

SECURITY THREATS TO OFFSHORE ENERGY INSTALLATIONS AND MEASURES OF PROTECTION UNDER THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

By

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Abstract

This article examined the security threats to offshore energy installations and measures of protection under the United Nations Convention on the Law of the Sea. The relevance of offshore energy installations to the global economy has made it attractive targets for terrorism and all forms of security threats and unlawful interferences. The objective of this article is an examination of the various security threats, measures for combating them in the various maritime zones as outlined under the United Nations Convention on the Law of the Sea and the challenges limiting the effectiveness of the United Nations Convention on the Law of the Sea. This article adopts the doctrinal method of research. This article revealed that there exist a legislative and enforcement jurisdiction of coastal states in maritime zones within national jurisdiction, flag state jurisdiction in the high seas and the jurisdiction of the International Seabed Authority in the area. This article revealed that the limitations of the United Nations Convention on the Law of the Sea, impedes its enforcement and that the challenges bedeviling the protection of offshore energy installations which include the inadequacy of the legal framework, conflicts arising from maritime delimitation disputes, incompetent personnel and funding, are of serious concern and hindrances to the effective operation of the legal framework. This article recommended incorporation of cautionary or exclusion zones in the United Nations Convention on the Law of the Sea, amendment of the United Nations Convention on the Law of the Sea, resolution of boundary delimitation disputes, human capacity development and adequate funding of the offshore petroleum industry as panacea to the protection of offshore energy installations.

Key Words: Security Threats, Offshore, Offshore Energy Installations

Introduction

Marine safety has been increasingly linked to maritime security given that the maritime industry, shipping companies, offshore installations and their employees are simultaneously potential targets of pirates, terrorists,

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or criminals.¹ Offshore security threats refer to an unlawful interference with offshore oil and gas operations or an act of violence directed towards offshore installations. They refer to threats such as maritime inter-state disputes, maritime terrorism, piracy, trafficking of narcotics, people and illicit goods, arms proliferation, illegal fishing, environmental crimes, or maritime accidents and disasters², bombing, vandalism, internal sabotage, and so on. Some of these security threats and their impacts on a state are briefly discussed below. Offshore in oil and gas extraction refers to the development of oil fields and deposits of natural gas beneath the ocean. According to M Kashubsky,³ offshore energy installations is a generic term that refers to any model of installation permanently or temporarily attached to the subsoil offshore, primarily erected for the purpose of exploration and exploitation of offshore oil and gas resources. Offshore energy installations could be fixed or mobile, utilized in all stages of crude oil production activities. Offshore petroleum installations, offshore energy installations, and offshore oil and gas installations will be used interchangeably.

Piracy

There are two prominent definitions of piracy⁴, one of which is provided in the 1958 convention on the high seas, and the UNCLOS 1982 as follows:

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) .

¹ C Bueger, 'What is Maritime Security' (2015)(53) *Marine Policy*, 161.

² *Ibid*, 159.

³ M Kashubsky, *Offshore Oil and Gas Installations Security: An International Perspective* (Informa Law from Routledge:2016) 3-4.

⁴ B K Sovacool, *Routledge Handbook Of Energy Security* (2011: Routledge Taylor And Francis Group) 114-115.

Article 105 of the LOSC grants *every* State the authority to seize any vessel or aircraft and associated property and arrest any persons engaged in piracy. The pirates may be prosecuted under domestic law by domestic courts of the state conducting the seizure which could determine what to do with the vessels; however, until recent times, the courts remain inadequate or unsupported in many places.⁵

The LOSC alone cannot sufficiently address the prosecution of pirates once captured. The IMO has urged all coastal states to take all necessary and appropriate measures to prevent and combat piracy through regional co-operation, and to investigate incidents of piracy in order to prosecute perpetrators in accordance with international law.⁶

