

BETTER STRATEGIES FOR THE ENFORCEMENT OF MARINE ENVIRONMENT LEGISLATION IN NIGERIA: LESSONS FROM SOME OTHER JURISDICTIONS*

Abstract

Marine pollution is a major problem of the present world. Man is the culprit due to his quest for growth and survival. The overdependence and unaccountable exploits of the resources of the marine environment has led to decline as well as death to the marine living resources. To cure the challenge of marine pollution, Nigeria made myriad of laws on marine protection, but the menace of pollution persists due to weak enforcement of the laws against polluters. The challenge of the marine pollution is being tackled and efficiently managed by some western countries using formidable legal instruments and strategies to combat pollution of the marine. It is against this backdrop that this article examined better strategies to enforce marine environment laws in Nigeria, using the case of Chile, United Kingdom and South Africa with robust marine ecosystem. The article used doctrinal research method of data collection and adopted primary source of data like relevant statute and case laws, while the secondary sources of data adopted were books, journals, articles and internet materials. This article found that the laws addressing marine protection in Nigeria were fragmented, stale and faced with enforcement challenge. The article recommended that Nigeria should borrow a leaf from the marine environmental laws and strategies adopted by Chile, United Kingdom and South Africa to guarantee a virile marine ecosystem protection.

Keywords: Enforcement Strategies, Marine Environment, Marine Protection, Marine Pollution, Nigeria, Chile, United Kingdom and South Africa.

1. Introduction

The continuous pollution incidents recorded in Nigerian marine environment notwithstanding the various international and national laws pooled together for its protection prompted this article. The marine environment is an important component of the global life-support system.¹ It provides essential services such as carbon capture for climate mitigation, protection from storm surges, generates solar energy, navigational routes and absorbs carbon dioxide.² In order to improve the sustainability of the natural environment of the marine ecosystem, Nigeria government enacted plethora of laws to safeguard the marine and its living resources. These laws amongst others are; the Harmful Waste (Special Criminal Provision Etc.) Act³, National Oil Spill Detection and Response Agency Act⁴, Oil in Navigable Waters Act⁵, Sea Fisheries Act⁶, Merchant Shipping Act⁷, National Environmental Standard and Regulation Enforcement Agency Act⁸, but in spite of the existence of the laws, marine pollution remained owing to the fact that these laws are fragmented, staled and has implementation and enforcement challenges. Pollution of the marine being a global challenge, and has assumed an international concern is being tackled and efficiently managed by some western countries who have pooled together formidable legal and institutional mechanisms to combat marine pollution. It is against this backdrop that this article tends to compare Nigeria marine environmental protection laws and that of Chile, United Kingdom and South Africa that already have robust marine management policy and viable marine legal frameworks which they have achieved by the consolidation of marine legislations, creation of Marine Protected Areas (MPAs) and enactment of plastic management laws. Doctrinal method of data collection is used in this article and the

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¹ UNEP, 'The Marine Environment is an Essential Component of the GLOBAL Life- Support System' <<https://www.unep.org/news-and-stories/story/marine-environment-essential-component-global-life-support-system>> accessed 23 September 2022.

² Environment Fact Sheet: Protecting and Conserving the Marine Environment' European Commission (February 2006) 2.

³ Cap. H1 LFN, 2004.

⁴ NO.15, 2006 as amended

⁵ Cap.O6 LFN,2004

⁶ Cap. S4 LFN, 2004

⁷ 2007

⁸ 2007 and its 2018 Amendment.

primary sources of data adopted are the relevant statute and case laws while the secondary sources of data implored in this article are books, journals, articles and internet materials. This article found that Nigeria marine environmental laws lack enforcement and implementation mechanisms and recommend that Nigeria should adopt the marine protection laws and policies enforced in Chile, United Kingdom and South Africa by creating MPAs, enacting plastic control and management laws and consolidating the too many laws protecting the marine environment in Nigeria.

2. Clarification of Key Concepts

Marine Environment: is the ocean, seas, bay, estuaries and other major water bodies, including their surface inter-face and interactive, with the atmosphere and with the land seaward of the mean high-water mark.⁹

Marine Pollution: refers to ‘direct or indirect introduction by human of substances or energy into the environment (including estuaries) resulting in harm to living resources, hazard to human health, hindrances to marine activities including fishing, impairment of the quality of sea water and reduction of amenities.’¹⁰

Enforcement strategy: is a measure put in place by the government to combat violators of environmental regulations to force them to comply to regulations and laws.¹¹

