

AFRICA'S BLUE ECONOMY: THE OPPORTUNITIES AND CHALLENGES

Deborah Fredrick Emawodia*

Maritime spaces, earth's "blue gold" are highly prized, in that the most precious and essential commodity fundamental to all aspects of drinking, eating, maintaining hygiene, promoting population health, preservation of most ecosystems and crucial to a safe and long lasting environment are dependent on it.

Not only does it maintain social stability and environmental sustainability, but also fosters economic development across civilizations as statistics show that shipping accounts for about 90% of international trade in goods. In view of the major role which maritime commerce and activities play in the global economy, Africa as a continent is endowed with a vast coastline as well as navigable inland waterways and is strategically placed on the Atlantic coast of the world to reap a bountiful reward from its maritime industry in promoting interregional and international trade of its maritime resources.

Maintaining that the maritime space is rife with economic and development opportunities is stating the obvious given that offshore areas represent a well-established and increasingly important source of non-living resources such as hydrocarbons and on a global scale gas hydrates locked in the seabed have been estimated to contain twice the carbon in all known coal, oil and natural gas¹.

Oil and gas reserves do not constitute the only minerals that can be extracted from the seabed. Indeed, the seafloor has long been the source of valuable resources such as aggregates for building construction and land reclamation, efforts to exploit other seabed resources such as deposits in marine sediments, including resources such as diamonds and both base metals (such as tin) and precious metals (such as gold and platinum), exploration efforts for diamonds, for example, are taking place in progressively deeper waters. For example, diamond mining company De Beers undertakes sea floor mining operations off the Namibian coast in waters, exploitation of sea floor massive sulphide deposits in the Bismarck Sea off Papua New Guinea².

*Deborah Fredrick Emawodia, LL.B (Hons); B.L., LLM. (Hull)

¹ William Dillon, Gas(Methane)Hydrates-A New Frontier, US GEOLOGICAL SURVEY(Jan.9,2013), <http://marine.usgs.gov/fact-sheets/gas-hydrates/title.html>.

² Clive H. Schofield, *Departures from the Coast: Trends in the Application of Territorial Sea Baselines under the Law of the Sea Convention*, **27 INT'L J. MARINE & COASTAL L. 723 (2013)**.

In addition to mineral and other non-living resources contained in the seabed and subsoil of the outer continental shelf, sedentary living resources of the outer continental shelf, including marine genetic resources, may also prove to have considerable value. Marine biota (plants and animals) represent a relatively untapped resource offering developmental potential for a range of valuable applications. Perhaps the best known of these applications are in the medical and pharmaceuticals industries where so called "wonder drugs" from the sea have been heralded. Marine biotechnology-related products were estimated to be worth **\$100 billion (USD)** in the year 2000 alone³. Despite the enormous economic, social and health opportunities derived from the marine space, it is fraught with different challenges.

This paper brings to fore the challenges of the maritime space noticeably: the problem of **Piracy**, Pollution, the unknown impacts of new resource activities on the marine environment, especially of unknown or unexplored remote and deep water areas, the **Rising Sea Level (SLR)**⁴, **The shortcomings of relevant international laws and the absence of effective enforcement in Africa**, uncertainties over the extent of **maritime jurisdictional rights** and attendant **maritime boundary disputes**.

The paper does not boast of a panacea to the numerous challenges hampering utmost utility of the diverse opportunities locked in the marine space but argues that proper and effective management of the various challenges will ensure that African states not only tap into the various opportunities of the maritime space but will also delve into the untapped resources and exportation of products to international markets by sea where they are sold and foreign currency which could yield tens of billions of dollars in earnings potentially increasing gross domestic products and ensuring the continent's developmental objectives.

³ Joanna Mossop, *Protecting Marine Biodiversity on the Continental Shelf Beyond 200 Nautical Miles*, **38 OCEAN DEV. & INT'L L. 283, 283-85 (2007)**

⁴ **Nijhoff Brill**, *Rising Seas, Receding Coastlines, and Vanishing Maritime Estates and Territories: Possible Solutions and Reassessing the Role of International Law* **INTERNATIONAL COMMUNITY LAW REVIEW 16 (2014) 38-74**

ECONOMIC OPPORTUNITIES

The African continent is endowed with a vast coastline as well as navigable in land waterways and is strategically placed on the Atlantic coast of the world for it to reap a bountiful reward from its maritime industry in promoting inter regional and international trade. If its maritime resources are properly harnessed, there is the possibility of generating lots of money from marine biodiversity which has vast potential markets in such industries as the pharmaceutical, waste treatment, food processing, oil-well services and paper processing industries⁵. It also holds the potential to offer a range of other mineral resources, which are increasingly being exploited such as oil and gas and gas hydrates.