Bombing

Bomb threats are made to disrupt petroleum operations and to harass oil companies. The most likely culprits are employees who may be coerced into acting on behalf of terrorists or a hostile government. Explosive charges may also be affixed to the underwater portion of a platform by more sophisticated adversaries. As a result of denial of access to oil platforms, adversaries might try to place bombs in floating storage tanks, underwater pipelines, or terminal facilities on shore, or aboard vessels servicing offshore platforms.⁷

Vandalism

Vandalism is an action involving deliberate destruction of public or private property within the civic domain. It also denotes willful destruction of public or government property in-keeping with criminal or political intent. Acts of oil pipeline vandalism comprise the willful breaking of oil pipelines with the intent to misappropriate petroleum products, disruption of petroleum production and the securing of political appeasement (in connection with either IOCs or the government). It also contemplates the deliberate “breaking” of oil pipelines with the intent to misappropriate petroleum products or to perpetrate what have been

⁵ The Fletcher School, ‘A Policy Primer, Maritime Security and the Convention on the Law of the Sea’ <<https://sites.tufts.edu/lawofthesea/chapter-six/>> accessed 28th October, 2020.

⁶ *Ibid*, 6.

⁷ B M Jenkins, ‘Potential Threats to Offshore Platforms’ Santa Monica, CA: RAND Corporation 1988. <<https://www.rand.org/pubs/papers/P7406.html>> accessed 28th October, 2020.

described as “acts of sabotage” against the current administration. Pipeline vandalism is very common in the Niger Delta region of Nigeria⁸. Poverty appears to be a major reason why people are engaging in acts of oil and gas pipeline vandalism, especially in Nigeria. The significant environmental degradation of some parts of the Niger Delta often means that people do not have the opportunity to practise traditional occupations such as fishing and farming. Consequently, some local communities, have taken to acts of vandalising oil pipelines in order to take oil for sale for the purpose of economic survival.

Another factor that might be attributed to (or be a cause of) the rise in acts of pipeline vandalism is the current level of unemployment, which has forced many people to take to resort to this kind of activity, including acts of oil pipeline vandalism and misappropriation of oil as a means for economic survival.⁹

Another possible reason for acts of pipeline vandalism is the issue of ownership of crude oil and natural gas in Nigeria. Ownership of petroleum is vested on the Federal government in Nigeria by virtue of the Nigerian legislation¹⁰ which could also be referred to as coercive statutes¹¹. The increase in indigenous claims over petroleum resources have given rise to pipeline vandalism¹².

Terrorism

Offshore platforms are subject to increased physical protection, continuous surveillance and optional military intervention. However, as the terrorist attack on the USS Cole in Yemen in 2000 demonstrated, even a battle ship with its enhanced technical and operational capabilities to ward off an enemy attack has proven to be vulnerable to a suicide terrorist boat attack.¹³ Terrorism can be defined as the deliberate creation and exploitation of fear through violence or the threat of violence in the

⁸ E O Okumagba, ‘Oil and Gas Pipeline Vandalism in Nigeria: Analyzing Alternative Options Beyond the Traditional Legal Approach’ <<https://www.researchgate.net/publication/342184010-Oilandgas-Pipeline-Vandalism-In-Nigeria-Analysing-AlternativeOptions-Beyond-The-Traditional-Legal-Approach/Citation/Download>> accessed 28th October, 2020.

⁹*Ibid.*, 17.

¹⁰ CFRN 1999(as amended), ss. 44(3), LUA 1978; 1, EEZA 1978, s. 2(1).

¹¹ K G Kingston, *Oil and Gas Laws: A Guide For International Practitioners* (2ndedn: LAP Lambert Academic Publishing: 2018), 72.

¹² E O Okumagba (n 8).

¹³ F Steinhausler and Others, ‘Security Risks To The Oil And Gas Industry: Terrorists Capabilities’ (2008)(VII)(1) *Strategic Insights, Center For Contemporary Conflict*, Monterey, California, 4.

pursuit of political change. All terrorist acts involve violence or the threat of violence. Terrorism is specifically designed to have far reaching psychological effects beyond the immediate victims or object of the terrorist attack. It is meant to instill fear within and thereby intimidate, a wider target audience that might include a rival ethnic or religious group, an entire country, a national government or political party, or public opinion in general.