3. Examining the Laws and Strategies adopted by some Jurisdictions to Protect Marine Environment

3.1. South Africa

South Africa is blessed with an exceptional rich marine environment. In addition to the endowment is the custody of at least 11130 species of marine animals, numerous species of marine plants and sea weeds.¹² Unlike Nigeria, the South Africa has laudable Marine Protected Areas (MPA). According to the IUCN, MPA is defined as ‘any area of inter- tidal or sub- tidal terrain together with its overlying water and associated flora, fauna and historical and cultural features which has been reserved by law or effective means to protect part or all of the enclosed environment.’¹³ Historically, on the 3rd of February, 2016, the minister of environmental affairs of the South Africa published draft notices and regulations to declare a network of marine protected areas. The network proposed 22 new MPAs covering about 70,000 sq kilometer of the ocean space of the South Africa waters.¹⁴ The proposed network is an operation phasika initiative aimed at speedily making the economic potential of the ocean viable via fast tracking the development of industries such as off shore oil and gas, mariculture, manufacture and machine shipping.¹⁵ South Africa protects approximately 8% of its terrestrial natural heritage by a system or network of protected Areas. The coastal and ocean ecosystems are conserved through a network of MPAs. South Africa has 25 government recognized MPAs with the addition of 23 permanent coastal MPAs, a walker Bay (otherwise called seasonal coastal MPA and the large prince Edward islands (PEIS) MPA in the Southern Ocean before 2019.¹⁶ The 24 MPAs within the main land in South Africa covered 0.43% of the total ocean space and of this size, 0.16% was a no take area and highly protected.¹⁷ To strengthen the MPAs, the South Africa in 2011 established ‘National Biodiversity Assessment’ and after the 2011 Assessment, it was discovered that the offshore was poorly protected. The discovery triggered up the initiation of the offshore MPA Project (2007-2011) with the target to boast up protection of the offshore ecosystem, which was advanced towards implementation during operation phakisa ocean economy.¹⁸

In 2016, a total of 22 new MPAs were gazetted for debate and consultation and the process led to the cabinet to grant permission to declare a revised network of 20 new MPAs on October, 2018. It was gazetted on 23rd May, 2019 and came into effect on 1st August 2019 and eventually extended the horizon of South Africa’s main land

⁹ C Duarte ‘Seagrasses’ in *Encyclopedia of Biodiversity* (2nd edn, Academic Press 2001)

¹⁰ Glossary of Environment Statistics Studies in Methods, Series F, No. 67, United Nations New York, 1997 <http://www.stats.oecd.org/glossary/detail.asp?id=1596> accessed 26 June 2023.

¹¹ ED Oruonye & YM Ahmed, ‘The Role of Enforcement in Environmental Protection in Nigeria (2020) (7)(1), *World Journal of Advance Research and Reviews*, 49.

¹² CL Griffiths et al, ‘Marine Biodiversity in South Africa: An Evaluation of Current States of Knowledge’ [2010] (5) (8) *Plos One*, 1.

¹³ WWF, *Marine Protected Areas: WWF’s Role in Their Future Development* (Gland, Switzerland WWF 1998).

¹⁴ Center for Environmental Right, ‘A Network of Marine Protected Areas in South Africa Could Soon Become Reality (23 February 2016) <<http://cer.org.za/news/a-network-of-marine-protected-areas-in-south-africa-could-soon-become-a-reality>> accessed 20 July 2022.

¹⁵ *Ibid.*

¹⁶ Marine Protected Areas, South Africa <<https://www.marineprotectedareas.org.za/protecting-the-ocean>> accessed 20 July 2022.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

ocean territory to 5%.¹⁹ The South Africa MPAs is regulated by the National Environmental Management: Protected Areas Act, 2003²⁰ and in its salient provision, the Act state: ‘no person may conduct commercial prospecting or mining, exploration, production or related activities’ in a marine protected area.’

From the day the Act came into force, all minerals and petroleum extraction and related activities, including seismic surveys, will be prohibited within the network.²¹ The network is designed to protect some key spawning, breeding, nursery, feeding, and aggregation areas for deluge of marine fauna, including threatened shark, turtle and sea bird species. It will also protect unique and diverse habitat types and features including cold water corals, a fossil, yellow wood forest, canyons, reefs, mangroves, coastal wetlands, mud habitats and gravel habitats. The network is made to boost the rapidly growing marine economy of South Africa. It is meant to create job opportunity and support livelihoods. MPAs are simply powerful fisheries management tools that enable recovery of depleted and over exploited fish stocks.²² Section 22A of the 2003 Act²³ empowers the then minister of environmental affairs, Yane to declare the addo elephant marine protected area, the agulhas bank complex marine protected areas, the aliwal shoal marine protected area, the aguihas muds marine protected area, the namaqua fossil front marine protected areas²⁴ amongst others. The schedules to the MPAs delineate the boundaries of the MPAs showing the geographical coordinates and the purposes of the MPA. The common purposes of each of the MPAs provided in the schedules to the respective MPAs are:

- (a) To contribute to a national, regional and global representative system of marine Protected Areas, by protecting a linked system of shore, estuaries, bay, Island and self ecosystems and their associated biodiversity and ecosystem processes in a contiguous coastal conservation area.
- (b) To facilitate fisheries management by protecting spawning stock, allowing stock recovery and enhancing stock abundance in adjacent areas, in particular for line fish and abalone resources. amongst others.

