains a global hotspot for pirate attacks. This study examined the geographic spread, variation, and categories of ships attacked in the Gulf region between 2009 and 2020. The Expo-facto research design was adopted for the study. Data emanated from the website of the International Maritime Bureau (IMB) log on pirate distress calls within the Gulf of Guinea between 2009 and 2020. Tools used for analysis include Analysis of Variance (ANOVA), and The Arc-View GIS 10.4 to analyse the objectives of the study. Findings showed that a larger part of the attacks occurred during motion within Nigeria's shoreline with a significant variation in the number of ships attacked among the thirteen countries in the Gulf of Guinea within the period of review ($F(12,133) = 22.212$). Product tanker shipping vessels are the most vulnerable to pirate attacks among the categories of shipping vessels transiting the Gulf of Region. The study suggested among others, a holistic approach to managing the problem including greater coordination and response to distress ships, addressing the underlying socio-political issues of coastal communities as well as prioritising securing tanker vessels due to their vulnerability to pirate attacks in the Gulf of Guinea.

Keywords: Maritime, Piracy, Gulf of Guinea, ships, seafarers, transportation.

1. Introduction

Access to the sea or coast is today an important resource for nations and such that can significantly influence a nation's economic, social, and strategic growth. In modern perspective, such resources offer

the chance for wealth creation. It is for this reason that necessary steps should be taken to safeguard and defend such areas in a country's national interests. In order to maximise the plow back from such coastal resources, these areas must remain secure backed with an effective law enforcement and strong maritime governance that must be committed to addressing the root of any security breach the domain.

The African continent area has the second largest coastline in the world with an estimated length of 30,500km. The continent has access to major bodies such as the Mediterranean Sea, Atlantic Ocean, Indian Ocea in North, West and Eastern areas respectively. However, most of its maritime domain is thought to be loosely guarded and are vulnerable to crime. These sea crimes are also believed to have been further exacerbated by the prevalence of political and socio-economic challenges facing many of coastline states in terms of unemployment, weak governance structures, poverty, and ineffective law enforcement (Dina et al, 2019). Over time two notable hotspots for sea piracy emerged within the African coastal area. These are, the maritime domain in the area known as the Gulf of Aden or "The Horn of Africa" close to the Somali Coast and the other in the area known as the Gulf of Guinea, in the coast of West Africa. However, the effort made by a coalition of the international community led by the USA and other European counties to secure "The Horn of Africa" region resulted in a serious significant reduction of piracy. This is corroborated by Tumbarska (2018) who noted that since 2012, reported cases of sea piracy on the Eastern coast of Africa has declined due to intensified counter-piracy efforts by this international coalition.

On the other hand, there is irrefutable evidence sea pirate attacks have been on the increase within the Gulf of Guinea. According to global reports, the region is now a dangerous hotspot for sea pirate

attacks (UNCTAD, 2014). A study by Ofose-Boateng (2017) attributed the observed increase in attacks to higher annual volume of marine traffic with about 300,000 vessels traversing the area servicing oil and gas exploration offshore the region. These together with geo-political tensions and loose security are major catalyst for pirate attack. Between 2010 and 2014, the International Maritime Bureau Reporting Center recorded about 224 pirate attacks in the Gulf of Guinea out of the 1,690 attacks that was recorded globally. The spread of the attacks within coastal states of the region showed Nigeria coastal waters had the highest share of 46.88% with 105 pirate attacks, followed by Togo coast waters with 30 (13.39%) attacks, Benin Republic waters recorded 22 (9.8%) attacks, the Congo and Ivory Coast waters recorded 18 (8.04%) and 17 (7.59%) attacks respectively. While 32 (14.29%) of the pirate attacks were recorded for the rest of the Gulf area excluding Equatorial Guinea with zero (0) attacks since 2008 (IMB, 2014).