Gas Hydrates- a nontraditional form of sealed hydrocarbons occur in and below areas of thick perma frost on shore or alternatively, off shore in the marine sediments deeper than 500m⁶. On a global scale, gas hydrates locked in the seabed have been estimated to contain twice the carbon in all known coal, oil and natural gas resources⁷. This means that gas hydrates represent the most abundant grade of unconventional natural gas in the world, larger than all the other grades of gases.⁸ They are particularly attractive as potential energy resource, not only because of the abundance, but also because they can deliver substantial energy with more limited release of greenhouse gas emissions than traditional energy carriers⁹. Approximately, one third of global crude oil is located off shore¹⁰ and it has been suggested that offshore fields accounted for 32% of worldwide crude production in 2009, with this figure projected to rise to 34% by 2025.¹¹

Other non-living resources reputed to be discovered in the oceans include hydrocarbons, construction aggregates and said minerals in placer deposits such as

⁵ Joanna Mossop, 'Protecting Marine Biodiversity On The Continental Shelf Beyond 200 Nautical Miles' (2007) 38 *Ocean Development & International Law* 283

⁶ Jill Marlelle-De Silva & Richard Dawe, 'Towards Commercial Gas production from Hydrate Deposits' (2011) 4 *ENERGIES* 215 <<http://www.mdpi.com/1996-1073/4/2/215/Odf>> Accessed 20th July, 2017.

⁷ William Dillion 'Gas (methane)Hydrates-A New frontier' (2013) US GEOLOGICAL SURVEY (Jan 9,2013)<<http://marine.usgs.gov/fact-sheets/gas-hydrates/title.html>> Accessed 20th July, 2017

⁸ combined Nick A. Owen & Clive H. Schofield, 'Disputed South China Sea Hydrocarbons In Perspective' (2012)36 *Marine Policy* 809

⁹ Ibid Dillion at note3

¹⁰ INT'L ENERGY AGENCY (IEA) *WORLD ENERGY OUTLOOK*, 2010,3 (2010), available at <<http://www.worldenergyoutlook.org/media/weo2010.pdf>> Accessed 20th July, 2017

¹¹ IOC/UNESCO, IMO, FAO, UNDP, *A Blueprint for ocean and coastal sustainability*, Paris: IOC/UNESCO, 10(2011) <Http://www.unesco.org/newfileadmin/MULTIMEDIA/HQ/SC/Pdf/interagency-blue_paper-ocean-rioplus_20.pdf> Accessed 20th July, 2017

diamonds, gold and ilmenite; and industrial chemicals such as sulphur and phosphate. Further, it has been estimated that the Clarion Clipperton Zone (Atlantic Zone) alone holds more than 27 billion tonnes of Nodules containing of the order of 7 billion tonnes of Manganese, 340 million tonnes of Nickel, 290 million tonnes of Copper and 78 million tonnes of Cobalt as well as rare earths needed for the production of many hi-tech product such as smart phones.¹² Indeed, marine biotechnology related products are so commercially viable that in the year 2000 alone, it was estimated to be worth \$100 billion (USD).¹³

Though it is a known fact that precious metals, such as gold, platinum tin and resources such as diamonds are being explored in progressively deeper waters¹⁴ in the coastal states of Africa. The oceans are indeed biodiversity rich, yet under-explored as about 1,000 new marine natural products are reported annually.¹⁵ It is obvious that new resource opportunities exist and it will be increasingly feasible to take these opportunities up as exploration and exploitation technologies advance and energy and mineral commodity pieces escalate.

In addition to the rich deposit of bio-diversity and non-living resources which the oceans are rift of, statistics show that shipping, accounts for about 90%¹⁶ of international trade in goods. In view of this major role played by maritime commerce and activities in the global economy, it is in the interests of governments, ship owners and seafarers that the transportation of people and goods by sea be facilitated as much as possible.

This paper posits that Africans in coastal states should rise up and embrace investment in the shipping sector through owning of ships for transportation and charter purposes; building of ships for sales and personal commercial use; rendering services of maintaining ships; dissecting and trading the spares of wrecked ships.

¹² David Shukman, 'Deep Sea mining 'gold rush' moves closer' BBC News (May 17, 2013), <<http://www.bbc.co.uk/news/science-environment-225468757>> Accessed 19th July, 2017

¹³ Joanna Mossop, 'protecting Marine Biodiversity on the continental shelf beyond 200 Nautical miles (2007) 38 OCEAN DEV. & INT'L.L 283

¹⁴ For example, diamond mining company De Beers undertakes the Sea floor mining operations off the Namibian Coast in waters of 90-140m depth Marine Mining, DE BEERS, <http://www.debeersgroup.cpm/operations/mining/mining-methods_marine_mining/> Accessed 19th July, 2017

¹⁵ Danielle Skropeta, 'Exploring Marine Resources for New Pharmaceutical Applications' (2011) 211 Marine Resources Management.

¹⁶ Omogbai Omo-Eboh, 'Maritime Law Reforms The Interface Between International Law And Nigerian Law' (2012) 11 International Journal Of Legislative Drafting And Law Reform And Contributors 175.

