

SHIP SECURITY IN PIRACY RISK AREAS

Professional Paper

Capt. Josip Ivanov, Euronav Ship Management SAS, Antwerpen, jivanov3@gmail.com

Abstract

The article presents measures included in fight against piracy and analysis of attacks in 2021. Following the described “Difference between pirates and corsairs”, “Present prevalence of Piracy in the World”, “Piracy attack analysis in 2021”, “Attacks analysis as per vessel type”, “Security measures on vessels”. Many factors affecting development of piracy in the world and continuous proper analysis should be done in concern for better understanding of piracy and risks affecting sailors and vessel security. Further research should be done in direction to find true reasons that affecting development of piracy in the world and bringing in focus real source of “fire” not just “firefighting”.

Keywords: Anti-piracy measures, Merchant vessels, Hijacking, Attacks, Development

1. Introduction

Piracy as one of the most dangerous threats to the safe transport of goods by sea is considered as one of the oldest threats to vessels and crew that is not part of natural disasters, building quality of ships or carrying dangerous goods. Elements for piracy will be while existing sea trade and people that live with the sea. Through this paperwork I will try to describe and make closer piracy as a professional seafarer and as a student of VSS part of SSBM Geneva, explain the difference between piracy and ship's robbery. How already is described by Chalk P. (2008) there are three types of attacks that are used by pirates in the world: opportunistic attacks, armed robbery, ship hijacking.

“- Opportunistic attacks (low-level), typically occurring when the target ship is berthed or anchored offloading cargo.

– Armed robbery at sea and/or ransom attempts (mid-level), where pirates will attempt to board ships at sea (“steaming”) to ransack the ship and/or kidnap crew members to extract ransom payments from shipping companies. Favoured locations for these incidents are congested waters near chokepoints on the highways of the sea.

– Ship hijacking (high-level), pirates may seize an entire ship and cargo to negotiate ransom payments for their return. A variant is the “phantom ship” attack where the ship is given a new identity (re-named and re-registered with fake documentation) to continue trading. The cargo is sold to a buyer colluding with the pirates.”¹

It will be pointed out areas where piracy exists today and its economic influence on shipping companies, insuring companies and owners of cargo who are using the ships for transport. By simply describing it will be shown security measures that are used on vessels trading in piracy high risk areas and an analysis of attacks depending on vessel types who were the most usual targets in 2021. In the period from January until September 2021. In modern times is implemented the code under the name ISPS (International Ship and Port Facility Security code), and it's used for better security control on ships and in the ports, today is one of the most important regulations in the maritime industry that everyone adheres to, everything in the purpose of better control, safe transport and trade of goods by sea. As per some research, protection methods

¹ W. Bryant i dr. (2013) Preventing maritime pirate attacks: a conjunctive analysis of the effectiveness of ship protection measures recommended by the international maritime organisation, Springer Science+Business Media New York 2013

bring better results in anti-piracy measures. Psarros and others said that the most effective measures in vessels protection bringing more effective watchkeeping and enhanced vigilance because it is concerned with stopping pirates before they board.

“The results indicate that the most effective defence against piracy was Watch Keeping and Enhanced Vigilance because it is concerned with stopping pirates before they board.”²

Analysing results given by ICC – International Maritime Bureau for period from 01 January until 30 September 2021 I will make parallel between geographical area, attacked vessel types, frequency of attacks. By using that results it will be extracted few, so we can see final status of attacked vessels. Maritime industry is making 90% of world trade and by continuous growing for sure it will be source of money or implementation of some plans for pirates and militant groups in future. Pirates are using today electronical equipment for easier positioning and collecting of information's that will be used for planning attacks what is confirmed by work of N.Stracke and others where is said: „Pirates intercept communications of passing ships using VHF radios and the Automatic Identification System and thereby monitor, track and determine the movements of ships.”³

By technology development and possible autonomous controlled vessels, we can assume that in the future pirates and terrorism will be developed in that direction what will be new challenges for maritime organization and shipping companies and they will be pushed to take more care about Cyber security.

² W.Bryant i dr. (2013) Preventing maritime pirate attacks: a conjunctive analysis of the effectiveness of ship protection measures recommended by the international maritime organisation, Springer Science+Business Media New York 2013

³ N.Stracke i dr. (2009) Piracy: Motivation and Tactics The case of Somali piracy, Gulf Research Center, Dubai

2. Difference between pirates and corsairs

Today picture of pirates in the world population is mostly created by movies in film industry, but there beginning starts far away in nautical history and mostly there are misunderstanding between the terms pirates and corsairs. Term “pirate” coming from Greek word „Peirates“ or Latin word „Pirate“ and term “corsair” coming from Greek word „Goursares“ or Latin „Cursarius“. Terms „Pirates“ and „Corsair“ are clearly defined by the law. Under the term “corsairs” are considered robber of the ships who is making robbery attacks for the principal in the most cases for the king or country, while “pirate” is doing attacks for own interest. Today corsairs are not existing, but pirates still sharing fear in free shipping trade in the areas of coastal countries where the economic situation is not perfect and local people are using attacks on “soft targets” to take ransom from shipping companies, insurance companies of ship and cargo. In the United Nations Convention on the Law of the sea under the article 101 piracy is defined as any illegal act of violence, detention or depredation committed for private ends on high seas or any other place that is not under jurisdiction of any State. Legal definition of piracy in the United Nations Convention on the Law of the sea is attached in the text bellow taken from “Narodne novine”.