A multinational initiative has been put in place as part of measures to combat piracy in the gulf region. This initiative known as The Yaoundé Process Agreement signed by 25 West and Central African countries in 2013 is to coordinate the fight against sea pirates (Kojola, 2019). This initiative has technical and financial assistance to support its implementation by the international community (Ojukwu, 2020). These include naval operations such as the EU's Operation Atalanta (Gamba, 2019), the US-led Africa Partnership Station (Jacobsen, 2019), and the French-led Operation Corymbe (Cabinet du Premier Ministre, 2021). Nigeria whose maritime domain is the epicenter for pirate attacks in the region in recent years also stepped-up efforts to combat crime at sea by upgrading its tactical logistics. Equipment such as fast intervention boats, surveillance drones to detect a potential threat, the use of maritime surveillance aircraft, and advanced communication equipment. The nation also scored its first conviction in a law court against pirates apprehended following the strengthening of observed lacuna in jurisprudence in the matter.

Despite these laudable countermeasures against piracy at sea in the region, the proportion of attacks within the Gulf of Guinea remains worrisome. It is not clear how these attacks vary among countries in terms of nature of attack, severity, and type of ships. The global outlook of volume, success or severity in cases of attacks appears skewed to the Guinea region. Between 2008 and 2018, about 96.29% of global kidnappings and 73.53% of global hostages taking took place within it. The region further accounted for 40.51% of the 195 global pirate attacks that occurred

in 2020 (IMB, 2020). Considering the foregoing, it is necessary therefore necessary to appraise the dynamics and effect arising from the multinational countermeasures put in place within the Gulf of Guinea Region. This study fills this existing knowledge gap by looking at sea piracy activities on maritime transportation in the Gulf of Guinea over twelve years (2009-2020) in the Gulf of Guinea.

2. Literature Review

Several research studies have focused on piracy within the Gulf of Guinea. The study by Njoku & Akaliro (2021) investigated the extent of hostage-taking, oil theft, and armed robberies at sea have affected the security of vessels in the Gulf of Guinea between 1999 and 2018. The study found these events to be common and have a significant effect on the security and socio-economic progress of the Gulf of Guinea states. The study suggests proactive and pre-emptive strategies to address the problems of unemployment, poverty, and deprivation in riverine communities, where maritime afflictions are incubated. Onuoha, (2013) identified 8 stages in the process that leads to a pirate attack on shipping vessels in the region raising a security concern by the growing trend of piracy in the region with the potential involvement of organised crime syndicates compromising energy security, potential terrorism financing, and escalating insurance premiums. Nwalozie, (2020) explored contemporary piracy in the Niger Delta within the Gulf of Guinea noted most attacks occur in Nigeria. This was also corroborated by Dina et. al (2019) that further investigate the attributes of attacks noted they commonly take place in the early hours of the morning with tankers and merchant vessels as a common target.

The study by Hassan & Hasan (2017) investigated the effectiveness of the effort to combat piracy in the region associated with the decrease in the number of reported incidents of piracy in the region to the current intervention by the Nigerian government. The study however raised possible concerns about underreporting of such incidence in the country with a call for better cooperation among the Gulf of Guinea states to effectively combat piracy. Jacobsen (2017) highlighted the need for capacity building to address the observed gaps in security measures in the region. The study emphasised the need for international support, particularly from the European Union and the United States, to ensure such the fight against piracy becomes sustainable and effective.

Hasan (2014) notes sea piracy as a growing risk for the states in the Gulf of Guinea region observing

possible links between piracy and other types of organised crime at sea in the area. The study further noted the international initiatives put in place as being insufficient and ineffective following failure at addressing the root cause of the problem. The study further outlined financial, technical and logistical challenges confronting the member states of the Gulf of Guinea which could make the phenomenon remain prevalent for some time to come.