SOCIAL STABILITY AND ENVIRONMENTAL SUSTAINABILITY

The maritime spaces, the earth's 'blue gold' or Africa's 'blue economy' consist of water or what we call the sea; which is the most precious and essential commodity for survival on the planet earth. Marine spaces ensure and provide earth with the water necessary for life. It is not wrong to say that it is the earth's most precious and essential commodity, in that it is fundamental to all aspects of drinking, eating, maintaining hygiene and promoting population health. Trans-boundary rivers are shared in such a way that allows each riparian state a realistic opportunity to make an equitable and reasonable utilization of this water. For instance, the Okavango River, which is shared among three African countries: Angola, Namibia and Botswana. While Namibia, views the river as the only dependable source of water for the avid central part of the country where her population is concentrated, Botswana depends on the flow, for both existing and planned agriculture. But the river's primary function is to sustain a vibrant ecosystem and attendant tourism industry in the spectacular wild life rich Okavango Delta, the largest convention wetlands in the world.¹⁷

The marine space guarantees water to satisfy basic human needs and to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resources. This is especially possible by trans-boundary rivers being shared in such a way that allows each riparian state a realistic opportunity to make an equitable and reasonable utilization of this water. Upstream states do not have an absolute right to control and use all the water that originates in their territories, and downstream states do not have the corresponding right to block upstream development by demanding the unimpeded flow of a river into their territories.¹⁸

Better ecosystem management, more efficient river services such as hydroelectric power is evidence of social and environmental stability of the seas. As hydropower is a crucial energy source for all basin states, over half of them get more than 90% of their electricity from hydropower, while others are 70%¹⁹ dependent on hydro. This is the

¹⁷(A. Dan Tarlock, 'Four Challenges for international water Law' (2009) 23 Tul. Envtl Law Journal 369

¹⁸ Stephen S. Mac Caffrey, *The law of international water courses: Non-Navigational uses* (2nd ed. 2007

¹⁹ A. Dan Tarlock & Patricia Wonters, 'Are Shared Benefits Of International Waters An Equitable Apportionment?' (2007) 18 Colo.J. Int'l Envtl .L & POL'Y 523

case in the Nile basin where Egypt dammed the Nile to generate energy and to replace seasonable with perennial irrigation for cotton production in the delta.

DEVELOPMENTAL OPPORTUNITIES

There is a spectacular growth of the oil and gas sector which has been predicted to contain global capital expenditure on deep water developments forecast, at \$232 billion (USD) over the 2012-2016 periods²⁰. It is of interest to know that the best known and most advanced project to date is that related to the exploitation of sea floor massive sulphide deposits in the Bismarck sea off Papua New Guinea. Papua New Guinea granted the world's first deep sea mining lease to Nautilus Minerals inc. for the development of the solwara1 project in 2011²¹ in Africa.

The continent is so rich in natural resources and agricultural produce that most of these products are exported to international markets outside Africa by sea, where they are sold and foreign currencies earned to ensure the continent's developmental objectives.

Thus, the coastal states of Africa should look to our maritime domain as a vast and virtually unexplored area with enormous potentials to play a key role in helping the continent realize its true development capacity²² given that most of international trading is done through shipping, and trade is a central consideration in economic development and an instrument of development. It follows therefore, that most of the international trade regime can be viewed as instruments of development.

SEA LEVEL RISE (SLR)

One of the challenges of mankind in regards to the use of Marine space is the problem of climate change which includes (SLR) Sea Level Rise.

²⁰Jennifer Harbour, 'World Deep Water Market Report' (2012-2016), 239 PIPELINE & GAS J. No. 6, at 89

²¹ Mohammed Bashir, 'Deep Sea Mining Lease Granted, The POST-COURIER' (2011) JAN 19, 2011
<<http://www.postcourier.com.py/20110119/New03.htm>> see also Seafloor, Gold and Copper Exploration, NAUTILUS MINERALS, <<http://www.nautilusminerals.com/s/home.usp>> Accessed 19th July, 2017

²² A statement by Ambassador John K. Shnikaiye, the Chief of Staff of African Union Commission in his Closing Remarks at the 2010 Africa Maritime Safety and Security Conference.
<<http://www.au.int/pages/maritime/events/2010-africa-maritime-safety-and-security-towards-economic-prosperity-conference>> Accessed 19th July.2017

Concentration of heat-trapping greenhouse gases (GHGS) in the atmosphere has risen several times over,²³ upsetting the carbon cycle equilibrium.²⁴ This enhanced greenhouse effect can produce far-reaching and unpredictable climate changes that can alter hydrological, coastal, marine, forest and agricultural regimes replacing them with new assemblies.²⁵ As far as the seas are concerned, climate change impacts translate into the thermal expansion of the waters, and increasing temperatures will also melt more glacial and polar ice sheets, pushing up water levels still further.²⁶

Already, in several parts of the world, sea level rise is inundating coastal lands and infrastructures, while coasted aquifers are increasingly turning saline²⁷. In Africa, coastal states such as Egypt, Gambia and Angola²⁸ are most vulnerable to SLR.

The swallowing of land by oceans has grave consequences given that the sea has consumed many cities over the course of human history, and such scenario appears ready to replay, as coastal states may lose land and infrastructures as well as inhabitants. For small island states, this could spell the end of their existence, as climate change induced SLR threatens to redraw the geographical map of the world.²⁹

This paper argues that international law as it currently stands is inadequate to respond to the challenge of SLR, and opines that new rules may therefore have to be drafted and enacted to ensure that the rights of disappearing states are protected.