The establishment of MPAs in South Africa has gone a long way to conserve marine living resources in South Africa.

Lesson for Nigeria

Nigeria has very rich marine biodiversities. Nigeria’s entire southern border is attached to the Atlantic Ocean covering about 857 Km from the West boarding the Republic of Benin and to the east Republic of Cameroon.²⁵ The Nigeria coast is comprised of four different geomorphological formations namely, the barrier lagoon complex, the mid coast, the arcuate niger delta and the strand coast.²⁶ Nigeria aquatic ecosystems serves as habitats to several biological species including fish, aquatic mammals, reptiles, aquatic insects, some species of snails, fresh water shrimps, snakes, algae, water hyacinths, and lettuce, all found in Bayelsa, Rivers Edo, Akwa Ibom, Cross Rivers and Delta states of the Niger Delta and other coastal part of Nigeria. To sustain the above species, the Nigerian government enacted plethora of domestic laws and ratified several international treaties and conventions. These laws have proved inadequate because Nigeria seas does not have prohibited and restricted areas in terms of exploration of natural resources. The inadequacy spurred Ugwu²⁷ to note in his words that ‘unfortunately, Nigeria does not have formally established fresh water/ marine protected Areas and is not engaging in constructive mangrove restoration programs.’ Communities in Nigeria have aquatic species that are totems and are not to be killed. For example, the Akpors in River State do not kill python snake (Eke Rukani) and the Oporoma, Bayelsa forbids the killing of crocodiles. MPAs if created in Nigeria marine shall have several benefits associated with it and they are *inter alia*: (i) control fish mortality (ii) ensure food web integrity biodiversity (iii) protect and conserve habitats (iv) act as sink for fish eggs and leaves to improve recruitment (v) reduce by catch and (vi) reduce chance of species extinction²⁸ and provide jobs. Need for

¹⁹ *Ibid.*

²⁰ (Act No.57 of 2003).

²¹ *Ibid.*

²² *Ibid.*

²³ No.57, 2003.

²⁴ Government Gazette Staatskoerant: Republic of South Africa’ [2019] (647) (42478).

²⁵ Nigeria: 5th National Biodiversity Report (NFNBER) December, 2015 <<https://www.cbd.int/doc/world/ng/ng-nr-05-en.pdf>> accessed 20 July 2022.

²⁶ PC Nwilo and OT Badejo, ‘Impact and Management of Oil Spill Pollution along the Nigeria Coastal Areas’ (2015) <<https://www.researchgate.net/publication/242327944>> accessed 20 July 2022.

²⁷ J Ebebeinwe (ed), ‘The Need To Establish Fresh Water Marine Protected Areas in Nigeria’ (Policy Paper by Health of Mother Earth Foundation (HOMEF) 7 June 2020) 7.

²⁸ YE Agbeja, ‘Marine Protected Area: Prospective Tool for Ecosystem Based Fisheries Management in Nigeria’ [2017] (9) (6) *Academic Journals*, 162 <<http://www.academicjournal.org/IJBC>> accessed 20 July 2022.

establishment of MPAs in Nigeria is essential due to the peculiar challenges and issues affecting coastal resources conservation especially the fisheries in Nigeria.²⁹ Again, formidable legal frameworks and regulations both domestic and international legal frameworks are in existence to sustain the MPAs. What is needed is to harmonize the deluge of laws on marine protection into one formidable marine protected law like the South Africa National Environmental Management: Protected Area Act, No.57 of 2003 to give them flavour of implementation and enforcement.