Mandanda & Ping (2016) assess the impact and effectiveness of control measures in addressing piracy in the Gulf of Guinea. Arising from the findings of the study is the need for a more coordinated and comprehensive approach to addressing piracy in the Gulf of Guinea, with increased cooperation between states in the region and international partners as a point of emphasis. The authors suggest strengthening the existing legal frameworks for maritime security to improve the effectiveness of control measures against sea piracy.

Other studies have highlighted the link between poverty, unemployment, and piracy activities, emphasizing the need to address these underlying factors to effectively combat piracy in the region (Omar, 2021). Other research has explored the effectiveness of naval operations in deterring piracy and the impact of piracy on the economies of the countries in the Gulf of Guinea is yielding results (Fiasorgbor & Buor, 2020).

The studies so far reviewed on the issue of sea piracy in the Gulf of Guinea appear to have a mixed outlook in terms of the effect of the current effort to stem the situation within the region. There is therefore a need to reappraise the attributes and geographical spread of these attacks in the Gulf of Guinea in light of the policies put in place. Another gap as evident in the reviewed works of literature is if any significant variation has occurred in terms of attacks among countries in the Gulf of Guinea. Another bother on the need to further understand how these attacks have varied in pre and post-intervention of regional and international agencies within the region.

3. Research Methodology

The Gulf of Guinea is the north eastern part of the Tropical Atlantic Ocean, between Cape Lopez in Gabon, North, and West to Cape Palmas in Liberia between $4^{\circ} \text{ N } 8^{\circ} \text{ W}$ and $4^{\circ} \text{ N } 12^{\circ} \text{ E}$ within a 2,350,000 km² (910,000sq mi). Thirteen (13) countries share the coastal area, these are Liberia.