In addition to the above, coastal states should proceed in a state of inaction or maintain status quo. In such a scenario the seas would slowly move in and determine the equilibrium; this will save countries the trouble of diverting scarce economic resources

²³ R.T. Piwrethumbert, 'Climate Change: A catastrophe in Slow Motion' (2006), 6(2) Chicago Journal of International Law 573

²⁴ Christiana K. Harper, 'Climate Change And Tax Policy' (2007)30 (2) Boston College International & Comparative Law Review 411

²⁵ J.B Ruhl, 'Climate change and the Endangered species Act: Building Bridges to the No-Analog future (2008) 88(1) Boston University Law Review 1

²⁶ NASA, 'Arctic Sea Ice Shrinks To New Low In Satellite Era' 26 August 2012, <<http://www.nasa.gov/topics/earth/features/arctic-seake-2012.html>>accessed 19th July, 2017

²⁷ Tony George Puthucherril, 'Rising Seas, Receding Coastlines And Vanishing Maritime Estates And Territories: Possible Solutions And Reassessing The Role Of International Law' (2014) 16 International Community Law Review 38-74.

²⁸ Angola's initial National Communication to the United Framework Convention on Climate Change under the United Nations Framework Convention on Climate Change p 77, <<http://www.unfccc.int/resource/docs/natc/angora.pdf>>accessed 19th July, 2017; A. Tsyban; J. Everett and M. Perdomo, 'World Oceans and Coastal Zones: Ecological Effects' in W.J. MCG Tegart and G.W. Sheldon (eds), Climate Change 1992 (The Supplementary Report To The IPCC Impacts Assessments 1993) Pp.85,90.

²⁹ Richard J. Nicholls & Poh Poh Wong, 'Coastal Systems And Low Lying Areas' in M.L. Parry et al (eds), Climate Change 2007: Impacts, Adaptation and Vulnerability(Contribution Of Working Group11 To The Fourth Assessment Report Of The Intergovernmental Panel On Climate Change 2007)P.317.

and spending huge amounts of money constructing costly barriers to the sea. Even if mitigation were to take place, it will be at least a century before any benefits are realized, thus another option for nations and water managers is to adapt to the inevitable changes that are already manifesting themselves and this is done through high degree of cooperative management among riparian nations.

PIRACY

The United Nations Convention on the Laws of the Sea (UNCLOS) defines piracy as:

*"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... And directed... on the high seas, against another ship... or against persons or property on board such ship".*³⁰

This paper has a little concern with the above definition as those who finance, plan, organize, or unlawfully profit from piracy do not necessarily do so on the high seas. Most incidents of piracy occur within territorial waters around ports and heavily travelled shipping routes that lack proper law enforcement.

Having said the above, this paper aligns itself with the definition of piracy by International Maritime Bureau (IMB), "Piracy is an act of boarding or attempting to board any ship with the apparent intent to commit theft or any other crime and with the apparent intent or capability to use force in furtherance of the act".³¹

One of the greatest challenges of the high sea is piracy. The challenge posed by this, particularly off the coast of Somalia and Nigeria³² has assumed serious proportions that have to deal with security, political, legal, social, economic and even human rights dimensions and consequences. For example, Somalia pirates are well armed with access to a wide assortment of combat weaponry, including assault rifles, heavy and light machine guns, anti-ship ordinance and rocket propelled grenades (RPHS); most of these arms are proceed from illegal bazaars in Somalia, Ethiopia and Sudan where

³⁰UNCLOS- United Nation Convention on the Law of the sea (UNCLOS) art.101, Dec. 10, 1982,

³¹This conceptualization is used by the International Maritime Bureau (IMB) and is wider than the one adopted under the 1982 United Nations Convention on the Law of the Seas (UNCLOS) which restricts its focus exclusively to attacks that take place on the high sea.

³² International Chamber of Commerce Int'l Mar Bureau Piracy and Armed Robbery Against Ships: Annual Report I Jan-Dec.2008 5-6 (2009)

munitions are both plentiful and relatively cheap³³. It is so challenging that in year 2009 alone; pirates attacked 217 ships, with 47 successful hijackings and extorted \$60 (USD) million in ransom.³⁴ If the above figure is compared with data released by the International Maritime Bureau, an organ of the international chamber of commerce, in year 2011, it follows that in that year alone; there were a total of 243 incidents of maritime piracy attacks and 26 hijackings worldwide. Somalia pirates were responsible for 154 of these attacks and for 21 hijackings and currently hold 23 vessels and 439 seafarers and tourists hostage.³⁵

Despite the above instance, the true statistics of piracy incidents remain unknown because many shipping companies do not report piracy incidents for fear of rising insurance premiums and protracted time-consuming investigations.³⁶

As territorial piracy in the coastal states of Africa becomes a huge problem both domestically and internationally, international laws have effectively highlighted the problem of piracy on the high sea³⁷. The international civilian maritime community has come up with a wide range of solution to enhance the security of navigation through dangerous waters, such as Automatics identification systems (AIS) for merchant shipping, over 3000 gross tonnage³⁸.

Managing this particular manifestation of transnational crime will require a response by the international community that goes well beyond the militaristic actions currently being witnessed off the horn of Africa. First, greater focus should be given to boosting the coasted monitoring and interdiction capabilities of littoral states abutting pirate infested waters. Provision of surveillance assets, training and technical support by major flag states would be a good start.