3.2. United Kingdom (UK)

The United Kingdom is one of the countries in Europe with her economy majorly hinged on fossil fuels, i.e oil and gas exploration which generate up to 90% revenue output.³⁰ Oil was the major contaminants of the marine ecosystems in the United Kingdom. For instance, it was recorded that the total production of oil from the onshore since 1939 was pegged at 60.5 million tonnes while the output via the offshore since 1975 was about 2867 million tones. Arithmetically, the production for both onshore and offshore in UK in barrels stood at 453.4 and 21.375 million respectively.³¹ The major marine protected legislation in the United Kingdom is the Marine and Coastal Access Act³². The objective of the Act is to make provisions for marine functions and activities. The Act provide for the protection of the migratory and fresh water fish, works detrimental to navigation, to amend the Habours Act 1964 and for connection purposes,³³ amongst others. To ensure the effective working of the Act, the Act established a body called the 'Marine Management Organization' (MMO).³⁴ One of the main feature of the Act under it's general objective is that the Act charges the MMO to carry out it's functions with the objective of achieving 'sustainable development.³⁵ The MMO has enormous powers under the Act including to take any action for the purpose of furthering any social, economic and environmental purposes.³⁶ For purposes of achieving the sustainable development mentioned above, the secretary of state to the UK government is charged with the responsibility to guide the MMO and to contribute towards the achievement of sustainable development.³⁷ The guidelines must be laid before each houses of parliament³⁸ and made to be published by the secretary of state.³⁹

Another innovation by the 2009 Act is that the secretary of state's functions under the Sea Fish (Conservation) Act 1967 on license of fishing boat, has pursuant to section 4 of the instant Act been transferred to the MMO. Section 1(a) of the Sea Fish (Conservation) Act, prohibit the right to fish unless authorized by a license granted by one of the ministers or secretaries of state. By virtue of section 4 of the 2009 Act, license of fishing boat shall be granted by MMO. The MMO can vary, revoke, and suspend a license or its holder.⁴⁰ Furthermore, Section 11 of the Act repealed Section 1(1) of the Sea Fisheries (Wildlife Conservation) Act 1992 in terms of conservation in the exercise of Sea Fisheries functions and replaced the name MMO and removed the words minister or Ministers. The Act amended certain consent under Section 36 of the Electricity Act 1998.⁴¹ Accordingly, the Electricity consent functions of the secretary of state are transferred to the MMO.⁴² The Electricity consent functions includes amongst others; giving consent for construction etc of generating stations. Section 12(3) of the 2009 Act provides that the generating stations must be in waters which are subject to regulation under section 95 of the Energy Act, 2004. Section 36B provides for duties in relation to navigation,⁴³ which ordinarily is the duty of secretary of state to give his consents to and this consents obligation has been transferred to the MMO. Section 13 of the 2009 Act provides for the functions of the secretary of state under section 95 of the Energy Act, 2004 which functions so far relates to safety zone around renewable energy installation.⁴⁴ Renewable energy installation must be in waters subject to regulation under section 95 of the Energy Act, 2004.

²⁹*Ibid* 12.

³⁰O Fagbohun, *The Law of Oil Pollution and Environmental Restoration: A Comparative Review* (Odade Publications, 2010) 433.

³¹*Ibid* 433-434.

³² Chapter 23, 2009

³³ The Preamble to the Marine and Coastal Access Act, 2009.

³⁴S 1, Part 1 of Chapter 1 of the Marine and Coastal Access Act, 2009.

³⁵S 2(1)(a) of the 2009 Act.

³⁶S 2(2).

³⁷S 2(4).

³⁸S 2(8).

³⁹ S 2(10).

⁴⁰S 4(7) of the 2009 Act.

⁴¹S 12 of the 2009 Act.

⁴² S 12(1).

⁴³S 12(2) (a-c).

⁴⁴ S 13(2).

In the exercise of the functions of the MMO, section 14 of the 2009 Act provides that the secretary of state may enter into an agreement with MMO to perform any marine function of the secretary of state either in the UK marine area or in relation to specified parts of that area as stated in the agreement.

In addition, the MMO with the approval of the secretary of state can enter into an agreement with an eligible body authorizing the body to perform any functions of the MMO in relation to the UK marine area or specified part of the area.⁴⁵ The 'eligible bodies' means: (a) Natural England (b) The Environment Agency (c) Any Harbour Authority,⁴⁶ The MMO under the 2009 Act is empowered to bring criminal proceedings in England, Wales or Northern Ireland against offenders. The proceedings can relate to recovery of any monetary penalty imposed under the Act. The MMO may also continue the prosecution commenced by the secretary of state for an offence under the Fisheries legislations specified in sections 2 and 3 of the Fisheries Regulations.⁴⁷ The UK marine areas are:

- a) The area of sea within the seaward limits of the Territorial Sea adjacent to the United Kingdom.
- b) Any area of the sea within the limit of the Exclusive Economic Zone
- c) The area of sea within the limits of the UK sector of the Continental Shelf,⁴⁸

The 2009 Act is a comprehensive document that would have wielded the same character as the UNCLOS.

