Petroleum
Business
Review

Abandonment/Decommissioning under Nigerian Legal Regimes: a Comparative Analysis

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ARTICLE INFO

Keywords:

Decommissioning, Abandonment, Environment, legal instruments, Niger Delta, Oil & Gas

Received: 23 July 2020
Revised: 28 July 2020
Accepted: 12 August 2020

ABSTRACT

This article in its introductory part will be devoted to conceptual clarifications of decommissioning and abandonment and (differences, if any). Part two, is the critical analysis of legislations on decommissioning in Nigeria. Part three is also a critical analysis on legal regimes and practices on decommissioning in other jurisdictions such as USA, UK, South Africa. Part Four is a comparative analysis of legislations and decommissioning practices in Nigeria and another jurisdiction. Part Five Consists of findings/observations made during the research. In the end, recommendations and conclusions are drawn, part of which is a call for proactive actions by megacorporation and the Nigerian government in the sphere of timeous decommissioning of obsolete and failed platforms, enactment and, or, review of obsolete legislations regulating decommissioning as well as fulfillment of obligations under multi-lateral environmental treaties that regulate decommissioning and sustainable environmental management and protection. A comprehensive legal framework on decommissioning is urgently required to be enacted to detonate the time bomb on which the region is still sitting due to the fact that the 170 platforms are nearing their useful lifetime.

1. Introduction

Decommissioning and, or, abandonment is adjudged to be critical to the safety and sustainable management of the environment, which (environment) consists of land, water, air, man, animals and plant life or flora and fauna. It is both onshore and offshore and has a miscellany of both positive and negative environmental and socio-economic effects on a country and its citizens. Other climes do not treat this environmental and socio-economic issue with levity but act timeously right from enactment of legislations and installation of oil and gas platforms and decommissioning/abandonment of the platforms to thereafter formulating robust legal instruments that are proactively and collectively enforced.

It is apposite to state that at the beginning of hydrocarbon exploration and development globally and particularly in Nigeria, many installations are built while equipments peculiar to these operations are used. In addition, diverse well bores may be drilled (or were drilled in the Niger delta) by multinational companies to extract hydrocarbons from the Earth's crust. When the oilfield reaches the end of its useful and, or, structural

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life and the reservoir is depleted, there is the need to either remove the oil and gas platforms or abandon the field altogether and this becomes an issue for the company, industry regulator and the government of the host state (Ayoade, 2011).

The Nigerian Government owns of all hydrocarbon deposits as stipulated under 1999 Constitution of the Federal Republic of Nigeria (as amended) and has the sovereign responsibility of protecting its citizens' lives and property as well as harness the social system for the benefit of the citizens. They are also vested with constitutional and statutory responsibility through the instrumentality of the Department of Petroleum Resources (DPR) thus "ensure that closure and post-closure operations on hydrocarbons are conducted efficiently and effectively, and where required, also ensure that the multinational companies involved in the operations try to reduce the risk of negative environmental, social and economic impacts following the conclusion of commercial exploitation" (SDN, 2017). Although, there is no question about a "universal agreement" that previous petroleum and natural gas installations and production sites ought to be decommissioned within oil bearing states (using international legal instruments or domestic laws as guiding principles for the purpose, but there remains a challenge in respect of the nature of installations and how the actual decommissioning practice should be carried out in various oil producing regimes or jurisdictions, particularly in Nigeria (Agbaitoro and Kejeh 2017: 99-127).

The pivotal reason that underlies the foregoing statement is premised on the fact that decommissioning process is set against the backdrop of a proactive global awareness and quest for sustainable growth, ecological protection amidst finest practices in the utilization and development of aquatic based natural reserves all over the world (Ayoade, 2011). This view is predicated on the global campaign and protest across Europe against Shell's attempt in the mid-1990s to dispose the Brent Spar Oil Installation in the North Sea, and which ushered in a new international order where the decommissioning of offshore and onshore energy installations received significant global attention and concern than it had received previously (Amakiri, 1997:423). In addition, other jurisdictions such as USA have conducted extensive researches on decommissioning with a view to averting existential threat to humanity, hence abandoned oil and gas rigs are timeously decommissioned. Alternative options to decommissioning have also been proffered. The Nigerian offshore petroleum industry has been estimated to possess over 170 installations operating in the Nigerian Maritime Zone (Adedayo 2003: 197). There is no gainsaying the fact that vegetations, farmlands, fishing ponds and even human settlements have been destroyed by oil exploration activities within the Niger Delta Region; some parts of the region also suffer from deforestation now, amongst rising unemployment amongst the youth and poverty as a result of loss of farming, fishing and hunting occupations of some citizens of the region, unjust and undemocratic legislation on gas flaring, and bureaucratic bottlenecks challenge of Niger Delta Development Commission (NDDC). A comprehensive legal framework on decommissioning is urgently required to be enacted to detonate the time bomb on which the region is still sitting due to the fact that the 170 platforms are nearing their useful lifetime.