“Article 101

Definition of piracy

Piracy consists of any of the following acts:

- (a) any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed:
 - (i) on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft;
 - (ii) against a ship, aircraft, persons or property in a place outside the jurisdiction of any State;
- (b) any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;
- (c) any act of inciting or of intentionally facilitating an act described in subparagraph (a) or (b).”⁴

⁴ NN 9/2000 (20.6.2000.), Konvencija Ujedinjenih naroda o pravu mora i Završni akt Treće konferencije Ujedinjenih naroda o pravu mora s Prilozima I-VII. i Dodatkom i Sporazum o primjeni XI. dijela Konvencije Ujedinjenih naroda https://narodne-novine.nn.hr/clanci/medunarodni/full/2000_06_9_84.html (08.11.2021)

3. Present prevalence of Piracy in the World

Weakening economic power in some world countries and global political influence making higher difference between rich and poor supported by bad politics, unregulated states and intertribal conflicts what creates ground where former fisherman's or people connected with the life at sea becoming pirates. In some areas that's just robbery attacks while in some becoming well organized groups like in 2017. most danger zone near the coast of Somalia. In short period they develop by taking big ransom so they were able to make big security problems for merchant traffic between Asia and Europe, usually in most high traffic area of Indian ocean. How we can read on picture No.1 most attacks in the present are in Gulf of Guinea, Singapore and Sunda-strait area including coastal countries of northern part of South America continent. By looking attached map it's easy to confirm one of the reasons of piracy as it is mentioned on the beginning. In the Gulf of Guinea countries are rich with oil and gas that some of rich countries companies exploiting, but some good effects on developing of countries from where oil and gas is taken its not visible, what is a reason of unorganized political and country organization where the corruption is integrated in all parts of community.

Picture No.1 Piracy attack map in 2021.

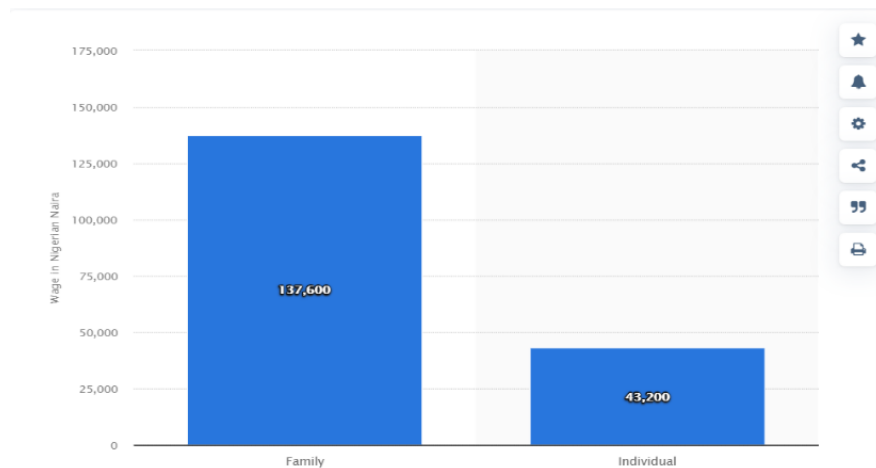


Source: Commercial Crime Services (2021). IMB Piracy and Robbery Map 2021.
(Downloaded 08.11.2021.) <https://www.icc-ccs.org/piracy-reporting-centre/live-piracy-map>

In that kind of economic and political corrupted countries appearing resistance to unfair country income distribution, develop of piracy as a way of surviving of local people coming in focus

on future safe oil and gas exploitation including interstate trading processes. As a attachment to that kind of view I attach graph showing monthly living wage for family and person in Nigeria for 2020. where is visible that recalculated in US dollars monthly life expenses for one person are 105,23 USD, while for average family is 335,17 USD. For sure is needed to take by reserve truthfulness input information's used in calculation.

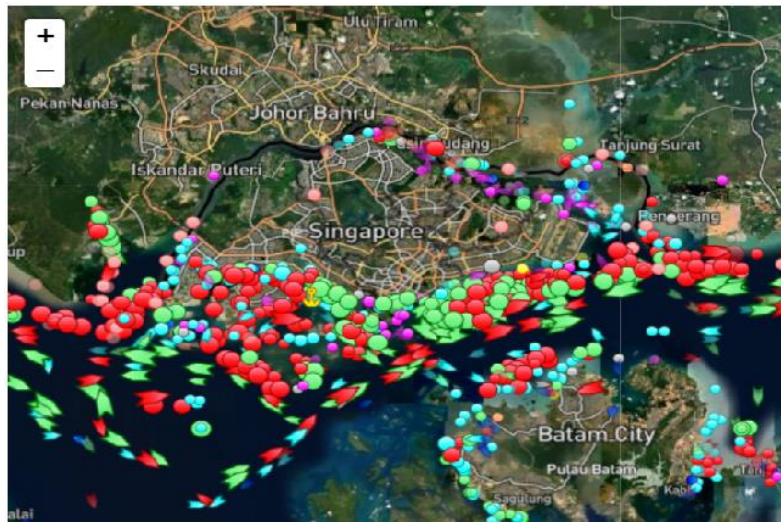
Picture No.2 Monthly living wage in Nigeria in 2020.