Apart from the rich provisions made by the Marine and Coastal Access Act of 2009 to protect the UK marine environment, the UK Government in order to sustain the marine ecosystem came up with a policy framework called the National Action Plan to Safeguard the Marine Environment from Continued Pollution. One of these excellent moves made by UK government to protect marine environment is called 'UK Marine Strategy.' This strategy Provide the frame work for accessing and taking measures to achieve and maintain Good Environmental Status (GES) in UK seas.⁴⁹ Its aim is directed at the protection of biodiversity, marine environment descriptors which include marine litter, underwater noise, eutrophication, sea floor integrity.⁵⁰ At present, the United Kingdom is formulating a pact which objectives is to transform the UK plastic packaging sector by meeting four leading targets which targets are:

- a) 100% of plastic packaging to be reusable, recyclable or compostable
- b) 70% of plastic packaging effectively recycled or composed
- c) eliminate problematic single use items
- d) 30% average recycled content across all packaging.⁵¹

The UK has evolved what is called voluntary measures responsible fishing standard. It is a scheme developed by sea fish (the public body supporting the sea food industry in UK) and global seafood assurance, which encourages ideal waste management that helps to prevent marine litter. It replaced Responsible Fishing Scheme.⁵² The UK also supported a non- governmental organization and project like fishing for litter, marine conservation society and global ghost gear initiative. The Fishing for Litter is a voluntary unpaid litter by catch removal scheme by commercial fishermen run by KIMO. It provides fishing boats with bags to dispose marine generated litters gathered during normal fishing operations.⁵³ The UK signed up to the Global Ghost Gear Initiative (GGGI) and Food and Agriculture Organization in 2017. The GGGI is the stakeholder alliance of the world-renowned experts and pioneering alliance of the fishing industry, private companies, NGOs and government working to solve the challenge of Abandoned, Lost and Discarded Fishing Gear (ALDFG) problem.⁵⁴

⁴⁵S 15(1)(a).

⁴⁶ S 16(1)(a)-(e).

⁴⁷ S 30.

⁴⁸ S 42 of 2009 Act.

⁴⁹ The United Kingdom Action and Progress on Marine Plastic Litter: Towards Osaka Blue Ocean Vision, G20 Implementation Frame work for Action on Marine Plastic Litter<g20mpl.org/partners/UnitedKingdom>accessed 28 July 2022.

⁵⁰UK Marine Online Assessment Tool, 'Introduction to UK Marine Strategy'<<https://most.cefas.co.uk/introduction-to-uk-marine-strategy/>> accessed 28 July 2022.

⁵¹The United Kingdom Act and Progress on Marine Plastic Litter, *ibid*.

⁵² *Ibid*.

⁵³KIMO, 'Fishing for Litter' <www.kimointernational.org/fishing-for-litter> accessed 3 August 2022.

⁵⁴ Global Ghost Gear Initiative, 'Protecting Our Oceans and the Life within Them' <www.ghostgear.org> accessed 3 August 2022.

The UK 2021 G7 have committed to set up international action to tackle ghost gear which has a significant direct impact on marine lives. The UK is a signatory to the G7 5-year Bologna Roadmap (2017) which highlights the need to address plastic leakage into the marine environment.⁵⁵ The act demands members to acknowledge the socio- economic benefits of marine litter prevention and reduction measures, interns of employment generation, tourism development, sustainable fisheries, waste and waste water management and other areas. The UK is keyed to the export development of the G20 action plan on marine litter. The plan provides a framework to local, national and regional action to reduce, prevent and eliminate littering of the marine eco system. Under the 2019 Osaka Blue Ocean Vision G20, UK has the commitment to reduce further pollution of the ocean by plastic litter to zero by 2050 via a comprehensive life-cycle approach⁵⁶improved waste control management and innovative solutions. The need was re-emphasized and re-affirmed in 2020 at the 2020 G20 Riyadh summit.⁵⁷

Lesson for Nigeria

Unlike the United Kingdom that has laudable and robust laws, strategies, policies and programmes aimed at protecting the marine environment from Pollution of Plastics, Nigeria does not have plastic control and management laws. Currently, the Women in Logistics and Transport (WILAT) has raised the alarm on the threat to oceans and aquatic lives calling for proper disposal and recycling of plastic wastes to protect the marine, having in mind the United Nations estimate of approximately 5.25 million plastic debris weighing 268,940 tonnes currently floating in the world oceans.⁵⁸ Again, the Regulation of marine activities in Nigeria should be made the function of a specific constituted body order than the Agencies as recommended by the NESREA Act, NOSDRA Act and NIMASA Act. These intertwine bodies have created more of clash in their roles than assurance of positive objectives. The United Kingdom in order to avoid the same clash of function, transferred the functions of management of ocean activities to the Marine Management Organization (MMO) by virtue of the Marine and Coastal Access Act, 2009. The Act also consolidated the Sea Fish (Conservation) Act, 1967, Sea Fisheries (Wildlife Conservation) Act 1992, Electricity Act 1998 and Energy Act, 2004 to avoid fragmentation of legislations on the same subject like the Nigeria case.