Secondly, increased support should be given to nascent sub-regional arrangements that have been instituted to deal with piracy. One promising initiative is the Djibouti code of

³³ Michael Gagain, 'Neglected Waters: Territorial Maritime Piracy and Developing States: Somalia, Nigeria, and Indonesia' (2010) 16 NEW, Eng. J INTL' L & COMP. Law 9

³⁴ Dr. Ali Abdussalam Treki, 64th Session of the General Assembly of the UN
<<http://www.un.org/ga/president/64/statements/piracy140510.shtml>> accessed 19th July, 2017

³⁵ <<http://www.icc-ccs.org/piracy-reporting-centre/piracynewsfigure>> accessed 19th July, 2017

³⁶ Gal Luft & Anne Korine, 'Terrorism goes to sea' (2004) 83 FOREIGN AFF. 61

³⁷ United Nations Convention on the Law of the Sea (UNCLOS) , Dec 10,1982

³⁸ See Regulation 19, chapter v. International Convention For The Safety Of Life At Sea. (London, 1 November 1974) 1184 UNTS 276

conduct³⁹ and shipping companies must be given greater financial incentives to institute basic security protocols such as avoiding dangerous routes, maintaining constant anti-piracy watches, and developing and practicing anti-piracy contingency plans through the offer of lower insurance premiums.

This paper further argues that universal jurisdiction is warranted because of the heinousness of piratical acts and the fact that those acts are directed against Ships and persons of any and all nations, disrupting international trade and commerce.⁴⁰ Accordingly, states may exercise criminal jurisdiction over acts of maritime piracy, without regard to where the crime was committed, the nationality of the alleged or convicted perpetrator, the nationality of the victim or any other connection to the state exercising such jurisdiction.

In addition, the international community must adhere to a cohesive, uniform definition of piracy and a body of international law concentrating on eradicating piratical acts. This legal frame work must include adequate enforcement mechanisms reflecting the evolving trends in piracy, such as a shift from the high seas towards territorial waters of states.

Finally, more attention needs to be given to ease the underlying political and socio-economic drivers that give rise to piracy off the horn of Africa. These include poverty, under-development, and lack of governance⁴¹. Soft socio-economic objectives aimed at protecting local fishing grounds and supporting small-scale industry and cooperative businesses that do not rely on the piracy financial life, all seem to be most viable means of fighting piracy off the coastal states of Africa.

POLLUTION

³⁹ Which was signed on 30th January 2009 by Eight African States: Djibouti, Ethiopia, Kenya, Madagascar, The Maldives, the Seychelles, Somalia and Tanzania. More importantly, the code of conduct calls on member states to enact appropriate Legislation to facilitate the arrest and prosecution of suspected pirates.

⁴⁰ Jeffrey M Blum & Ralph G. Steinhardt, Federal Jurisdiction over international Human Rights claims: The Alien Tort claims Act after *Filartiga .v. Periairala*, 22 HNRV. INT'L L.J.53 60(1981)

⁴¹ Peter Chalk, 'Piracy Off The Horn Of Africa: Scope, Dimensions, Causes And Resources '(2009-2010) 16 Brown Journal of World Affair 89

Pollution is the presence in or introduction into the marine environment substance(s) which has harmful or poisonous effect. The coastal states of Africa stands the risk of pollution ranging from discharge from ships on the surface water, coupled with noise pollution from the vessels as well as from underwater equipment,⁴² as it is not uncommon to see ships regularly clean their tanks en route and discharge their residues at sea together with all rubbish overboard.

Pollution leads to ocean acidification and rising sea surface temperatures which can lead to coral bleaching several atolls which may lose their ability to sustain human habitation or economic life, and consequently, the EEZ (Exclusive Economic Zone) or the continental shelf that these islands once generated, will also correspondingly vanish and as the sea moves further inland and the islands disappear, other maritime zones will also be lost. This can have serious economic implications, since, for these islands the maritime zones and the resources therein, form the primary economic back bone.⁴³ Concurrently, high sea mining may also cause harm to the sensitive species and ecosystems that are found on the ocean floor depending on the depth, currents and the types of deposits. These activities have potential to cause long-term impacts on the marine ecosystems as sediments released during the mining process may smother habitants and floral and fauna, physically changing the marine space topography⁴⁴. And for those that depend on the sea water for drinking, it spells doom.

This paper posits that environmentally safe shipping, exploration and exploitation require prevention of shipping incidents and pollution alike. This is achieved by developing five equally important tools. First, by improving the construction and maintenance standards for ships and other equipment used for exploration of natural resources, so that the carriage of pollutions is more resilient to the dangers of the sea and to human fault. Second, by improving the training standards for crew members and exploration experts, so that the risk of human fault is reduced. Third, by establishing management systems for the ships, ports and the shipping companies which ensure early identification and minimization of risk taken, or, in the case of an accident, confirmation of the causes of the pollution accident and appropriate attribution of responsibility. Fourth, by establishing liability regimes, which ensure that pollution victims will be compensated, and that the polluting industry, in other words natural

⁴² Jeremy Firestone and Christina Jarvis, 'Response And Responsibility, Regulating Noise Pollution In The Marine Environment' (2007) 10 Journal Of International Wildlife Law And Policy 109

⁴³ Clive Howard Schofield, 'The Trouble With Islands' (2009) Master Of Laws Thesis, The Faculty Of Graduate Studies, The University Of British Columbia p.409

⁴⁴ Royers J and X Li, 'Environmental Impact Of Diamond Mining On Continental Shelf Sediments Off Southern Namibia, (2002) 92(1) 1 Quaternary International 101,101-112

resources exploiters and explorers, ship-owners, cargo owners, insurers and importers, will strive to avoid pollution.