Source: Statista.com <https://www.statista.com/statistics/1119087/monthly-living-wage-in-nigeria/>
(Downloaded 08.11.2021)

Continuously analysing piracy map on picture No.1 as per my experience as a seafarer on second place we can put South America costal country areas. Looking map carefully we can see that in big percentage are countries with political and economic crises. Haiti is country where in last few years are increased violence, ecological crises, missing of basic hygienic supplies, uncontrolled forest cutting plus everything is helped with huge nature disasters, creating ground for oldest robberies job at sea what is not unknown for Haiti, area known as a centre of Caribbean piracy. Third zone which is as per registered numbers today on first place is Malacca and Singapore Strait. For this area we can say that is place where existing big traffic fluctuation between Asia and Europe. Every vessel passing Singapore Strait in most cases if its not going alongside in Singapore, making supply of spare parts, fuel and food, anchored on one of Singapore anchorages located on big part of Singapore sea territory. How by size its narrow strait for most of the ocean-going vessels, distance for daylight fisherman's and night pirates from Indonesia is minor. Most of robbery attacks are done on vessels anchored at one of Singapore anchorages or at Pulau Batam anchorage. That's mostly stealing of ropes, spare parts or personal items if they reach it, rarely taking crew as hostages.

Picture No.3 Singapore port traffic map preview



Source: Marine Traffic Singapore port Live Map Preview. (Downloaded 08.11.2021)

<https://www.marinetraffic.com/en/ais/details/ports/290>

According to available information's on day 09.11.2021 at 0300 local time Port of Singapore is visited by 1567 different size ships in last 24 hours. In the moment of analysing map in the port are 1092 and scheduled to arrive 960 ships. If we consider this numbers it's clear that even the sea territory of Singapore is well controlled by police forces it's impossible fully isolate gang attacks from Indonesia area. That's the reason why should be well implemented security plan on each vessel by crew in coordination with local authorities.

Picture No.4 Vessel anchorage Port of Singapore (during day)



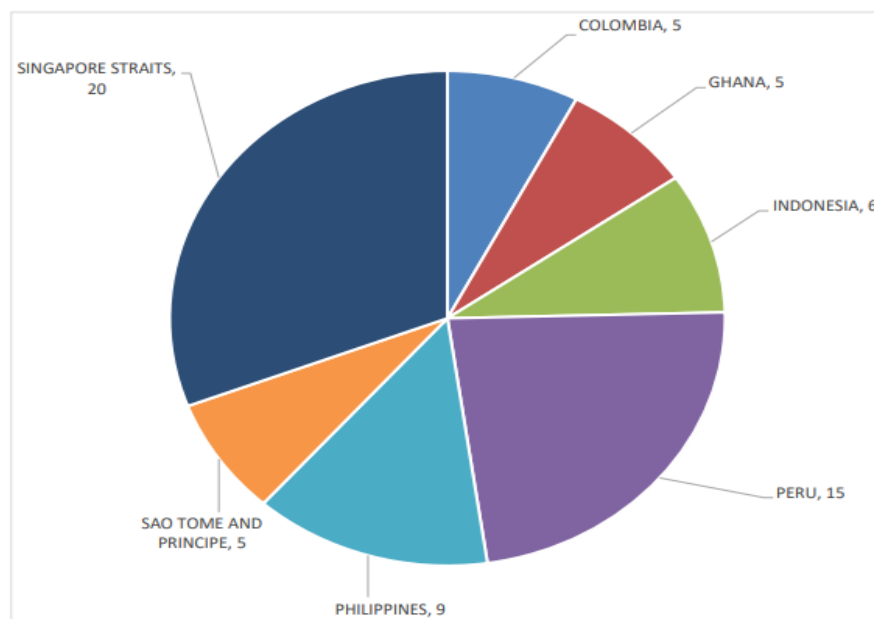
Source: gcaptain.com (Downloaded 08.11.2020) <https://gcaptain.com/singapore-suspends-trade-relations-with-north-korea/>

4. Piracy attack analysis in 2021.

By regular piracy attacks reporting independently on their success, some anti-piracy organizations making trend analysis on global scene connected with piracy attacks. One of that organization is ICC – International Maritime Bureau, by collecting attack information's is making analysis depends on geographical area, types of attacks, types of attacked vessels, weapons used during attacks etc. Trend analysis are done on yearly and quarterly base. Comparing yearly results it's possible to make nice picture of trends and by using it it's possible to have some conclusions depends who is making analysis. How I mention in previous part of my work social reasons in making good ground for developing of piracy, in this one I will be focused on types of ships that have been attacked and possible reasons why are they the most numbered in attached graphs, depending on geographical area where attacks are done.

Graph No.1 Review of seven locations contributed with 67% of the total 97 incidents in reported period from January – September 2021

CHART A: The following seven locations contributed to 67% of the total of 97 incidents reported in the period January – September 2021



Source: IMB Piracy and armed robbery report January – September 2021 (Downloaded 11.11.2021) https://www.icc-ccs.org/reports/IMB_piracy_and_armed_robbery_report_January-September_2021.pdf

Table No.1 Locations of actual and attempted incidents, January-September 2017-2021

TABLE 1: Locations of ACTUAL and ATTEMPTED incidents, January – September 2017 – 2021