The Malacca strait and the Gulf of Aden, which play a significant role in international trade have been identified as high risk areas for maritime terrorists attack. The Malacca strait, which connects the Indian Ocean with the South China Sea is one of the busiest water ways in the world. More than 60,000 merchant vessels transit the strait each year. Tankers carrying oil from the Middle East to countries such as China and Japan, which rely heavily on imported oil, are just some of the vessels passing through the water way each day. The area also has oil, gas and mineral resources, with both onshore and offshore energy installations in operation. Security is a concern in the Malacca strait because criminal gangs as well as politically motivated groups, such as the terrorist group Jemaah Islamiyah and the guerilla group, Free Aceh Movement (Gerakan Aceh Merdeka or GAM), are active in the vicinity of the waterway¹⁴.

The first act of oil terrorism in Nigeria can be traced to December 2005, when the Movement for the Emancipation of the Niger Delta (MEND) blew up Shell's Opobo Pipeline in Delta State. After the arrest of Alhaji Asari Dokubo, the leader of the Niger Delta People's Volunteer Force (who is widely regarded as a leader of the Ijaw nation) in September 2005, militant groups in the Delta region instructed all multinational oil companies to leave the region, as they were preparing for a war with the Nigerian government¹⁵.

Sabotage

Sabotage according to B M Jenkins, are of two levels, viz: low-level sabotage and the High- level sabotage. The low-level sabotage is an attempt to impose financial cost on a corporation, by disabling its facility or temporarily disrupting its operations. This form of sabotage is carried out mostly by employees during periods of labour strife. High-level sabotage on the other hand, consists of acts of terrorism or surrogate

¹⁴F Steinhausler and Others, (n13)119 &120.

¹⁵ C Onuoha, *Oil Pipeline Sabotage in Nigeria: Dimensions, Actors and Implications for National Security*, (2008) 17(3) *African Security Review*, 8.

warfare carried out by one nation against another and includes destruction of facilities and human lives, planting explosives underwater or temporal seizure of the control of a facility.¹⁶

Oil pipeline sabotage, as referred to here, concerns the illegal or unauthorised act of destroying or puncturing of oil pipelines so as to disrupt supply or to siphon crude oil or its refined products for purposes of appropriating it for personal use or for sale on the black market or any other outlet. It includes such acts as oil bunkering, pipeline vandalism/fuel scooping and oil terrorism. In this sense, any person(s) or company involved in such an act is considered to be guilty of economic sabotage¹⁷.

Organised Crime

Organized crime refers to crimes which could interfere with offshore petroleum operations such as armed robbery, oil theft, extortion and other forms of crimes. In Malaysia, an organized criminal group attacked a mobile offshore drilling rig Allied Centurion on 26 December 2008, and stole stores of goods and property.

Kidnapping

Kidnapping refers to abduction of oil and gas personnel, especially when they are confined to a vessel. Kidnapping is usually carried out for certain reasons, namely: to interrupt the exploration and development of oil fields; to protest corporate policies of energy companies; and as a source of revenue¹⁸

It can be deduced from the foregoing, that excluding piracy these security threats are similar in activities, and objectives; and are launched on similar grounds.

The 1982 Law of the Sea Convention.

The Law of the sea convention of 1982 was as a result of the Third United Nations Conference on the law of the sea, (UNCLOS 111). It superceded the four Geneva Conventions, without altering any inter-state agreements that in the meantime had been made under the rules of these

¹⁶B M Jenkins, (n 7)14.

¹⁷ C Onuoha,(n15) 2&3.

¹⁸ M L Kleinpeter, 'The Resource Curse In Nigeria: Comparing The Security Of Offshore And Onshore Oil Production' (2016) 8(3) *Inquiries Journal* 1.

conventions¹⁹. The convention establishes a new legal regime for the seas and oceans, and made provision for the peaceful use of ocean space, the equitable and efficient management and utilization of its resources, and the study, protection and preservation of the marine environment. It provides for the maritime zones, which include the internal waters, territorial waters, contiguous zone, exclusive economic zone, continental shelf, and international waters, which are zones which extend from within national jurisdiction to zones beyond national jurisdiction, and sets the nations' right on these zones²⁰.