3.3. Chile

Chile has total land area of 291,932 sq mile (756,102 sq.km)⁵⁹. It is located in South America Western edge and its capital is Santiago with the population of 18, 430,408 million.⁶⁰ Republic of Chile has an estimated 6400km (4000 mile) of Pacific Ocean coastline.⁶¹ Unlike Nigeria, the Republic of Chile has a total of 165 protected areas of which 145 are terrestrial and the remaining 20 are in the ocean (i.e. Marine Protected Areas).The 145 Protected Areas created in Chile covers 151,465 km or 19.5% of the Country and among them 84 (58%, 120, 660 km²) have a management plan while about 99.9% of the MPAs surface area, corresponding to (MPAs, MPs, and NSs) are not linked to a management plan.⁶² The 20 MPAs in Chile's ocean represents above 463,000km² (13.6% of the Chilean EEZ) and it includes; Coastal Marine Protected Area (CMPAs), Marine Parks (MPs), Marine Reserves (MRs), Native Sanctuaries (NSs) and All Marine Reserve (La Rinconada; Isla

⁵⁵The Joint Statement of the G7 Environment Hosted in Bologna- The G7 Environment Ministers discussed the 3030 Agenda, Climate, Marine Litter, Food Easter, and More, Published in G7 in US on 12 January 2017<medium.com/ g7inus/the-joint-statement-of-the-g7-environment-hosted-in-bologna-60287158ec05>accessed 3 August 2022.

⁵⁶F S Robert et al, 'Policy Options to Eliminate Additional Marine Plastic Litter by 2050 Under the G20 Osaka Blue Ocean Vision' (Report of the International Resources Panel: United Nations Environment Program, Nairobi, Kenya 2021) <www.resourcespanel.org/reports/policy.options-eliminate-additional-marine-plastic-litter> accessed 3 August 2022.

⁵⁷S Lopez et al, '2020 G20 Riyadh Summit Goals Set and Met' *G20 Research Group* (University of Toronto, Munk school of global Affairs and Public Policy 23 November 2020) 45.

⁵⁸S Salai, 'Nigeria Needs Law Regulating Use of Plastic. Protect Oceans' *The Guardian News* (Nigeria, 19 June 2019) <https://www.guardian.ng/business.services/nigeria-needs-law-regulating-use-of-plastic-protect-oceans/> accessed 29 July 2022.

⁵⁹Infoplease, 'Chile: Facts and Information' <https://www.infoplease.com/countries/chile> accessed 18 August 2021.

⁶⁰PW Drake, 'Chile' <https://www.britannica.com/place/chile> accessed 1 November 2022.

⁶¹M Wei-Haas, 'Chile Announces Protections for Massive Swath of Ocean With New Marine Parks' *Smithsonian Magazine* (27 February 2018) <https://www.smithsonianmag.com/science-nature/chile-protects-massive-swath-ocean-new-marine-parks-180968275/>accessed 18 August 2022.

⁶²IJ Petit et al, 'Protected Area in Chile: Are we Managing Them?' [2018] (91) (1) *Revista Chilena de Historian Natural*: 91<https://www.revchilhistnat.biomedcentral.com/ article/10.1186/s40693-018-0071-z>accessed 18 August 2022.

Chantal' Isla Choros- Dana's', 'Pullinque' and 'Putemun') Chile has the following Protected Areas and Natural Sanctuaries amongst others:

- i. Laguna Con Chali located in IV Region (Losviles) established 2000 and is covering an area of 0.509 km² and the conservation goals are salt marsh and dunes, high diversity of Migratory birds.
- ii. Isla de Salas Y Gomez located in V Region and established in 1976 and covering an area approximately 2.5 km² and it's conservative goals are geared toward protecting high diversity of subtropical, oceanic species of the South Eastern Pacific especially, fish (tuna, sword fish, sharks): high diversity of marine birds and no permanent human settlement.
- iii. There is the Islote Pena Blanca Oceanic Rocks Campo, Dinar de la Punta de Concon located in V Region (Algarrobo) Vina del Mar and Concon established in 1982, 1990 and 1993, respectively, and aimed at protecting migratory birds, fishes and invertebrates including octopus.⁶³