1.1. Abandonment

Abandonment has been variously defined. It is defined as the intentional relinquishment or forsaking of all possession or control of any substance (Criminal Justice Services, 1991:37). Black's Law Dictionary defines abandonment as "sort willfully and with an intention of causing perpetual separation" (Garnar, 2019: 311). Wikipedia defines it as "relinquishment, giving up or renunciation of an interest, claim, civil proceedings or right especially with the intent of never again resuming or asserting it". (Wikipedia, 2020) Abandonment is defined at common law as "relinquishment of a right in property by the owner thereof without any regard to future possession by himself or any other person and with the intention to forsake or desert the right or the voluntary relinquishment of anything by its owner with the intention of terminating it of his ownership and without the intention of vesting ownership in any other persons". Abandonment has also been judicially defined "as the giving up of a thing absolutely without reference to any particular person or purpose" (Ginnow v. Nikolic 1985 SC).

Only the common law and judicial definitions are relevant to our discourse. Abandonment is not defined in any of Nigeria's petroleum industry legal instruments. Lowe defines abandonment as "the procedures used by an oil and gas operator to secure important requirements from the regulator when the operator wants to temporarily abandon a well, or other oil and gas facilities." (Lowe, 2009: 32-39) Lowe distinguishes rights that can be abandoned and those that cannot be abandoned at Common Law: Incorporeal rights may be abandoned while corporeal rights may not be abandoned.

The legal implication from Lowe's definition is that abandonment is temporary and optional. Abandonment is also defined as the act of stopping an activity with no intention of returning it. (Etikerentse, 2006: 37)

Abandonment, technically speaking is accompanied by well plugging (P & A) and involves the removal of platform well or deep hole equipment (packers, Pumps, tubing) which are fixed from a platform, subsea wells whose wellheads are buried on the ocean floor and crude oil to a hovering ship or attached support to oil rig infrastructure, as well as floating exploration and appraisal wells (E & A).

1.2. Decommissioning

Decommissioning has also been variously defined. It is "the process of ending oil and gas operations at an offshore platform, such as dismantling and disposing of platforms and returning the ocean and seafloor to pre-lease conditions" (DOI, BSEE, BOEM, 2020). It may at times take the form of partial removal of structure or toppling in place of infrastructure. This definition is only concerned with offshore decommissioning, but excludes onshore decommissioning.

Decommissioning of offshore installations is a complex process that involves the following procedures and plans:

- •capping all wells that are sustained by the platform and taking out the well shelling 15feet beneath the mudline
- •clean-up and taking out all production and pipeline risers that are sustained by the platform
- •taking out the platform beginning with the base by doing away with all bottom-founded mechanisms no less than 15 feet beneath the mudline.
- •Getting rid of the platform in a junk storage area or manufacturing yard, or moving the platform to an artificial reef location; and carrying out site approval authentication at the platform site to whilst suring that all waste and potential blockade to new users of the ocean seabed is removed.

In decommissioning, all platforms whose useful life and structural life have expired are removed to avoid the creation of safety, environmental and navigational risks. Besides, abandoned platforms are subject to deterioration and decay, structural failure, destruction or toppling by storms, and can damage neighbouring active platform or installations. Removal of platforms could be done through mechanical severance, or explosive severance. The pitfall with the latter option is that it causes shock-wave and the acoustic energy it generates can harm or kill fishes, sea turtles and other marine mammals, as well as destroy aquatic life within, or situate on the platform infrastructure.