Internal Waters

Internal or national or interior waters are those waters which lie landward of the baseline from which the territorial sea and other maritime zones are measured.²¹ Thus internal waters of a maritime character mostly comprise bays, estuaries and ports, and waters enclosed by straight baselines.²² By virtue of the coastal state's full territorial sovereignty over the internal waters, the coastal state can build offshore petroleum installations in the internal waters and take measures necessary for their protection. The construction of petroleum installations and their protection is governed by the laws and regulations of the coastal state.²³ There is no right of innocent passage in the internal waters such as exists in the territorial sea, through them. The single exception to this principle is that where straight baselines are drawn along a coastline that is deeply indented or fringed with islands, enclosing as internal waters, areas which had not previously been considered as such, a right of innocent passage continues to exist through those newly enclosed waters, at least for parties to the Territorial Sea and Law of The Sea Conventions.²⁴

¹⁹ B Taverne, *Petroleum Industry and Governments* (3rd edn, Netherlands: Kluwer Law international: 2013) 324-325.

²⁰ E Konofagos And K Karageorgis, 'East Mediterranean Gas Discoveries: Offshore Security Challenges and 'The Greek Case' (2014) (5) *Journal In Naval Sciences And Technology, Hellenic Naval Academy*, 10.

²¹ The TSC 1958, art 5(1); UNCLOS 1982, art 8.

²² R R Churchill and A V Lowe, *The Law of the Sea* (3rd edn , Manchester University Press:1999) 60.

²³ M Kashubsky, 'Offshore Petroleum Security: Analysis of Offshore Security Threats, Target Attractiveness, and the International Legal Framework for the Protection and Security of Offshore Petroleum Installation' ((Unpublished Phd Thesis, Faculty of Law, University of Wollongong, 2011) 207.

²⁴ The TSC, art 5(2); UNCLOS 1982, art 8(2).

From the foregoing, the construction, operation and protection of offshore petroleum installations should not hamper the right of innocent passage and international navigation in areas of the sea where the right of innocent passage exists under international law²⁵. The coastal state can exercise civil and criminal jurisdiction or enforcement action over foreign ships in the internal waters, involved in unlawful interferences with or attacks on offshore installations located in the internal waters of that coastal state.²⁶

Installations in the Territorial Sea

The territorial sea is a maritime zone under the territorial sovereignty of the coastal state up to a limit not exceeding twelve nautical miles measured from the baselines. The coastal state has absolute authority to regulate all petroleum and resource related activities, which includes the construction of petroleum installations for the extraction of oil and gas from the sea bed. However, the right of innocent passage should not be hampered in sea lanes designated according to the recommendation of the international maritime organization.²⁷ In the territorial sea, vessels of all states enjoy a right of innocent passage through the territorial sea.²⁸ Passage is innocent, so long as it is not prejudicial to the peace, good order or security of the coastal state. Such passage shall take place in conformity with this convention and with other rules of international law²⁹. Prejudicial activities according to the Law of the Sea Convention, include the following:

- a. any threat or use of force,
- b. any exercise with weapons of any kind,
- c. spying,
- d. any act of propaganda
- k. interference with coastal communications or any other facilities

The coastal state can also temporarily suspend the innocent passage of foreign ships in specified areas of its territorial sea. Furthermore, the

²⁵ M Kashubsky, (n 23) 208.

²⁶ *Ibid.*

²⁷ E D Papastravidis, 'Protecting offshore Energy Installations Under the International Law of the sea-Chapter 8- Natural Resources and the Law of the Sea'
<<http://www.energyatsea.law.uoa.gr/fileadmin/energyatsea.law.uoa.gr/uploads/papastravidis.protectingoffshoreenergyinstallationsunderthelawofthesea.pdf>. > accessed 28th October, 2020.