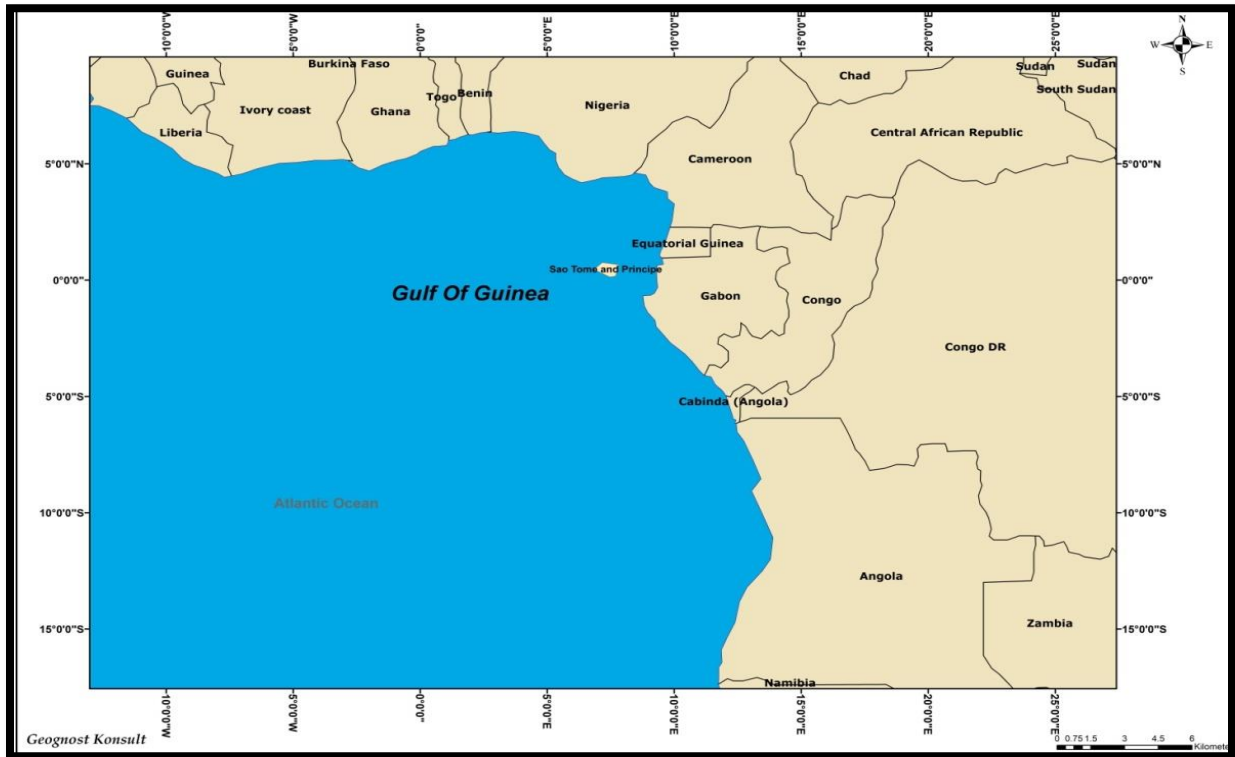


Figure 1: Map of Gulf of Guinea

Ivory Coast, Ghana, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea, Gabon, Sao Tome and Principe, Congo Republic and the Democratic Republic of Congo. This study adopted an expo facto research design. Data used for the study emanated from secondary sources from the annual report of the IMB available on their website. Records obtained include annual reports on sea pirate attacks in the region detailing different categories of shipping vessels attacked, and the coordinates of the attack in the Gulf of Guinea between 2009 and 2020. Other secondary information used in the study came from journals, online articles, and seminar papers both published and unpublished reports. The incidence of attacks within each of the thirteen countries and the set period were classified and used for this study. Both descriptive and inferential statistical methods were used to present and analyse the data extracted for this study. The frequency table was used to present the data while inferential models such as the Analysis of Variance (ANOVA) Arc-View GIS 10.4 were used to measure the variance of incidence between countries as well as show the geographical spread of pirate attacks within the set period in the Gulf of Guinea.

4. Findings and Discussion

4.1 Geography of Sea Pirate Attacks in the Gulf of Guinea Region (2009-2020)

The descriptive analysis of ship attacks in the Gulf of Guinea shows the annual mean attack on shipping vessels between 2009 and 2020 to be 4.14 attacks. Results as displayed in fig 3 further showed that Nigeria waters had highest concentration of attacks recorded among countries that make up the region with annual mean value of 13.96. This is followed by Nigeria’s next-door neighbour, The Republic of Benin with an annual mean value of 3.91. The Democratic Republic of Sao Tome and Principe waters is ranked 3rd with a mean value of 1.00 while other countries that make up the Gulf of Guinea had no incident.