Others Chilean marine protected areas are the 1.1 million km² Marae Moana: Cook Islands Marine Park established in 2012, the 1.3 million km² Parc Naturel de la mer de Corail established in 2014 and the 2015 500,000 km² Palau Natural Marine Sanctuary. In the same vein, the Motu Motiro Hiva Marine Park covering 150,000 km² created in 2010 and in 2016 the Nazca-Desventuradas marine Park covering 300,035 km² was established. The newly protected waters around the Desventuradas Islands contain many marine species found nowhere else on earth.⁶⁴ During the recent International Marine Protected Area Congress (IMPAC4 2017) in Chile, the Chilean government through the then President Michelle Bachelet signed into law protection for nearly 450, 000 square miles of water, an area estimated the size of West Virginia, Texas and California put together.⁶⁵ The new Marine Parks in Patagonia created by the government of Chile (most times through the National Environmental Agency Commission-Nacional de Medio Ambiente [CONAMA]) are divided into three regions and the largest of the three regions is the Rapa Nui Marine Protected Area (MPA). Industrial fishing and mining are prohibited while traditional fishing are allowed.⁶⁶ The area covers about 278,000 square miles. It protects more than 140 native species and 27 are threatened or endangered.⁶⁷ The peculiarity of this MPA is that it is one of the few Marine Protected Areas globally in which indigenous people had a hand-and a vote- in establishing the boundaries and level of protection.⁶⁸

The second largest of the region is the Juan Fernandez Archipelago Island about 101,000 square miles and found in some 400 square miles offshore Santiago. In this region no fishing or extraction of resources are allowed and because of this restrictions, great percentage of the native species abounds in this region.⁶⁹ The third region is estimated to cover about 55,600 square miles of fully protected waters within the Kelp Forests of Diego Ramirez Island,⁷⁰ otherwise called the Diego Ramirez-Drake Passage Marine Park and it is the 25th Marine Protected Area and seventh established in Chilean Patagonia where up to 14.2 million hectares (35 million acres) have been safeguarded.⁷¹ The region serves as a refuge for endangered species such as the gray-headed albatross, the black-browed albatross, the southern rock hopper penguin, and the macaroni penguin. It is also a migration route for whales and other cetaceans.⁷² To ensure the sustainability of the MPA, the Pew Charitable Trusts is created with the commitment to protect the marine area through the Omora Foundation which duty is to finance and ensure proper communication networks.⁷³ For purposes of the records, the Agencies that administered the MPAs in Chile before were: the Ministry of Defence, the Ministry of Economy, the Ministry of Agriculture, and the Ministry of Education. They were the primary agencies that used legal

⁶³ M Fernandez & J C Castillo, 'Marine Conservation in Chile: Historical Perspective, Lesson and Challenges'[2005] (19) (6) *Conservation Biology*, 1757

⁶⁴JJ Lee, 'Chile create Largest Marine Reserve in the Americas' *National Geographic* (6 October 2015) <<https://www.nationalgeographic.com/science/151005-desventuradas-islands-marine-protected-area-conservation-science>>accessed 18 August 2022.

⁶⁵M Wei-Haas, 'Chile Announces Protections for Massive Swath of Ocean With Three New Marine Parks' *Smithsonian Magazine* (27 February 2018), *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*

⁶⁸ *Ibid.*

⁶⁹ *Ibid.*

⁷⁰BBC News, 'Chile Create Law to Protect It's Ocean Habitat' *BBC News* (10 March 2018) <www.bbc.com/news/world-latin-america-43354623> accessed 18 August 2023.

⁷¹ Francisco Solis Germanic, 'Chile Announces New Marine Protected Area' (PEW 22 January 2019) <<https://www.pewtrusts.org/en/research-and-analysis/article/2019/01/22/chile-announces-new-marine-protected-area>>accessed 16 August 2022.

⁷² *Ibid.*

⁷³ *Ibid.*

instrument to protect the marine environment in Chile. The sea and seafloor administration fell within the navy jurisdiction, but today more concessions have been assigned to private institutions such as Fisheries Association, Universities and Industrial Companies usually for renewable period of 5 years for purposes of marine research and coastal systems.⁷⁴ Marine concessions assigned to Chilean universities or private companies are;

- i. Montemar Mehum is a marine concession assigned to the University of Valparacso and it is established in 1941 and has an area of 0.013km² and it is meant for research.
- ii. Mehuin is another marine concession and the Organization in which it is assigned is Universidad Austral established in 1978 and it is used for purposes of research.
- iii. Las cruces is organized by Pontificia Universidad Catholics de Chile. It was established on 1982 with an area of 0.048km² and meant for the use of research and preservation of marine biodiversity.⁷⁵

The current practical steps taken by Chile government to sustain the MPAs include:

1. Move to establishment of High Sea Marine Protected Area. Currently, Chile has 41% of its waters now covered by Marine Protected Area (MPAs), yet it has proposed the creation of a High Seas Marine Protected Area (MPAs) on the Salas and Gomez and Nazca Ridges which are two underwater mountain chains that stretch 2,900 kilometers across the South-eastern Pacific and houses some of the ocean's greatest biodiversity. The idea for this new High Sea Marine Protected Area off South America was muted by President Sebastian Pinera at the virtual climate summit held by US President Joe Biden in April 2021. The President in his view said it is not sufficient to protect National Waters (ie the EEZ), particularly considering the Universal call to protect 30% of the ocean by 2030.⁷⁶ It is clear that less than 1% of the high seas are protected by MPAs, and consequent upon that, a global treaty for the high seas are currently being negotiated under the UN Convention on the Law of the Sea (UNCLOS).⁷⁷

2. Chile Rejected Iron Mining to Protect Penguins: In 2017, a Chilean company called Andes Iron wanted to extract millions of tonnes of iron in the Northern Coquimbo regions as well as building another park, it was discovered that the project did not provide sufficient environmental guarantee. The Chilean government rejected plans for the billion-dollar mining project because it was suspected to disrupt sea life, including endangered penguins.⁷⁸

3. Another bold step taken by Chilean government to protect MPAs is that the government rejected what would have been the biggest energy project in the country's history. The project was to be built by HidroAysen. The project was a hydroelectricity dam. According to Chilean Environment Minister Pablo Badenier, thousands of people had protested against the Hidro Ayden project because Hidro Ayden made insufficient Provisions for those who would have been displaced and the qualification of damage to the environment and wildlife were inadequate,⁷⁹ and the project would have been five huge dams built on two rivers in a beautiful park of Patagonia.⁸⁰ The eleven natural Sanctuaries of the 27 existing in Chile were created to protect marine species or coastal habitats.⁸¹

4. Chile banned the use of single use Plastic. According to the Chilean Environment Minister, Marcelo Fernandez, 'the country produces 23,000 tons of single- use plastic and polystyrene (styrofoam) waste per year. Chile in addition, uses 3.4 billion Plastic bags in a year which is equivalent to one person using about 200 Plastic bags annually.⁸² Conversely, Nigeria is still backward as it neither has MPAs nor a plastic management law to protect its marine environment just like the Chilean government has done in the recent past.

⁷⁴ M Fernandez and JC Castillo, 'Marine Conservation in Chile: Historical Perspective, Lessons, and Challenges' [2005] (19) (6) *Society for Conservation Biology*, 1756.

⁷⁵ *Ibid* 1758.

⁷⁶ 'Chile Proposes High- Seas Marine Protected Area off South America' The Maritime Executive Mediakit (Fermin Loop 6 June 2021) <www.maritime-executive.com/editorials/Chile-proposes-high-seas-marine-protected-area-off-south-america> accessed 18 August 2022.

⁷⁷ *Ibid*

⁷⁸ BBC News, 'Chile Rejects Iron Mine to Protect Penguins' *BBC News* (22 August 2017) <www.bbc.com/news/world-latin-america-41007462> accessed 18 August 2022.

⁷⁹ BBC News, 'Chile Rejects Huge Hydroelectric Project in Patagonia' *BBC News* (10 June 2014) <www.bbc.com/news/world-latin-america-27788286> accessed 28 August 2022.

⁸⁰ *Ibid*.

⁸¹ M Fernandez & JC Castillo, 'Marine Conservation in Chile: Historical Perspective, Lessons and Challenges' *Ibid*.

⁸² J Ettinger, 'Chile's New Single- Use Plastic Ban sets a New Bar for Global Waste Initiatives' (16 February 2022) <www.greenqueen.com.hk/chiles-plastic.ban/> accessed on 20 August 2022.

4. Conclusion and Recommendations

Nigeria does not have Marine Protected Areas (MPAs) and a national regulation on plastic waste management. These inadequacies have caused series of degradations to the entire Nigerian marine estate because of lack of reserved marine areas and at present, the entire coastline has been heavily polluted with used plastics. It is therefore recommended that government should designate some areas as Marine Protected Areas (MPA). The MPAs will act as no-take areas for marine lives, breeding areas for marine animals and covering for endangered species and migratory marine life. It will also act as tourist attractions. The MPAs created, should be conceded to private institutions or organization to manage for purpose of research and longtime sustainability as done in South Africa, United State and Chile. The National Assembly should enact Plastic Management Law to control and regulate the use of plastic which now is the world's greatest concern as the used plastics are finding their ways into the seas through winds and runoff. Finally, the article recommends that Nigerian laws on marine protection be consolidated and also there should be clearly defined roles for the different Agencies (NESREA, NOSDRA and NIMASA) for efficient management of the marine environment.