²⁸ E D Papastravidis, (n 27) 200.

²⁹ UNCLOS 1982, art 19(1).

coastal state may exercise criminal jurisdiction on board the foreign ship in its territorial sea and as necessary arrest persons on board³⁰.

Furthermore, the coastal state may adopt laws and regulations in conformity with the provisions of this convention and other rules of international law, relating to innocent passage through the territorial sea, in respect of the protection of navigational aids and facilities and other facilities or installations.³¹ The coastal state can establish safety zones reasonable and proportionate in size, by virtue of the coastal state's sovereignty over its territorial waters. This is however not expressly provided under the UNCLOS.³²

Installations in the Archipelagic Waters

An archipelagic state is defined as 'a state constituted wholly by one or more archipelagos and may include other islands'³³. An archipelago is defined in the same article as: a group of islands, including parts of islands, interconnecting waters and other natural features which are so closely interrelated that such islands, waters and other natural features form an intrinsic geographical, economic and political entity, or which historically have been regarded as such. Archipelagic states exercise sovereignty over archipelagic waters regardless of their depth or distance from the coast as well as over the airspace above the archipelagic waters, their seabed and subsoil, and the resources contained therein.

The rules applicable to the protection of offshore petroleum installations in the territorial sea are almost similar to that of archipelagic waters under UNCLOS, except with respect to archipelagic sea lanes. In addition to the right of innocent passage, ships of all states enjoy the right of archipelagic sea-lanes passage in the designated archipelagic sea lanes, for the safety of air navigation.³⁴

Installations in the Exclusive Economic Zone

Every coastal state is assigned an EEZ. The EEZ is described as an area beyond and adjacent to the territorial sea which shall not extend beyond

³⁰ M Kashubsky, 'Protecting Offshore Oil and Gas Installations: Security Threats and Countervailing Measures', International Regulatory Countermeasures, (2013), *Journal of Energy Security*, 2-3.

³¹ UNCLOS 1982, art 21.

³² E D Papastravidis, (n 27)202.

³³ UNCLOS 1982, art 46.

³⁴ *Ibid*, 221 & 222.

200 nautical miles (equals 370 kms) from the baselines from which the breadth of the territorial sea is measured³⁵.

A coastal state must have due regard to the rights and duties of other states in exercising its rights with respect to the EEZ and shall act in a manner compatible with the provisions of the convention³⁶. States, whether coastal or landlocked, enjoy the freedoms of the sea and other internationally lawful uses of the sea related to these freedoms. In exercising their rights in the EEZ under this convention, states shall comply with the laws and regulations adopted by the coastal state in accordance with the provisions of this convention and other rules of international law, in so far as they are not incompatible with Part V³⁷. In the EEZ, the coastal state shall have the exclusive right to construct and to authorize and regulate the construction, operation and use of:

- i. artificial islands;
- ii. installations and structures for the purpose provided for in article 56 and other economic purposes.
- iii. installations and structures which may interfere with the exercise of the rights of the coastal state in the zone.

The coastal state shall have exclusive jurisdiction over such artificial islands, installations and structures, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws and regulations.³⁸

Due notice must be given of the construction of such artificial islands, installations or structures and permanent means for giving warning of their presence must be maintained. Installations or structures which are abandoned or disused, must be removed to ensure safety of navigation, taking into account, any generally accepted international standards established in this regard by the competent international organization. Such removal must also have due regard to fishing, the protection of the marine environment and the rights and duties of other states. Appropriate publicity shall be given to the depth, position and dimension of any installations and structures not entirely removed.³⁹

The coastal state, may where necessary, establish reasonable safety zones around such artificial islands, installations and structures in which it may

³⁵ UNCLOS 1982, art 55&57.

³⁶ UNCLOS 1982, art 55&57..

³⁷ *Ibid*, art 58.

³⁸ UNCLOS 1982, art 60(1) & (2).