The technicality of offshore decommissioning requires that it should be adequately and statutorily planned and structured. Based on global best practices, any legislation on decommissioning should incorporate the following processes and plans:

- Ascertainment of the extent of desertion if it should be part or whole.
- techniques to be applied in decommissioning should be indicated
- Authentication of the technique(s) when used.
- discarding of detached platform/compositions, trash and allied waste products.
- Environmental Impact Assessment (EIA), supervising, renovation and restorative plans.
- Certification of decommissioning by the regulatory authority after the decommissioning activity has been certified satisfactory.

It need be pointed out that on-shore decommissioning is usually regulated by Joint Operation Agreements (JOAs). Based on the foregoing clarifications on abandonment and decommissioning, the former is the initial process of the latter. Abandonment usually precedes decommissioning by one year, while decommissioning is supposed to be completed within 6 months. Before abandonment and decommissioning, the operator must consult the host community or communities and the impact of decommissioning incorporated in the decommissioning plans. Since abandonment is the initial phase of decommissioning some writers such as Paterson have been tempted to use the two terms interchangeably (Paterson, 2011:10).

2. A Critical Analysis of Nigeria's Oil and Gas Legislations

Nigeria's legal regimes that regulate offshore decommissioning are classified into three: International, Regional and National Legislations. In the first limb of this part, International legislations will be discussed while in the second limb, regional and national legislations will be discussed.

2.1. International Legislations

The international legal regimes that regulate abandonment/decommissioning globally, particularly in United Kingdom, Nigeria, United States of America (USA), South Africa, are:

- The Geneva Convention on the continental shelf, 1958
- United Nations Convention on Law of the Sea (UNCLOS) 1982
- The Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matters, 1972 and its Protocol of 1996
- The International Maritime Organization (IMO)'s Offshore Removal Guidelines, 1989.

Before discussing these international legal instruments, it is pertinent to point out that comprehensive legal instruments have not been developed by African countries particularly Nigeria because they have not experienced significant offshore/decommissioning activities. This does not mean that African countries especially Nigeria should not be proactive and pre-emptive by enacting comprehensive legislations which adopt prescriptive and goal-setting approaches now.

a. The Geneva convention on the continental shelf, 1958

Nigeria ratified this convention on 28th April, 1971. The convention recognizes rights of member states to exploit the resources of their continental shelf, but also provides for a caveat in Article 5(5) requiring appropriate notice have got to be specified for the production of any installations and enduring ways for providing warning to their existence must be sustained. It also provides that any mechanism which are discarded or neglected must be completely removed. This provision instructs member states to completely remove installations from the seabed when they are abandoned. The convention adopted complete removal regime because the presence of the installations would unduly obstruct with navigation and further utilization of the sea, but the likelihood of a necessity for part removal was not foreseen by the framers of the convention.

b. United nations convention on the law of the sea) unclos) 1982

Nigeria approved the treaty on 14th August, 1986. The states parties including Nigeria were impelled as a result of the yearning:

- To resolve, in the atmosphere of common fellowship and collaboration, all matters pertaining to the law of the sea and took exception to this historic convention because of its input to the upholding of progress, justice and peace for humanity worldwide. (Preamble of UNCLOS, 1982)
- To correct the pitfalls and failures of the Geneva Convention of 1958 and 1960. The significance of this convention, invariably, is the attainment of peace, justice and progress amongst member states in their quest to explore and exploit the sea.

The requisite provision of the law on abandonment, or, decommissioning is Article 60(3) which states that:

"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. Any installation or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by competent international organization. Such removal shall also have due regard to fishing, the protection of marine environment and the rights and duties of other states. Appropriate publicity shall be given to the depth, position and dimension of any installations or structures not entirely removed".

This proviso is almost nearly in pari materia with Article 5(5) of the Geneva Convention (GC) except that the UNCLOS Provision is permissive in the sense that it permits exceptional cases in which total removal is not possible: Note generally, this aspect of the provision, "any installations or structures not entirely removed".

c. International maritime organization guidelines, 1989

These guidelines were made by IMO for member states of UNCLOS in line with Article 60(3) of UNCLOS. They are guidelines which contain minimum requirements for taking away of all installations and structures situate at the continental shelf (CS) and within the Exclusive Economic Zone (EEZ), contained in IMO Resolution A.672(16) adopted on 19 October, 1989. The rules provide that:

- Where member states propose to allow the whole or part decommissioning of platforms or structures in CS and, or, EEZ factors such as potential environmental, navigation impact, the costs involved, technical feasibility and risks on lives of personnel who would be involved in the removal should be taken into consideration.
- Member states must justify the reasons for allowing part removal of the installations.
- Complete removal of installations or structures that are located in defined areas which are important to navigation but with exceptions. Installations should not be emplaced after 1st January, 1998, except its

plan and assembly are such that whole taking away will be possible.