MARITIME BORDER DISPUTE

The African Continent is characterized by lots of maritime boundary disputes; this is so because of the enormous deposit of mutual resources in the marine space and major commercial trading routes pass through these waters, thus, a control of a maritime zone is an economic boost. Besides, the sea is an entity that is governed by international law with rights and obligations of states through different maritime jurisdictions and thus cannot be occupied as a parcel of land⁴⁵ would be occupied. And no state has the capacity to exercise full sovereignty over them outside the extant International Treaties and Conventions and in exercising control over navigation and maritime resources, there can be overlapping claims between adjacent or opposite states.

Maritime border dispute is a threat to African peaceful co-existence and trade which is Africa's driving demographic and economy. These disputes are so numerous and acrimonious, that there is rarely any African coastal state that is free from one. Recent West African boundaries and border disputes include: land and maritime disputes between the Cameroon and Nigeria⁴⁶; Ghana/Cote d'Ivoire⁴⁷; territorial disputes on the land of Mbanie between Gabon and Equatorial Guinea⁴⁸; the frontier dispute between Burkina Faso and Niger frontier disputes⁴⁹; and the Benin-Niger frontier dispute.

In East Africa, there are: conflict over the Ilemi Triangle between Sudan and Kenya⁵⁰; the Nadapal boundary dispute between Kenya and Sudan⁵¹; the dispute over the Mingino Islands between Kenya and Uganda; the dispute over Lake Malawi between

⁴⁵ Theodore Okonkwo, 'Maritime Boundaries Delimitation and Dispute Resolution in Africa' (2017) 8 Beijing L Rev.55

⁴⁶ [2002] ICJ 303.

⁴⁷ Ghana v. Cote d'Ivoire (2014).Case No. **23, ITLOS**. Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Cote d'Ivoire in the Atlantic Ocean.

⁴⁸ Guinea and Gabon have agreed that a United Nations mediator should settle their territorial dispute over a handful of small islands that hold the key to potentially oil-rich offshore waters

⁴⁹ *Burkina Faso .v. Niger*⁵² ILM **1215 (2013)**.

⁵⁰ The disputed Ilemi Triangle is in East Africa; the land measures between **10,320** and 14,000 square kilometers. Kenya now has de facto control of the area.

⁵¹ Kenya-South Sudan (Nadapal boundary)-Nadapal is a border point, which is vital for trade between Kenya and South Sudan.

Tanzania and Malawi⁵²; the Badme territory dispute between Eritrea and Ethiopia⁵³; and the border disputes between Sudan and South Sudan⁵⁴.

In Southern Africa, Namibia and South Africa are quarreling over the Orange River⁵⁵, and this has been described as one of the oldest boundary disputes in the world. The Democratic Republic of Congo (DRG) and Angola are not spared of this dispute. Botswana and Namibia are also having issues over the latter's exploitation of the Okavango River. There are unresolved boundaries disputes of certain portions of the Namibia⁵⁶.

For the central African countries, there is a dispute on the location of the boundary in the broad Congo River between the Republic of Congo, Uganda and the DRC.⁵⁷ Uganda and the DRC are still disputing the Rukwanzi Island in Lake **Albert** and other areas on the Semliki River⁵⁸ with hydrocarbon prospective.

North Africa has boundary disputes, such as the Moroccan claims over Spanish territories of Ceuta and Melilla.

Though major controversies and strains still persist in Africa as maritime borders have manifested as a constant decimal of conflicts and wars, Africa should rise up to the reality that the absence of properly delineated maritime boundaries is a threat to its peaceful co-existence and trade which is Africa's driving demographic and economic forces.

The paper argues that there should be proper delineation of maritime boundaries which will help fix and identify the boundaries of the territorial sovereignty of a state and its spatial jurisdiction, as it is not uncommon for the maritime zones of two states to meet

⁵² Lake Malawi, also known as Lake Nyasa is an African great lake located between Malawi, Mozambique and Tanzania.

⁵³ K. Frank 'Ripeness and the **2008** Djibouti-Eritrea Border Dispute'(2015) 15 *North-East African Studies*, **113-138**.

⁵⁴ Located along the whole Sudan-South Sudan border. Agreement on borders and natural resources signed in September **26**, 2012 where security and oil deals were reached.

⁵⁵ For about 120 years, Orange River boundary has been subject of a dispute between South Africa and Namibia. South Africa claims, on the basis of the **1890** treaty, that the border runs along the north bank of the Orange River. Namibia claims that it follows the middle of the river. The Constitution of Namibia, **1990** explicitly claims the territory up to the middle of the river, while South Africa's Recognition of the Independence of Namibia Act denies any recognition of this claim.

⁵⁶ The Okavango Delta in Botswana is an area famous internationally for its birds and wildlife and an important source of tourist revenue, but depends on the Okavango River which flows from Angola via Namibia.

⁵⁷ The location of the boundary in the broad Congo River with the Republic of Congo is indefinite except in the Pool Malebo/Stanley Pool area.