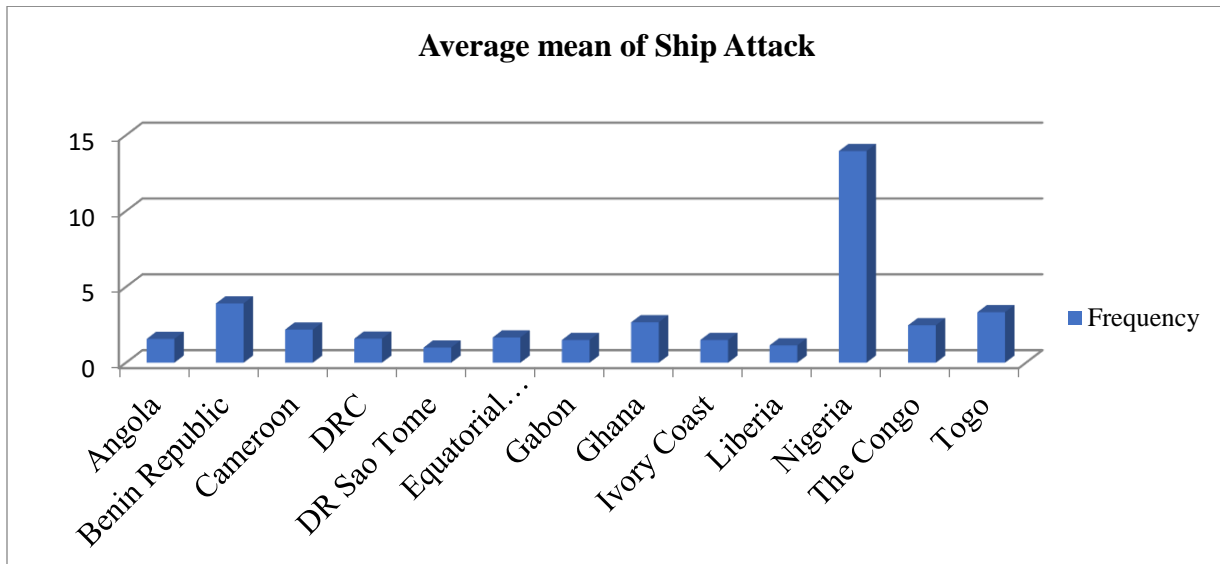


Figure 2 Average Mean of Ships attack in the Gulf of Guinea (2009-2020)
 Source: Author’s Computation (2022).

The distribution of attacks as shown in Figure 3 revealed most pirate attacks in the Gulf of Guinea are concentrated within the Nigerian waters around Lagos coastal area and the Niger Delta region similar to the findings of Nwalozie (2020) and Dina et al (2019). A number of these attacks occurred at anchorage while a greater proportion of attacks occurred while the vessels were in motion as they head Westward towards Benin, Togo, Ghana waters, etc. and eastward towards Cameroon, Gabon, The Congo, etc. The IMB reports between 2009 and 2020 showed that Nigeria waters had a share of 55.46% of the reported pirate attacks. Benin Republic, Ghana and the Congo waters accounted for 7.11%, 6.62%, and 6.95% of the reported pirate attacks, Togo waters accounted for 6.62%, Cameroon and DR Congo waters accounted for 3.97% and 3.15% respectively. While Angola, DR Sao-Tome and Principe, Equatorial Guinea, Gabon and Liberia waters accounted for a combined share of 5.79% of the reported pirate attacks between 2009 and 2020. A casual look at the map suggests several attacks occurred on the same location at different periods due to the clumsy view of the map. As rightly observed by several studies, the Nigerian territory is the hotspot for

attacks suggestive of the need to focus more international effort on within the Nigerian waters along with other neighbouring territorial waters to contain the menace of sea piracy in the Gulf of Guinea.