The standards contained in the Resolution stipulates that installations or structures that stand in a lesser amount of 75m of water and weighs not as much of 4000 tonnes ought to be completely removed.

The IMO Guidelines and Standards of 1989 are a softlaw or mere recommendations that are not legally binding on states parties of UNCLOS. However, evidence has shown that many soft laws had metamorphosed into hard laws after a considerable time of adoption and usage by states parties to multi-lateral treaties.

d. London dumping convention (LDC) or convention on the of marine pollution by the dumping of wastes and other matters at sea.

On 30th October, 2010 Nigeria acceded to the protocol of the Convention. The Convention has a protocol. The significance of the Convention is that is filled the lacuna created by GC and UNCLOS in their failure to provide for the post-decommissioning activities. The relevant provisions of the LDC and its protocol on decommissioning and connected matters are:

The LDC define dumping as "any deliberate disposal at sea of vessels, aircraft, platforms or man-made structures: see Article 111(1)(a)(ii). Article 111(1)(b)(ii) of LDC appears to be permissive as it permits installation to be used as artificial reefs: “placement of matter for a purpose other than the mere disposal”.

The permissiveness of LDC on decommissioning was altered in its 1996 Protocol to the Convention on the prevention of marine pollution by dumping of waste and other matters by making dumping a generally unacceptable practice. The protocol also adopts both the “precautionary principle” in Article 3(1) and polluter pays principle” in Article 3(2). The protocol therefore contains appropriate preventive measures for “when there is reason to believe that wastes or other matters which are dumped into the aquatic surroundings can give rise to destruction although there is no definite proof to show an underlying relationship linking deposits and resultant effects.

The big query is, is Nigeria legally bound by all the conventions she has ratified, acceded, approved and accepted, the legal effects of which Nigeria has established herself internationally through its approval to be subjected by a treaty? Under Customary International Law principle of "pact sunt servanda”, Nigeria is bound by these conventions on decommissioning discussed in the foregoing paragraphs. At the municipal level, constitutionally and by rules of logic, she is not bound because of the provision of its grundnorm, the 1999 Constitution of the Federal Republic of Nigeria (as amended) which states in Section 12(1) that:

"No treaty (convention) between the Federation of Nigeria and any other country shall have the force of law except to the extent to which any such treaty has been enacted into law by the National Assembly"

This kind of legal stipulation in the Nigeria and other nations’ constitutions gives states parties to conventions or treaties a wide latitude and ample opportunity to obey or not to obey international law obligations. Besides, the doctrine of territorial sovereignty, which most states hide under, gives them the opportunity to jettison international obligations of conventions. This explains why inspite of the existence of about 1000 multi-lateral Environmental Treaties in the world, environmental crimes still exist.

Nigeria and other nations can only be made to obey treaty obligations through:

- Threat of sanctions or financial rewards by superior and powerful states parties to treaties, and, or,
- Domestication of treaties as constitutionally required.

Domestication could be through the re-enactment or translation of a treaty into a distinct municipal law or reference in which case a municipal law references a treaty without laying out its details. Domestication is significant in enforcing international legal obligations because:

- It ensures the implementation and enforcement of and compliance with treaties by states parties and their citizens.
- It integrates treaties into the municipal legal systems on which machinery of governance of states parties would ensure their implementation, enforcement and compliance by their citizens and stakeholders.
- It allows states parties to treaties to transform declarations as well as guidelines which are not binding legally because they are soft laws into appropriate hard laws or legal frameworks.

2.2. Regional Legal Regimes

These include the Convention for the cooperation in the protection and development of the Marine and Coastal Environment of the West and Central African

Region (Abidjan Convention, 1981) as well as the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the East African Region (Nairobi Convention, 1985). These conventions were the outcome of the United Nation's Environment Programme's (UNEP's), Regional Seas Programme of 1974 which was used to promote regional collaborative actions in protecting the marine and coastal environment as well as conserve their resources. These conventions have not yet developed policies and principles for abandonment and, or, decommissioning of seaward installations.