³⁹ *Ibid.*, art 60(3)

take appropriate measures to ensure the safety both of navigation and of the artificial islands, installations and structures⁴⁰. The breadth of the safety zones shall be determined by the coastal state, taking into account, applicable international standards. Such zones shall be designed to ensure that they are reasonably related to the nature and function of the artificial islands, installations, or structures, and shall not exceed a distance of 500 meters around them, measured from each point of the outer edge, except as authorized by generally accepted international standards or as recommended by the competent international organization.⁴¹

Due notice shall be given of the extent of safety zones⁴². All ships must respect these safety zones and shall comply with generally accepted international standards regarding navigation in the vicinity of artificial islands, installations, structures and safety zones. Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation⁴³. The hot pursuit of a foreign ship may be undertaken when the competent authorities of the coastal states have good reason to believe that the ship has violated the laws of the coastal state or infringement of its safety zones. However, such pursuit must have commenced from the internal sea or territorial waters, archipelagic waters or contiguous zone of the pursuing state and may only be continued outside these zones if the pursuit has not been interrupted⁴⁴.

Installations in the Continental Shelf

The law of the sea convention stipulates that the continental shelf of a coastal state comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea.⁴⁵ The coastal state exercises sovereign rights over the continental shelf for the purpose of exploring it and exploiting its natural resources. The rights referred to here are exclusive to the coastal state. By virtue of article 80 of the UNCLOS, article 60 applies *mutatis mutandis* to installations in the continental shelf.

⁴⁰ *Ibid.*, art60(4).

⁴¹ UNCLOS1982, art 60(4).

⁴² *Ibid.*, art 60(5).7

⁴³ *Ibid.*, art 60(6) & (7).

⁴⁴ *Ibid.*, art 111.

⁴⁵ *Ibid.*, art 76(1).

All states are entitled to lay submarine cables and pipelines on the continental shelf. States shall have due regard to cables or pipelines already in position, when laying submarine cables or pipelines⁴⁶.

The hot pursuit of a foreign ship may be undertaken when the competent authorities of the coastal states have good reason to believe that the ship has violated the laws of the coastal state or infringement of its safety zones.

Installations in the High Seas

The UNCLOS provides that Part VII of the UNCLOS only applies to all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a state, or in the archipelagic waters of an archipelagic state. The high seas are open to all states and no state may validly purport to subject any part of them to its sovereignty.

The construction, operation and use of artificial islands, installations and structures established for economic purposes, and of installations and structures which may interfere with the exercise of coastal state rights on the continental shelf, are subject to the authorization and regulation of the coastal state.⁴⁷ All states possess the right to lay submarine cables and pipelines on the bed of the high seas beyond the continental shelf. Every state shall adopt laws and regulations, providing that willful or negligent breaking of a submarine pipeline shall be a punishable offence. An exception exists where it is done for safety of lives or the ship, after all necessary precautions have been taken to avoid such break⁴⁸. The flag state, which is the state under whose flag the ship sails, has exclusive jurisdiction over it on the high seas. The exclusiveness of the flag state's jurisdiction is not absolute. There exist exceptional circumstances where third states share legislative or enforcement jurisdiction or both with the flag state⁴⁹. One of the exceptions is Piracy. Piracy is one of the security threats to offshore petroleum installations. Piracy includes any illegal act of violence or detention or any act of depredation committed for private ends by the crew or passengers of a private ship or a private aircraft, and directed on the high seas against another ship or aircraft or against persons or property on board such ship or aircraft⁵⁰. A ship reasonably

⁴⁶ UNCLOS 1982, art 79.

⁴⁷ *Ibid.*, art 80 & 69

⁴⁸ *Ibid.*, 112 & 113.

⁴⁹ R R Churchill and A V Lowe (n 22), 209.

⁵⁰ *Ibid.*, art 101.

suspected of being engaged in piracy can be visited and boarded. If the suspicions are proven to be unfounded and provided that the ship boarded has not committed any act justifying them, it shall be compensated for any loss or damage that may have been sustained. A pirate ship may be seized by every state; and the state can also arrest persons and seize the property on board. However, such seizure may be carried out only by warships or military aircraft, or other ships, clearly marked and identifiable as being on government service and authorized to that effect. The courts of the state which carried out the seizure may decide upon the penalties to be imposed⁵¹.