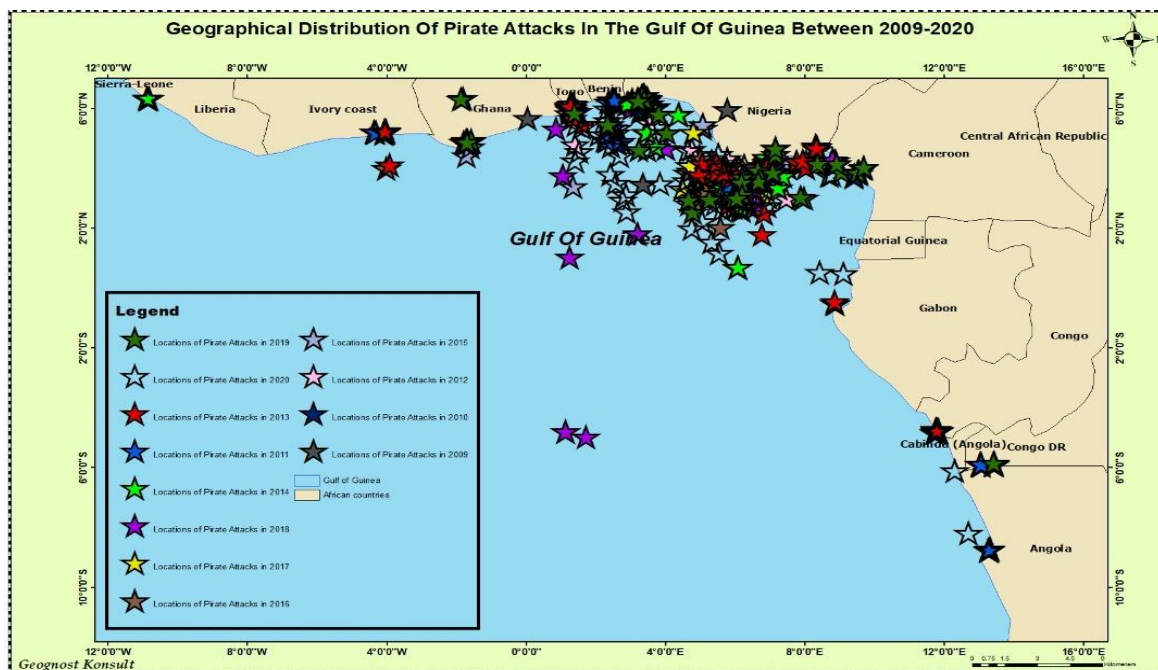


Figure 2: Map showing the Geographical Distribution of Pirate Attacks in the Gulf of Guinea (2009-2020).

4.2 Variation of Pirate Attacks in the Countries of the Gulf of Guinea

The result of the analysis in table 4.1 showed the minimum and maximum levels of attacks in each of the countries of the Gulf of Guinea. Nigeria waters recorded the highest number of ship attacks with thirty-one (31) and three (3) attacks being the minimum recorded on Nigeria waters in the period under review. This is followed by Benin Republic waters with a maximum reported attack of twelve (12) with a minimum of one (1) attack recorded between 2009 and 2020 while Republic of Sao Tome and Principe waters had a maximum of one (1) attack and a minimum of one (1) attack recorded between 2009 and 2020 in the Gulf of Guinea.

The results as presented in table 4.1 shows the overall Standard Deviation of ship attack in all the 13 countries that make up the Gulf of Guinea between 2009 and 2020 is 5.43. However, details of individual countries shoes Nigeria leading among Gulf of Guinea countries with a standard deviation of 6.81. This suggests Nigeria waters had the highest variation in terms of ship attacks between 2009 and 2020 in the Gulf of Guinea. Next is neighbouring Benin Republic with a standard deviation of 3.67 while Democratic Republic of Sao Tome and Principe waters had the least variation of ship attacks recorded in the period of review with a standard deviation of 0.00 in the Gulf of Guinea.

The ANOVA result as presented in Table 4.1 further suggest a significant variation in the number attacks among 13 countries of the GoG countries (F -Ratio = 22.212; P -Value = 0.00). Most of the attacks recorded are concentrated within coastal area of Nigeria, an area that remains the epicentre of the crime as noted in several studies such as Dina et al. (2019) and Nwalozie (2020), Ekeh & Jaja (2018). From the display of the attacks in the region, there are indications of a growing number of attacks occurring Westwards around the coast of Ghana and Togo, where new oil fields have emerged at sea at region. This therefore emphasises the need for the strengthening of the collaborative initiative for sea piracy to be tackled effectively within the region.

Table 4.1 Variation of Ship Attacks among GOG Countries

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2852.586	12	237.715	22.212	.000
Within Groups	1423.394	133			
Total	4275.979	145	10.702		
Descriptive Analysis of Ship Attacks in the Gulf of Guinea Countries					
GOG Countries	N	Mean	Std. Deviation	Minimum	Maximum
Angola	7	1.5714	1.13389	1.00	4.00
Benin Republic	11	3.9091	3.67300	1.00	12.00
Cameroon	11	2.1818	1.53741	1.00	5.00
DRC	12	1.5833	.90034	1.00	4.00
DR Sao Tome	5	1.0000	.00000	1.00	1.00
Equatorial Guinea	3	1.6667	.57735	1.00	2.00
Gabon	4	1.5000	.57735	1.00	2.00
Ghana	15	2.6667	1.95180	1.00	8.00
Ivory Coast	18	1.5000	.78591	1.00	3.00
Liberia	7	1.1429	.37796	1.00	2.00
Nigeria	24	13.9583	6.81098	3.00	31.00
The Congo	17	2.4706	1.46277	1.00	6.00
Togo	12	3.3333	2.70801	1.00	10.00
Total	146	4.1438	5.43042	1.00	31.00