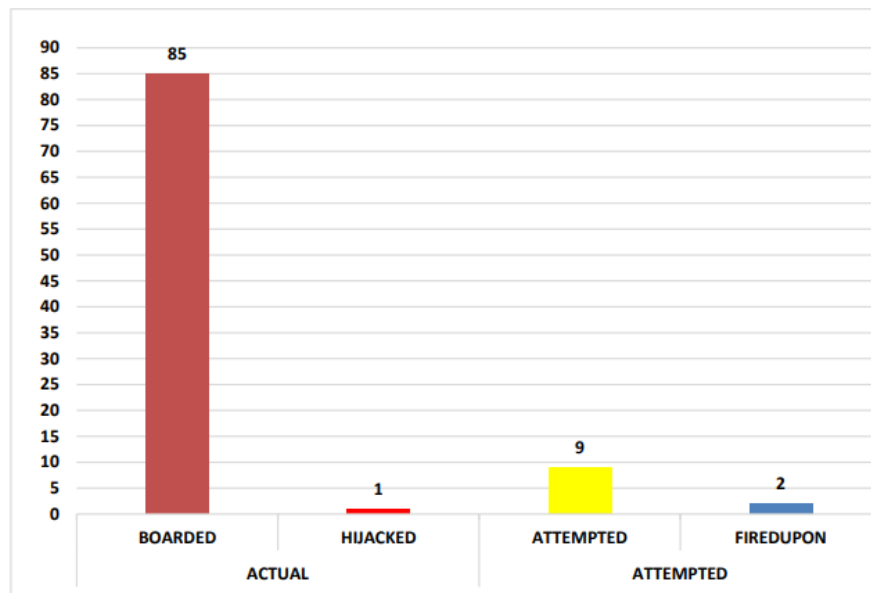
	Locations	2017	2018	2019	2020	2021
S E ASIA	Indonesia	23	31	20	23	6
	Malacca Straits					1
	Malaysia	6	9	10	4	1
	Philippines	17	6	4	8	9
	Singapore Straits	1	3	1	15	20
	Thailand				1	
EAST ASIA	China	1	2	3		
	Vietnam	1	2	2	3	1
INDIAN SUB CONT	Bangladesh	7	11		2	
	India	2	3	3	6	1
AMERICAS	Brazil		4	2	4	3
	Colombia	3	1	3	1	5
	Dominican Republic			1		
	Ecuador	2	4	3	4	2
	Guyana	1	2			
	Haiti	1	3	1	4	2
	Mexico			1	4	1
	Panama			1		
	Peru	2	3	5	5	15
	Venezuela	11	8	6		
	AFRICA	Angola	1			5
Benin			5	1	7	2
Cameroon			2	5		1
Democratic Rep. of Congo			1	1		1
Equatorial Guinea				2	2	
Gabon					2	3
Ghana		1	8	3	5	5
Guinea		2	2	2	1	3
Gulf of Aden*		2	1			1
Ivory Coast		1	1	1	2	
Kenya		1		1		
Liberia				2		
Morocco				1		
Mozambique		2	1	2	3	1
Nigeria		20	41	29	17	4
Red Sea*		1				
Sao Tome and Principe					1	5
Senegal		1				
Sierra Leone		4		1		
Somalia		4	1			
The Congo	1			1	1	
Togo		1	2	1		
REST OF WORLD	Iraq				1	
	Oman	1				
	Yemen	1				
Subtotal for nine months		121	156	119	132	97

Source:IMB Piracy and armed robbery report January – September 2021 (Downloaded 11.11.2021) https://www.icc-ccs.org/reports/IMB_piracy_and_armed_robbery_report_January-September_2021.pdf

How it's possible to read from table No.1 average number of attacks on monthly base, if we take yearly number of attacks divided with twelve months is 9,91 – 11, only in 2018. that number is little bit higher, in average 13 attacks. If we make result analysis from 30.09.2021 we are getting result and as per that we can expect until end of year 2021 approximately 20 more attacks if not appear some drastic changes on geopolitical scene what can result with more piracy attacks in some areas.

Graph No.2 Perpetrators successful in 88% of incidents. January-September2021

CHART D: Perpetrators successful in 88% of incidents. January – September 2021



Source: IMB Piracy and armed robbery report January – September 2021 (Downloaded 11.11.2021) https://www.icc-ccs.org/reports/IMB_piracy_and_armed_robbery_report_January-September_2021.pdf

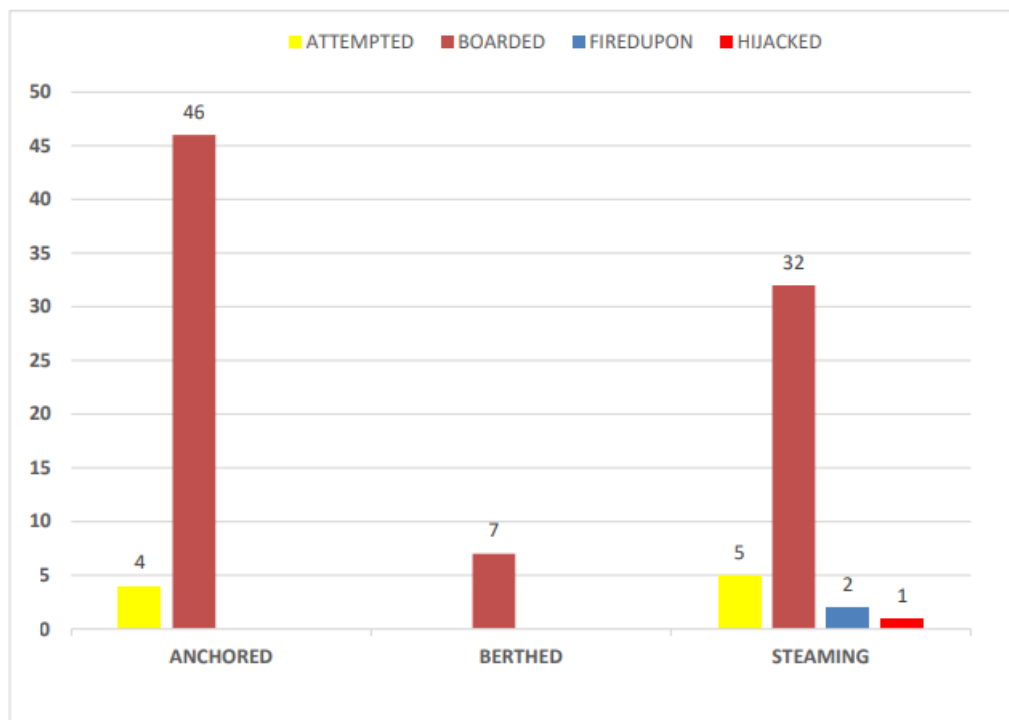
By looking graph No.2 we can notice that most attacks are done in intention to rob vessels, while hijacking is reduced to one case only. That showing us that missing good conditions like in time when the vessels where hijacked in Indian ocean, and safely waiting ransom inside Somalia territorial waters. By reading interview of one captured Somalian pirate, in that time in Somali more community levels were included in piracy, what means that attackers were able to await ransom without any problems inside territorial waters of Somalia. It's possible to see that 20% of income belongs to clan leaders, 20% is reserved for future missions, 30% for the gunman on the ship and 30% for government officials.