Another exception to the flag state jurisdiction is the right of hot pursuit. Such pursuit must be commenced when the foreign ship or one of its boats is within the internal waters, the archipelagic waters, the territorial sea or contiguous zone of the pursuing state, and may only be continued outside the territorial sea or the contiguous zone if the pursuit has not been interrupted. The right of hot pursuit applies to violations in the EEZ or continental shelf, including safety zones around the continental shelf installations. The right of hot pursuit ceases as soon as the ship pursued enters its territorial sea or that of a third state.⁵²

Under Customary international law, the doctrine of constructive presence can be invoked against foreign ships which use their boats to commit offences within the territorial sea, or the EEZ, while themselves remaining on the high seas. In this circumstance, the foreign ships could be arrested. The doctrine of constructive presence may operate together with the right of hot pursuit, so as to broaden the enforcement powers of the coastal states⁵³.

Other exceptions include unauthorized broadcasting, slave trading, drug trafficking, ships of uncertain nationality and stateless ships, major pollution incidents, exceptional measures.

Installations in the Area

The Area is defined as the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.⁵⁴ The Area is governed by the principle of the common heritage of mankind.⁵⁵ The International Seabed

⁵¹ *Ibid.*, art 110(3), 105 & 107.

⁵² *Ibid.*, art 111.

⁵³ (n 22), 215.

⁵⁴ *Ibid.*, art 1(1).

⁵⁵ *Ibid.*, art 136.

Authority is the international organization established under the UNCLOS for the purpose of exercising overall responsibility for the exploration and exploitation of the resources of the seabed beyond national jurisdiction. Construction of installations for the exploitation of the resources of the Area, are subject to the authorization of the Authority of the ISA and its regulations, rules and procedure.⁵⁶

Due notice must be given of the erection, emplacement and removal of such installations, and permanent means for giving warning of their presence must be maintained. Safety zones shall be established around such installations, with appropriate markings to ensure the safety of both navigation and the installations.

Challenges Associated with the Protection of Offshore Energy Installations under the United Nations Convention on the Law of the Sea

The challenges associated with the protection of offshore energy installations under the United Nations Convention on the Law of the Sea are as follows:

Inadequacy and Non-Bindingness of the Legal Framework

The UNCLOS is fraught with several inadequacies and this impedes its enforcement. The coastal states' jurisdiction in the EEZ and continental shelf are limited. The establishment of safety zones of 500m is the only measure to be explored by the coastal state. This is not the case in the territorial sea, where the coastal state determines the breadth of the safety zones. In the EEZ and continental shelf, foreign ships would not respect safety zones beyond 500m. The safety zones of 500m as provided by UNCLOS is inadequate for the protection of offshore petroleum installations.

The superjacent waters over the continental shelf are the high seas and the principle of flag state jurisdiction is protected under the UNCLOS. This creates a difficulty in the enforcement jurisdiction of coastal states against foreign ships who have interfered unlawfully with offshore petroleum installations.

Furthermore, the only security threats addressed by the UNCLOS is piracy and its application to offshore petroleum installations is limited to circumstances where the installation is regarded as a ship at the time it

⁵⁶*Ibid.*, art 147(2)(a).

was attacked. The UNCLOS is clothed with ambiguity. The security measures the coastal states would take in the EEZ are not precisely stated.