Source: Author's computation (2022)

4.3 Categories of shipping Vessels attacked in the Gulf of Guinea (2009-2020)

Data reviewed revealed as presented in table 4.2 and figure 4 respectively there were a total of 604 attacks that involved 19 categories of shipping vessels transiting Gulf of Guinea between 2009 and 2020. These include Asphalt Tanker, Barges, Bitumen Tankers, FPSO, Fishing Vessels, Landing Craft, LNG, LPG, Vehicle Carrier, Research Vessels, Product Tanker, Bulk Carrier, Chemical Tanker, Tanker, Container, General Cargo, Off-Shore Vessels, Refrigerator Cargo and Tugboats.

Results further revealed Product Tanker had the highest frequency of attacks that make up 24.17% of the entire attacks reported on ships in the area. Bulk carrier and Chemical Tanker are next taking 12.42% and 13.58% respectively, Tanker had a share of 9.44% of the entire pirate attacks on ships. In all, combined attacks on various class of tankers vessels made up 50.27% of the entire attacks on vessels in the period under consideration. Furthermore, Container, General Cargo, and Off-Shore Vessels had a collective share of 24.67% of the reported pirate attacks on ships while Refrigerator Cargo had a share of 4.30%. Attacks on Tugboats made up 3.31%, the share of fishing vessels was 2.33%, LPG had a share of 1.99%. Other categories of shipping vessels (Asphalt Tanker, Barge, Bitumen Tanker, FPSO, Landing Craft, LNG, Vehicle Carriers and Research Vessels) took a combined share of 3.81% of the reported pirate attacks on ships in the period under review within the Gulf of Guinea.