The Nairobi and Abidjan Conventions make provisions that affect continental shelf and EEZ of member states. They make states parties bound in the implementation of internationally recognized standards and prevention, fighting and controlling of toxic waste generated by discarding from vessels as well as aircraft (Abidjan and Nairobi Conventions: Article 6) and also toxic waste generated by or connected with sea bed and subsoil exploration and exploitative activities (Art 8 of both Conventions) Only the Abidjan Convention prohibits pollution from artificial Islands, installations and structures. This is a pre-emptive provision for decommissioning in the CS and EEZ of states parties. Both conventions also provide for sound and sustainable control of natural endowments through employment of effective and feasible methods at the stands of states parties (Abidjan and Nairobi Conventions: Article 4)

As earlier pointed out Nigeria is only regionally bound but not practically bound because of the provision of Section 12(1) of her 1999 Constitution (as amended). Domestication of the conventions is obviously the way out.

2.3. National Legislations

These include the Petroleum Act (LFN 2004) and its Regulations of 1969 (Petroleum Drilling and Production) Regulations of 1969, the Harmful Wastes (Special Criminal Provisions, etc) Act (LFN 2004) the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act or NESREA 2007, Oil and Gas Pipelines Regulations 1995, Joint Operating Agreement (JOA) and Production Sharing Contract (PSC): both are not legal instruments but they contain contractual obligations that must be observed by the contractual obligations that must be observed by the contractual parties, The DPR's Environmental Guidelines and Standards for Petroleum Operations (EGASPIN).

a. The petroleum act and petroleum (drilling and production) regulations 1969.

The Act was enacted ten (10) years after Nigeria started producing oil. The law does not contain any specific provisions on decommissioning, but gives powers to the Minister to formulate regulations for the deterrence and prevention of water and air toxic waste, as well as manufacture, maintenance and operation of installations in Section 9(1). However, Regulation 35 of the Petroleum (Drilling and Production) Regulations 1969 contains broad-spectrum provisions on abandonment only by stating that the re-drilling, plugging and abandoning of boreholes of existing wells, cemented casing or any other form of permanent casing should not be performed except due approval is given by the Director of Petroleum Resources (DPR). The Director must at all material times approve the abandonment of boreholes or existing wells in writing before an operator can abandon such. This legal requirement is to foster the prevention of ingress and egress of water into and from segments of the strata bored. Such abandonment must also be in accordance with the approved abandonment programme by the Director. However, in emergency, the Director may direct the plugging of boreholes or wells but under the supervision of his representatives.

Rules 1, 2 and 3 of Regulation 35 appear to have been framed by the law makers to cover only onshore decommissioning which involves partial or complete bringing to shore of all installations or platforms following cleaning and being made safe, thereafter, they are wrecked into scrap for reuse or sever into fragments and discarded of in approved permanent waste dumping/landfill locations (Ayoade, 2011: 11)

Rules 1 and 2 stress on written approval by the Director of Petroleum Resources for abandonment/decommissioning to be carried out by an operator, while Rule 3 insists on physical supervision of the activities by an official representative of the Director. Rule 2 stipulates that abandonment/decommissioning plans must be approved by the Director.

Rule 45 also covers only onshore abandonment/decommissioning and requires that the Operator convey to the Minister in excellent state, restored and condition, and suitable for additional working, all useful boreholes or wells except if the Director directs/necessitate the licensee or lessee in writing to cap them as stipulated by the Regulations simultaneously with all casings and other trappings to the boreholes and wells which are beneath the Christmas tree

hence impossible to be moved, devoid of resultant damage to boreholes and wells.