The sovereignty of the coastal states over installations in the EEZ and the continental shelf is also limited under UNCLOS. Pipelines are not categorised as installations under the UNCLOS and no adequate provision for the protection of pipelines are made. It is only provided that coastal states possess the right to lay submarine cables and pipelines in the EEZ, continental shelf and the high seas.⁵⁷

Conflicts Arising from Maritime Boundary Delimitation

The irresolvable conflicts arising from maritime boundary delimitation has resulted in difficulty in achieving regional cooperation in combating maritime insecurity. These disputes are predominant in East Asia and Southeast Asia. The inability of states to arrive at a consensus as regards boundary delimitation issues have posed a great challenge in regional cooperation of states in combating maritime insecurity.⁵⁸

Incompetent personnel

There exists a lack of human capacity development. Offshore operators who are expected to fight fires, on offshore platforms should be properly trained and equipped. Workers assigned as fire brigade leaders should possess the necessary leadership capacity and the required training in advanced firefighting. Workers should also regularly attend scheduled safety meetings. A major global issue in the offshore petroleum industry is the lack of adequately trained energy industry personnel.⁵⁹ In sub-saharan Africa, it has been observed that there is inadequate infrastructure and qualified teaching personnel; there are no facilities for vocational and technical training in addition to university education to foster acquisition of skills in the petroleum industry.

⁵⁷ UNCLOS 1982, art 87.

⁵⁸ L Cordner, *Offshore Oil and Gas Safety and Security in the Asia Pacific: The Need for Regional Approaches to Managing Risks* (S. Rajaratnam School Of International Studies: 2013) 63&64.

⁵⁹ G Enzer, 'Oil and Gas Is Facing A Severe Talent Shortage' <oilandgasmiddleeast.com> accessed 28th October, 2020.

Funding

Offshore exploration, drilling and production processes are capital intensive. Huge finance is needed for maintenance of offshore oil rigs and pipelines and to combat maritime insecurity. In Nigeria, the regulatory institutions charged with the responsibility of ensuring maritime security are not properly funded and this has led to regulatory capture.

Recommendations

Flowing from the tenor of the above stated, this article recommends as follows:

Incorporation of Cautionary or Exclusion Zones in the UNCLOS

The UNCLOS provides for safety zones of 500m for protection of offshore petroleum installations in the EEZ and continental shelf. It has been observed that the safety zones of 500m is not sufficient for adequate protection and coastal states possess no enforcement jurisdiction in the continental shelf for adequate protection of offshore petroleum installations. The non-compliance by foreign ships with safety zones beyond 500m cannot be legally enforced by the coastal state without its express provisions in the UNCLOS. The researcher therefore recommends the inclusion of cautionary zones beyond 500m in the UNCLOS and enforcement jurisdiction should be granted to coastal against foreign vessels that violate safety zones on the continental shelf, and cautionary zones for adequate protection of offshore petroleum installations and to enhance its enforceability.⁶⁰

Amendment of the United Nations Convention on the International Law of the Sea

The article has rightly observed that the 1982 UNCLOS is fraught with several inadequacies and limitations. The researcher therefore recommends an amendment of these provisions of the UNCLOS and for coastal states to reflect same in their national legislations for effective protection of offshore petroleum installation.

⁶⁰ M Kashubsky and A Morrison, 'Security of Offshore Oil and Gas Facilities: Exclusion Zone and Ships Routeing' (2013)(5)(1) *Australian Journal of Maritime and Ocean Affairs*, 3-4.

Resolution of Boundary Delimitation Disputes

States are urged to resolve maritime delimitation disputes by adjudication and international arbitration. It is suggested here, that the provisions of the UNCLOS be used for the resolution of disputes in areas of overlapping maritime claims.

Human Capacity Development

From the foregoing, it can be deduced by the researcher that lack of human capacity development has posed a great challenge to the protection of offshore petroleum installation. The researcher therefore recommends that African training institutions obtain international accreditation, to acquaint prospective offshore operators with the relevant international safety standards and practice. International oil companies should collaborate with the governments and international institutions to establish training institutions for acquisition of vocational skills in the petroleum industry.⁶¹

Funding

It has been rightly observed by the researcher that offshore petroleum drilling and production activities and maintenance of oil platforms and installations and maritime security involves huge financial requirements. The researcher recommends the establishment of a special fund internationally and regionally to be funded by the world bank and regional financial institutions like the African development bank and the west African development bank.

⁶¹P Peek and Others, 'Skill Shortages in the Global Oil and Gas Industry' <<http://www.sciepub.com>> accessed 28th October, 2020.