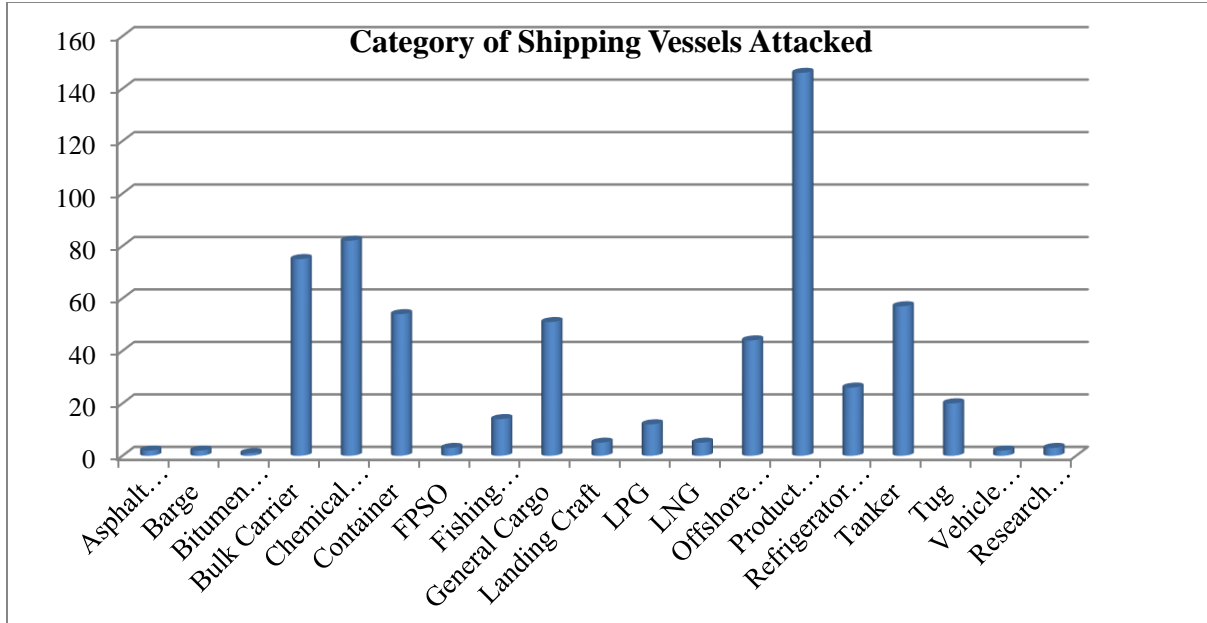


Figure 4: Categories of Ships attacked in the Gulf of Guinea (2009-2020)
Source: Author's Computation (2022).

In other words, this study showed that product tankers are the most vulnerable shipping vessels to sea piracy in the Gulf of Guinea. The implication is that a product tanker carrying refined oil like petrol, diesel, kerosene, or jet oil could cause significant environmental damage if run aground, sunk or set on fire.

Table 4.2 revealed that shipping vessels of (Chemical Tanker, Product Tanker and Tanker) categories took a share of 47.19% of the reported pirate attacks on ships in the Gulf of Guinea between 2009 and 2020. This indicates that every shipping vessel in form of a tanker shape is more vulnerable to sea piracy than other shipping vessel categories in the Gulf of Guinea.

Table 4.2 also revealed that product tankers (used for transporting refined oil from crude oil) took a share

5. Conclusion and Recommendations

The issue of maritime piracy has developed into a multifaceted transnational security challenge that threatens lives, livelihoods and global welfare. Sea piracy as a crime continues to be a concern to maritime transportation. A structured response by both regional and international agencies is critical to address this crime. Due to various reasons, some of which have been outlined above, the situation in the Gulf of Guinea is very unlikely to change significantly in the short or even the medium term. This study analysed sea piracy in maritime

of 24.17% and other categories of shipping vessels took a total share of 75.83% of the reported pirate attacks in the region between 2009 and 2020. However, this evidence shows sea piracy was not majorly targeted at oil tankers but every moving ship in the Gulf of Guinea. Therefore, every shipping vessel is vulnerable to sea piracy in the Gulf of Guinea. The implication is that several ships could be diverting their trip by avoiding the main route to an alternative route due to incessant pirate attacks on shipping vessels in the region and this could add up to both time and expenses for each shipment which in turn will add up to the cost of transporting goods on waterways. This could also affect the competitiveness of traders of perishable goods and time-sensitive goods such as clothing. The rate of pirate attacks on each category of shipping vessels transiting in the Gulf of Guinea between 2009 and 2020 is shown in table 4.2.

transportation in the Gulf of Guinea. The study found that most pirate attacks in the Gulf of Guinea between 2009 and 2020 are concentrated around Nigeria waters (Lagos and Niger Delta region). The study also revealed that there is a significant variation in the reported pirate attacks in each of the thirteen countries of the Gulf of Guinea in the past twelve years.

Sea piracy in the Gulf of Guinea is no longer just the issue of the nations that are directly impacted by it, but rather something that concerns the whole globe. Therefore, this study attempts at providing recommendations that could help ameliorate the

menace of sea piracy in the Gulf of Guinea which includes re-establishing collaboration between regional and international agencies involved in combating piracy activities in the Gulf of Guinea, providing more security equipment which includes patrol ships, aircraft and personnel with the essential skills and training and lastly, emphasis and top priority should be given to every shipping vessels shipping vessel in form of tanker shape since they were more vulnerable to sea piracy than other shipping vessels categories in the Gulf of Guinea.

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