During an interview, a pirate stated: “We typically divide up the loot this way – 20 percent for our bosses (businessman or clan leader), 20 percent for future missions (to cover essentials like

guns, fuel, food and cigarettes), 30 percent for the gunmen on the ship and 30 percent for government officials.”⁵

Graph No.3 Type of incidents in relation to the status of vessel movement January – September 2021

CHART E: Type of incident in relation to the status of vessel movement January – September 2021



Source: IMB Piracy and armed robbery report January – September 2021 (Downloaded 11.11.2021) https://www.icc-ccs.org/reports/IMB_piracy_and_armed_robbery_report_January-September_2021.pdf

From graph No.3 we can see that most of attacked vessels where anchored or on berth, while underway vessels were attacked in less cases but more violent, using firearms. Vessels are implementing anti-piracy measures how is regulated by ISPS code, where measures are divided in three security levels, depends on geographical area where vessel operating. Vessel security level is regulated by country flag requirements of vessel, but sometimes due to cargo preparations and cargo handling operations can come to omission in procedure implementation,

⁵ Nicole Strack i dr. (2009), Piracy: Motivation and Tactics The Case of Somali Piracy, Dubai: Gulf Research Center

giving the time window for pirates to make attacks. Underway vessels are not easy targets for pirate attacks considering vessel size and speed, what require more preparations and organization for pirates. As per available information's from ICC – International Maritime Bureau report, it's clear that most violent attacks happened during pirate attacks in waters of African continent, meaning on Gulf of Guinea what is considered as high-risk piracy zone, while less dangerous attacks such as robbery happening in the rest piracy active areas in the world. In period from January until September 2021 in Gulf of Guinea happened one attempt of vessel hijacking and two attacks using firearms, while one person die. Because of hijacking and use of firearms in attacks I am attaching final result of mentioned cases.

4.1 Container vessel hijacking attempt in Gulf of Guinea

On day 25 October 2021 in Gulf of Guinea is attacked container vessel MSC Lucia located 150 Nm (Nautical miles) northwest from island Sao Tome (Sao Tome and Principe). In 0855 UTC as per information's from AIS delivered by Pole star, vessel stopped. "Russian ministry of defence reported that destroyer Vice-Admiral Kulakov received signal for help from MSC Lucia with information that armed pirates came with speedboat and climb on vessel. MSC Lucia crew went to engine room for security. From Kulakov is sent helicopter Kumov Ka-27PS transferring group of Russian marines. After pirates noticed helicopter coming closer, they run away from MSC Lucia, enter the speedboat and with full speed proceed to the coast, reported by ministry. As per last available information's, MSC Lucia is currently on her way to destination, port of Cameroon city of Douala, under Russian navy escort. MSC Lucia is container ship 1951 teu, lenght 189 meters, owner Mediterranean Shipping Company. Build 1985. sailing under Panama flag. There is no information's how many people were on board during attack, reported by The Maritime Post."⁶

⁶ Pomorac.hr Gvinejski zaljev: Napadnut MSC-ov kontejneraš, spasila ga ruska mornarica
<https://pomorac.hr/2021/10/26/gvinejski-zaljev-napadnut-msc-ov-kontejneras-spasila-ga-ruska-mornarica/>
(20.11.2021)

Picture No.5 Container vessel MSC Lucia



Source: Vesseltracker.com <https://www.vesseltracker.com/en/Ships/Msc-Lucia-8413887/gallery/1924204> (Downloaded 20.11.2021)

4.2 Use of firearms during attack on LNG Tanker

On day 08 February 2021. at 1810 UTC on distance of approximately 50 Nm (Nautical miles) southwest from island Sao Tome (Sao Tome and Principe), while LNG tanker “Madrid Spirit” was underway, crew noticed speedboat approaching to their vessel. SSAS (Ship Security Alarm System) was activated, general alarm sounded and all crew gathered on muster station. When the speedboat came closer, noticed hooks and ladders in the boat, pirates shoot in vessel direction causing accommodation damage. Master of the ship increased the vessel speed, made avoiding manoeuvre what caused that pirate boat increase distance and give up from boarding on LNG tanker. All crew and vessel remain safe. Vessel “Madrid Spirit” sailing under Spanish flag, length 285 m, width 44 m.