⁵⁸ Uganda and DRC disputes Rukwanzi Island in Lake Albert and other areas on the Semliki River with hydrocarbon potential

and overlap. The line of separation should be drawn unilaterally or by written agreement, depending on the geographical location of the coastal states in proximity to the sea, bearing in mind that the core rule of general international law as it relates to the delineation of maritime boundaries between neighboring littoral states, is that delimitation should be in form of an agreement based on fair principles,⁵⁹ that take into consideration all relevant circumstances, in order to produce justified outcomes.

Maritime border dispute should be resolved through negotiations and diplomatic measures of acceptable means. The African Charter on Maritime Security, safety and Development which African head of States and Government have adopted and signed on Saturday 15, 2016 at the extra ordinary summit of Heads of state and Government in Lome, Togo, must be commended, and enforceability should be ensured to guarantee that boundary dispute in Africa is resolved amicably for Africans to be able to reap an imperative and integral maritime economic development.

It is true that African states have a good culture of peaceful settlements and negotiations in resolving boundary disputes through various indigenous mechanisms, which include the council of elders,⁶⁰ negotiations, and diplomatic measures and acceptable means of settling maritime boundary disputes should continuously be encouraged; the use of peace radios and peace newspapers⁶¹ should also be encouraged. Further, as trans boundary water conflicts intensify, especially in arid areas impacted by (SLR), international water Laws should be enacted for the development of new institutions which will ensure that there is fair allocations of wet water or fair and effective monetary or in kind substitutes that meet the evolving water needs of riparian states or alternatively, there should be a proper implementation of UNCLOS⁶², as one of the key achievements of UNCLOS is agreement on spatial limits to national claims of maritime jurisdiction⁶³. In accordance with the terms of UNCLOS, the breadth of a coastal state's territorial sea is not to exceed⁶⁴ 12nm from baselines along the coast; a coastal state's contiguous zone may not extend beyond 24nm from the baseline from which the breadth of the territorial sea is measured. The UNCLOS further provides the generally acceptable legal framework governing maritime jurisdictional

⁵⁹ See Federal Republic of Germany.v.Denmark (1969) ICJ Rep.3

⁶⁰ Sudan Tribune, 'Jieng council of Elders Reject IGAD(Intergovernmental Authority on Development) proposal on South Sudan'(Sudan Tribune, 11 July, 2015),

⁶¹ As seen in East Africa's Intergovernmental Authority and Development (IGAD) which is an eight- country trade bloc in Africa. It includes governments from the Horn of Africa; Nile valley and the Africa great Lakes. Its head quarters are in Djibouti city.

⁶² United Nations Convention on the Law of the Sea, Dec 10, 1982, 1833 UNTS 397

⁶³ Ibid.

⁶⁴ Ibid. Articles 3& 4)

claims and the delimitation of maritime boundaries between national maritime zones and thus, its rules should be judiciously followed if Africa is to curb maritime dispute to its barest minimum.

THE SHORTCOMINGS OF RELEVANT INTERNATIONAL LAWS AND THE ABSENCE OF EFFECTIVE ENFORCEMENT IN AFRICA

A Plethora of international and regional statutes exist which tends to protect and ensure the optimum enjoyment of the marine space by the coastal states in particular, and all mankind in general, as the sea is regarded as the common heritage of all men.

Some of these statutes include: 1982 United Nations Convention on the Law of the Sea; 1958 Geneva Convention on the Continental Shelf and 1997 Convention on the Law of the Non Navigational Uses of International Watercourses.⁶⁵ These Statutes have been ratified and domesticated by most riparian states of Africa. And one wonders why Africa still encounters numerous challenges in the maritime sector, even though most of these statutes have made provisions for suppressing these challenges. For example the African Union (AU)⁶⁶ Constitutive Act, has been ratified by all 53 member states of the A.U⁶⁷, of these, 38 AU member states are coastal states with varying coastlines. And in year 2008 the AU adopted a decision based on the consciousness of the major geopolitical and strategic states limited to the African continental shelf and of its abundant mineral and biological resources, which constitute an important source of foreign currency earnings for the economic development of the continent.⁶⁸

Notwithstanding the above, weak legal regime and poor implementation of existing legal framework; due to lack of capacity, ineptitude and corruption at the apex level of governments bedevil these statutes. In most basin countries⁶⁹, the judicial systems are dysfunctional and most judges are unable to perform their designated function of interpreting water laws and adjudicating water disputes independently and effectively.

⁶⁵ Malcolm D. Evans(edt) Blackstone's International Law Documents (Oxford University Press 2003)

⁶⁶ the African Union Constitutive Act came into force on 26 May, 2001, <<http://www.au.int/en/treaties>> Accessed 19th July, 2017

⁶⁷ Except Morocco which is not a member of the AU

⁶⁸ Decision on Extension of the African continental shelf and climate change, Doc. Ex.CL/391(XII), Decisions and Declarations of the 10th ordinary session of the Assembly of the AU, 3 <<http://www.africa-union.org/root/au/conferences/2008/January/summit/docs/decisions/Assembly-Decisions-171-191.Pdf>> Accessed 20th July, 2017

⁶⁹ These countries include Cameroon, Ghana, Kenya, Nigerian and Tanzania

The main reason being that, high level government administrative institutions usually undermine the independence of such judicial functions.⁷⁰

Most African states are partly induced by financial or political leverage to ratify some of these statutes in relation to water without considering the capacity for and interest in enforcing rights and obligations pursuant to the agreements. Apart from the force of public opinion, there is no effective monitoring and compliance system to ensure that obligations assumed under treaties are enforced within African nations.