Picture No.6 LNG tanker “Madrid Spirit”



Source: Vesseltracker.com <https://www.vesseltracker.com/en/Ships/Madrid-Spirit-9259276/gallery/746637> (Downloaded 20.11.2021)

4.3 One killed and 15 abducted crew members on container vessel

In Gulf of Guinea on 23 January 2021 on distance 95 Nm from island Sao Tome, in morning hours around 0530 UTC happened firearm attack, during that one person is killed and 15 abducted. As per available information's four pirates boarded vessel while all crew were in citadel. After few hours' pirates managed to enter citadel, its assumed by using explosives. During verbal conflict one of crew member is killed, while 15 of them are taken as hostages and it was requested ransom for their release. Three crewmembers remain on board and successfully transfer vessel to Port-Gentil (Gabon), even navigation bridge was considerably damaged. Murdered crewmember was citizen of Azerbaijan, while abducted crewmembers were citizens of Turkey. As per Boden Shipping here wasn't politically motivated hijacking, it was just done for ransom. Pirates made first contact with Boden Shipping on 25 January 2021 and started negotiations for ransom. After two weeks of negotiations, more exact on 12 February 2021 official report from Borealis Maritime organization confirmed that all crew members are in good condition, there are free and organization is working on transport of all 15 crewmembers to Turkey.

Picture No. 7 Container vessel "Mozart"



Source: gcaptain.com <https://gcaptain.com/pirates-release-mv-mozart-crew/>

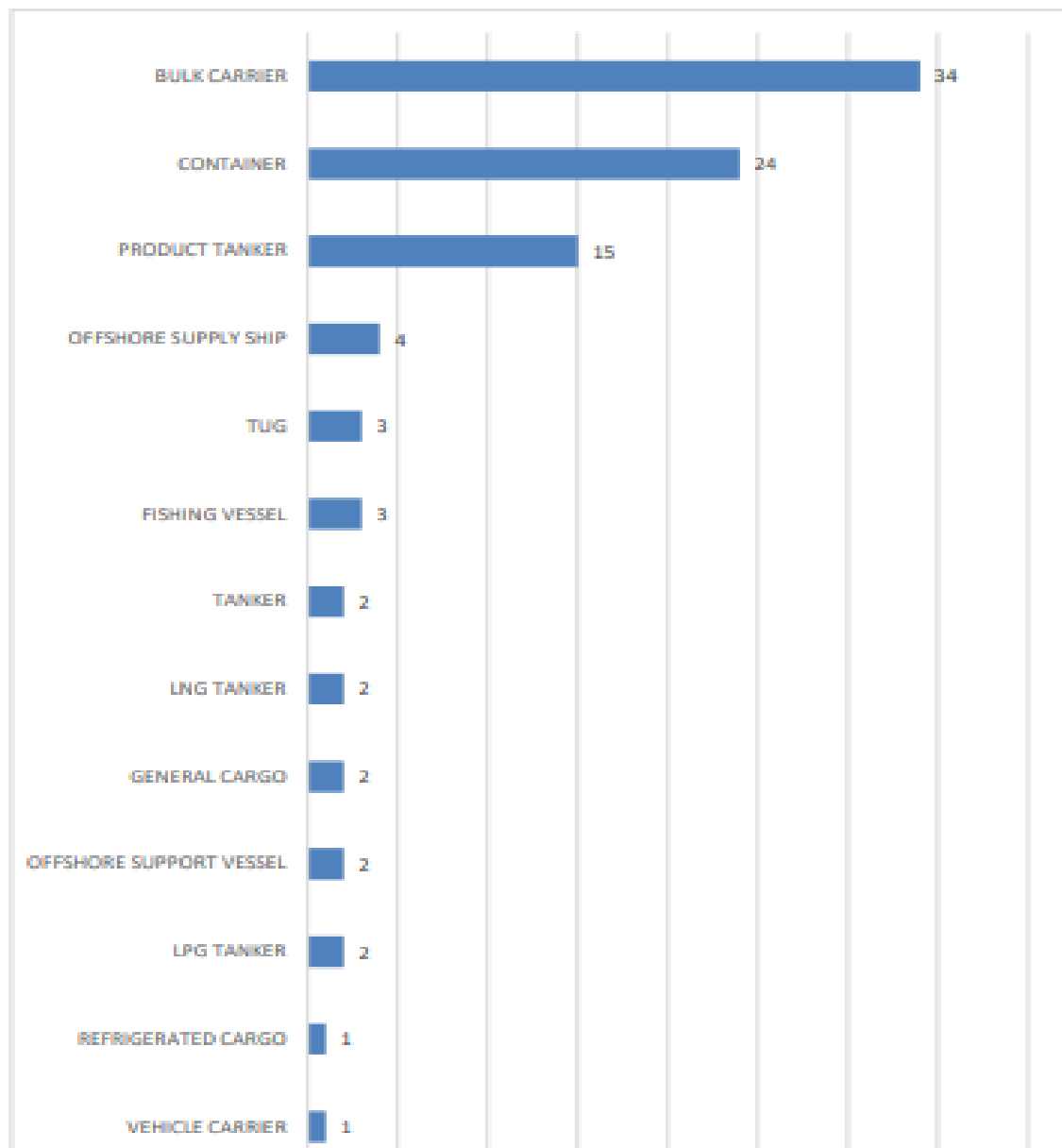
(Downloaded 20.11.2021)

5. Attacks analysis as per vessel type

Depends on vessel type, geographical area where there are operating and cargo there are carrying, vessels are forced to come closer to the coast to make loading/unloading operations, what affecting the numbers of attack.

Graph No.4 Incidents as per type of vessels, January – September 2021

CHART H: Incidents as per type of vessels, January – September 2021



Source: IMB Piracy and armed robbery report January – September 2021 (Downloaded 11.11.2021) https://www.icc-ccs.org/reports/IMB_piracy_and_armed_robbery_report_January-September_2021.pdf

From graph no.4 we can see that top three types of attacked vessels are bulk-carriers, container vessels and product tankers. Here we are talking about vessel forced due to specific cargo they carry to come in the ports located in countries with different economic, social, religious level of development. They must be berthed alongside in the port to be done cargo operations, unlike to crude oil tankers in that kind of countries can be berthed on far distances from the coast or LNG tankers usually don't have infrastructure for receiving liquified natural gas. Arriving in that port as per my experience I can conclude that mentioned types of vessels are good targets for pirates to make attacks, because of their freeboard and time they spend at anchorage awaiting to come alongside for cargo operations. By making calculation with available information's received from graph No.4 its clear that 69.35% of attacks belongs to these three types of vessels, rest of attacks to all others. Other types of ships are mostly less attractive for pirates such as fishing vessels, supply boats, or more complicated for successful attack car carriers, crude oil tankers etc. It must be considered total number of these three types of vessel all over the world comparing with others what contributes in their piracy attack numbers.

6. Security measures on vessels

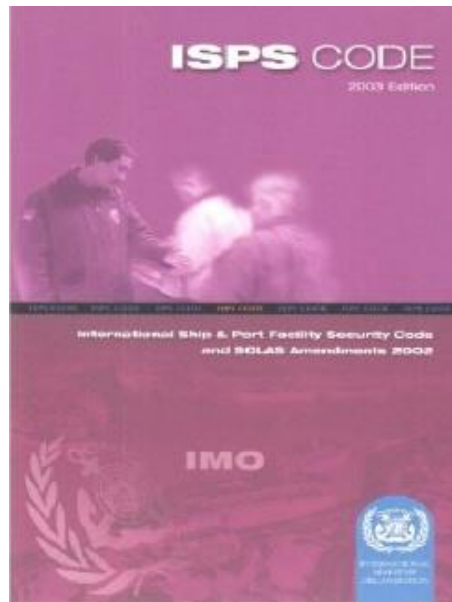
Terroristic attacks in United States of America that happened on 11 September 2001 forced International Maritime Organization (IMO) for implementing ISPS code. From 01 July 2004 ISPS code is implementing how is mentioned text bellow:

“This Code applies to:

1. Passenger ships, including high-speed passenger craft in international navigation
2. Cargo ships, including high-speed cargo ships, from 500 GT or more
3. (SOLAS) ships in international navigation
4. Mobile offshore drilling units; passenger ships in national navigation which travel at a distance of more than 20 Nm from the shore
5. Ports open to international traffic of ships to which ships and facilities referred to items in 1, 2, 4.
6. it also applies to maritime facilities in national navigation and ports, i.e. port operational areas which, in accordance with the conducted risk assessment and at the proposal of the Ministry of the Interior, are determined by an order of the Minister of Maritime Affairs”⁷

⁷ Gospić Alen (2019), Piratstvo na moru – Jesmo li sigurni?, Split : Redak

Picture No. 5 ISPS code (International Ship & Port Facility Security Code)



Source: Abebooks.com

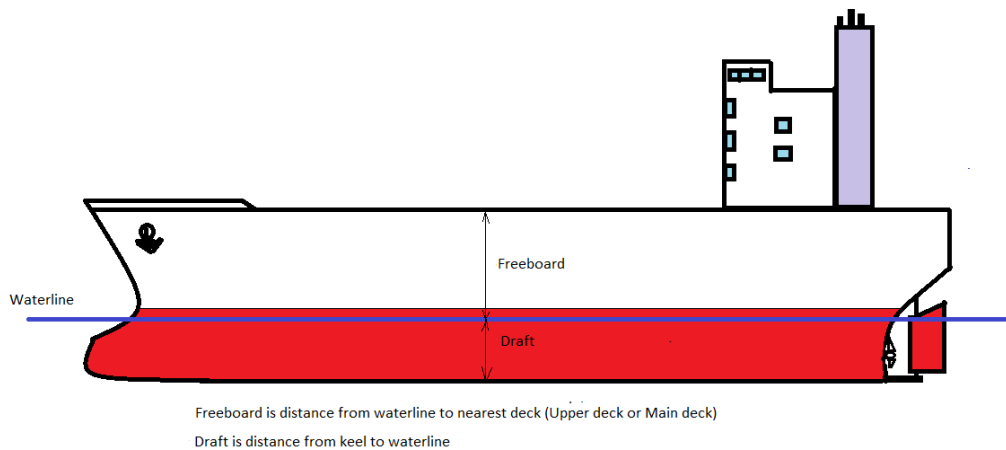
https://www.abebooks.com/servlet/BookDetailsPL?bi=30909971116&cm_sp=rec--pd_hw_i_1--bdp&reftag=pd_hw_i_1 (Downloaded 09.11.2021)