Again, most riparian states have not clearly defined the water boundaries within national and regional levels. Additionally, most African nations have not effectively enforced international agreements and principles partly because they consider some aspects of classical international law to be incompatible with their new status as sovereign nations and to be serving imperialistic interests of the international oligarchy.⁷¹ Even where African states have enforced some of these international statutes, we find out that the statutes have lacuna, as is the case of the definition of piracy given by the UNCLOS. The definition did not take cognizance of the fact that most piratical acts are actually not committed in the high sea. From its definition, two ships must meet for piracy to be said to have occurred; this definition is not favorable to the fight against piracy.

Furthermore, existing laws are too weak and outdated to deter offenders and most punishments prescribed are too poor. This brings to mind the provision of the UNCLOS. One of the short comings of the UNCLOS is that it has generated too many overlapping claims to same area of outer continental shelf. The definition of the outer limits of the continental shelf is a more complex task, specifically where areas of 'extended' or 'outer' continental shelf seawards of 200 nautical mile limit are under consideration.⁷² Neither of the two terms 'outer' or 'extended' continental shelf are ideal nor have gained universal acceptance. The introduction of the 200nm breadth EEZs, has had a dramatic impact on the scope of the ocean spaces becoming subject to the maritime claims of costal states.

⁷⁰Narenda P. Sharma Et Al., *The Word Bank, And African Water Resources: Challenges And Opprtunities For Sustainable Development* Xiv-Xv (1996 World Bank Technical Paper No. 331)

⁷¹ Valentine Okaru-Bisant, 'Institutional and Legal frameworks for preventing and Resolving Disputes Concerning the Development and Management of Africa's Shared River Basins' (1998) 9 *Colo.J. Int; I Envtl.L. & POL'Y* 331.

⁷² UNCLOS art 76

This article posits that water laws and institutions are available; however, the institutions are ineffective and laws are inadequately enforced and as a result, there is need to strengthen the enforcement of available laws and enhance both the soundness and performance of existing institutions. This can be done by having well-exposed judges who understand the issue and arable of maritime to make reasoned judgments as there is a risk that, should conventional legal principle be applied in case of maritime, there might be miscarriage of justice.

There should be cooperation among African states to end the various challenges of the maritime space. A clue should be taken from the UNCLOS (though has lacuna) which contains several provisions that encourage countries to cooperate in the conservation and management of living resources of the high sea.⁷³ It equally provides for cooperation, for protection and preservation of the environment⁷⁴, encourage countries to co-operate on marine scientific research,⁷⁵ and cooperation on development and transfer of technology⁷⁶. On the issue of delineation of boundary, the key factors required for the definition of the outer limits of each of the international zones of maritime jurisdiction is an understanding of the location of the baseline, coupled with an accurate and precise means of calculating the relevant distance measurements of 12nm, 24nm and 200nm⁷⁷. It follows therefore, that proper maritime boundary delineation followed by a well-established and acceptable mechanism of enforcement of the various international and regional instruments, alongside cooperation of riparian states for equitable and fair use of the seas, will ensure that maritime boundary disputes are in the past.

CONCLUSION

The take home message is that coastal states of Africa should try to surmount the various challenges facing the ultimate utilization of the marine spaces. When these challenges are curbed and are at their lowest ebbs then the coastal states shall be able to fully enjoy the diverse opportunities locked in the seas of Africa.

⁷³ UNCLOS Article 118

⁷⁴ Ibid Article 197-201

⁷⁵ Ibid Articles 242-244

⁷⁶ Ibid Articles 270-274

⁷⁷ Clive Schofield, 'New Marine Resource Opportunities, Fresh Challenges' (2013) 35 University Of Hawaii Law Review 7,5

In curbing the challenges the coastal states should cooperate and avoid dispute which is economically and developmentally destructive. In the use of the marine space, government of the various states and individuals in their capacity should try and minimize incidence of pollution which not only destroys the ecosystem and bio-diversity but also a major cause of SLR which threatens to wipe out some coastal states.

Though there is an argument that the participation of the littoral states of Africa in deep sea mining and shipping businesses are being frustrated by technology and limited finance, piracy and its accompanying challenges, this paper finally argues that such excuse should not inhibit the littoral states from mining 'the blue gold'. Africans in the coastal regions should not relent in partnering and being involved in the exploitation and exploration of living and non-living marine resources.

The argument that marine economic activities are capital intensive should not hold waters as wherever there is a will, there is a way. And it is doubtful if there is any other sector that is full of resources enough to alleviate the popular belief and saying that "Africa is poor", than the maritime sector.

The Governments of the coastal states should encourage its citizens to venture into maritime businesses, by making available a low interest rate for loans, a safe marine space devoid of piracy and disputes, easier ways of obtaining license for mining, exploiting, exploration and shipping for its citizens. The citizens on the other hand should forget the mediocre belief that shipping, mining, exploring and exploitation of natural marine resources are too expensive, and venture into it. Shipping should not be the exclusivity of such continents as Europe and America; Africans should be largely involved in shipping businesses (That's where the wealth of this world has ever been). African's can pull resources together by way of partnership and enjoy the numerous economic, social and developmental opportunities that the marine space flaunts.