Some of conditions increasing possibility of piracy attacks like weather conditions, vessel speed, type of vessel (more expensive vessel attracting pirates), vessel freeboard. One of the instructions for avoiding boarding of pirates on board is zig-zag manoeuvre, meaning changing of vessel course port or starboard depending on existing course, by using that system must be taken in account that big course alterations leading to considerable reduction of vessel speed. If we suppose that vessel running with speed of 12 knots, if we are changing rudder angle more than 10-degree port/starboard from midship, vessel speed will be reduced to 7/8 knots what is contradictory as per instructions saying that is needed to increase vessel speed in case of attack. For that reason, all responsibility belongs to the master of ship in taking best decisions that present situation require. “Experience shown that vessels with freeboard higher than 8m have better chance in avoiding piracy attacks.”⁸ For that reason before passing piracy high-risk area, master taking best economically acceptable plan in relation with present vessel condition (freeboard height, loaded or ballast condition), accordingly to

⁸ Gospić Alen (2019), Piratstvo na moru – Jesmo li sigurni?, Split : Redak

that voyage, plan is changed in cooperation with company/charterer to reduce risk of possible attacks.

Picture No.4 Meaning of “Freeboard”



Source: Author Josip Ivanov

How to reject or to get some time in case of piracy attack, vessels must be equipped with technical equipment such as:

- SSAS (Ship Security Alarm System) is silence alarm installed on few places on board and responsible crewmembers are familiar with locations and procedures how to activate. System is used to alert navy forces, company and country flag that vessel belong.
- AIS (Automatic Identification System) is equipment used for transmitting vessel information's such as: vessel type, cargo on board, position, ETA (Estimated Time of Arrival), destination, speed, number of crewmembers. Even if someone consider that during passing piracy high-risk area, AIS should be in OFF mode recommendation is to keep it ON in case of attack, because navy forces will find faster and easier attacked vessel.

- CCTV camera (Closed Circuit Television) is used for monitoring pirates in their movement onboard vessel and later analysis of recorded information's for bringing more effective measures done by anti-piracy organizations.

In practice above mentioned equipment are most used, but onboard some vessels we can find not usual Anti-piracy laser, LRAD (Long Range Acoustic Device). On navigating bridge, all crewmembers in charge must have bullet proof jackets, helmets, and for lookout purpose binoculars for daylight period plus night vision goggles for night lookout. It's of great importance that during passing piracy area is better lookout on navigating bridge because of weak echo rcvd by radar from small speedboats used by pirates. Also, very important is that all crew is well trained before entering piracy high-risk zone to reduce stress and time to go in citadel in case of real attack. All anti-pirate measures are used for rejecting pirates or for getting time before pirates reach navigation bridge or take one of crew member as a hostage. In case one of crew members is arrested its considered that vessel is hijacked, because rest of the crew will be surrendered and that situation is not giving any possibility for navy forces in making vessel free. In case of that scenario vessel is proceeding as per pirates' instructions and later requesting of ransom. To get some time, around vessel are installed razor wires in two levels of height plus around accommodation. Fire nozzles used for making water mist are posted on each side of vessel, installed windows protection, additional metal protection on door entrances including doors going to citadel. Citadel is protected area mostly located inside engine room. Before passing piracy high-risk areas, citadel must be supplied with enough quantity of food, water, medical first aid. Inside citadel is located satellite phone independent from ship electrical net and its used for communication between crew and rescue team. Citadel door are going to be open only in case rescue team give agree sign or password received form CSO (Company Security Officer). Each vessel because of own specifics has anti-piracy security plan because in some cases Security and Safety coming in conflict. Safety of vessel is priority in relation to anti-piracy measures, but for better understanding I am giving some examples:

- Each vessel must have certain number of fire nozzles only for firefighting purpose, not for anti-piracy use, because of that vessel must be supplied with additional nozzles for anti-piracy purpose
- In case of fire if all nozzles are open it will not be enough working pressure on hydrant for firefighting purposes

- In case vessel is equipped with CO2 system for extinguishing engine room, system must be well secured so pirates don't have possibility to activate because all crew will be forced to leave citadel in case of that scenario. In same time CO2 system must be ready for use all the time.
- By securing entrance with additional levers are increased time needed to enter lifeboats in case of abandoning of ship
- Too many installed razor wires can bring to more complicated approach to life-saving equipment such as life-rafts, rescue boat or by damaging personal life-saving equipment
- All exits from closed areas in case of need must be free of any obstructions, must be easy to open doors

Approach and usage of all life-saving equipment, fire-fighting equipment and safe functioning of ship should not be reduced because of anti-piracy measures, but sometimes it's not simple and only good planning and training of crew can satisfy both requirements.

7. Conclusion

In maritime industry big focus is on security and safety. In centralized management system of global regulations done by IMO (International Maritime Organization), specialized agency of United Nations with 174 member states and 3 associate members on more simple and effective way developing safety at sea and anti-piracy as part of security. Piracy will existing while ships are at sea and people life's connected with sea, but positive global changes can reduce piracy and robbery attacks, what we can see in areas like Gulf of Aden where was not possible to pass without private security forces and helping of NATO navy forces in cooperation with India, Japan, China, same as Europe areas where piracy totally disappear. Merchant vessels as soft targets were and will be "tools" that some countries will use in own political acting to get some profit. In other part of world will be source of money for surviving of local people or "tools" for anti-state acting of militant groups. Taking in account that vessels are owned by company from one country, using flag of other country, cargo they carry is owned by companies from third countries and crew is multinational, it's clear that there is no any national, religious or similar connection between ships and countries were piracy existing. Vessel are used only like available pray to get some goals. Anti-piracy measures are additional costs for shipping companies and charterers, because of paying guards to protect vessel, additional costs of insurance and possible longer passage plan.

8. Literature

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