The Licensee or Lessee must plug up or hedge all openings other than boreholes and wells and excavations existing in the applicable spot to such a degree as the Director may plausibly require. Reasonability here is subjective, that is, it is based on the Director's judgment. The Licensee or Lessee must also take practical steps to reinstate as far as feasible to their unique state the exterior of the appropriate spot and all edifice and composition thereon which have been spoiled in the course of his business. This is known as remediation. The test of reasonability is also applied in this proviso and is also based on subjectivity or licensee's or lessee's judgment of what the appropriate steps of remediation should be. Regulation 45(3) provides that

"the operator, in the end of his permit or rent, shall with recourse to the privileges of the owners of the surface (Federal Government of Nigeria) or additional natives having lawful interest in the significant part as well as any fraction of it (host population), removal all structure, installations, machinery, belongings and things put up or purchased by the licensee or lessee upon the appropriate region for on in relation with his business: provided that, subject as stated, the Minister may stipulate any such structures, installations, plants, belongings or things, and shall then be permitted to take the same at a cost bearing a practical relationship to the written down price thereof".

This Regulation also covers only onshore abandonment and decommissioning, places financial burden of the decommissioning activities on the operator, but gives benefits of decommissioned installations to the Federal Government of Nigeria. The proviso avails the government of eating her cake and having it at the same time.

There is no doubt that Regulations 35 and 45 apply to complete removal of installations, but they do not apply to offshore and proshore decommissioning. The regulations do not provide for exact decommissioning arrangement and detailed necessities for the remediation of the ground. The problem that has arisen from this non-specific and weak legal framework is the degradation of the Ogoni Land and the lingering clean-up issue. The legal regime addresses only removal and disposal of petroleum facilities, but expressly excludes the responsibility to reimburse for exclusion and discarding and residuary accountability.

Residuary liability is a critical component of decommissioning and is the potential post-decommissioning and discarding of oil installations and pipelines obligation. Residuary liability is inexhaustible and subsists in perpetuity. It also involves accountability for preservation and forewarning, conditional/potential third party accountability, insurance premiums, ecological impact and damage, conformity with potential legal requirements and responsibility to unborn or future generations. It is apparent that in making the regulations the Minister did not avert his mind to the fact that decommissioning involves complex and costly engineering processes which entail comprehensive legal, environmental, socio-economic and policy considerations.

The Oil and Gas Pipeline Regulations 1995 were made to regulate the decommissioning of pipelines. Its provisions cover situations where there is mere discontinuance of the use and abandonment of pipelines. In discontinuance of the use of pipeline, a licensee or lessee must give three months' notice with valid reasons and planned method to the Director of Petroleum Resources. The DPR may approve the discontinuance or approve and suggest a contrary method to be used in the operations. Under abandonment, the licensee or lessee may avoid removing the pipelines or get rid of them. Where the pipelines are to be removed, the DPR must approve the removal work programme prepared by the Operator and the latter is statutorily obliged to carry out remediation work on the place after removal or "restore the surface of the land and the vicinity to a perfect condition". The use of "perfect condition" elicits discretion to DPR, and can only apply to onshore but not offshore decommissioning.

Other legal regimes are purely environmental legislations that were enacted specifically to protect the Nigerian environment as well as promote the sustainable management of the Nigerian environment and resources. They include the Harmful Wastes (Special Criminal Provisions, etc) Act, 1988 which generally applies to hazardous substances on onshore not offshore, and constitute harmful wastes. The NESREA Act does not apply to the Petroleum Industry per se, but impliedly affects abandonment/decommissioning issues.

The extant supposed legal framework that regulates abandonment/decommissioning is contained in the Environmental Guidelines and Standards for Petroleum Industry in Nigeria (EGASPIN) published by the Department of Petroleum Resources (DPR) in 1991 (amended in 2002), which provides in Paragraph 13, that "After 1st January, 2003, no installation or structure is to be placed in any continental shelf or Exclusive Economic

Zone unless it is designed so that entire removal upon disuse would be feasible". EGASPIN was issued pursuant to IMO Guidelines and Standards on decommissioning of 1985. EGASPIN makes elaborate provisions for decommissioning of 1985. EGASPIN makes elaborate provisions for decommissioning of petroleum installations and facilities in Paragraph 13. These provisions include:

Planning of decommissioning programme, phased project design, initiation and implementation and objectives.

Decommissioning Objectives and activities must include restoration programme.

- Mandatory Preparation of Environmental Impact Assessment/Baseline/Sea-bed, inspection Report, or Submission.
- Specific Post-impact Environmental Report and Decommissioning Plan Report.

Licensees or Lessees must properly clean up, take apart and do away with structures from oil and gas installations and amenities after such installations and amenities have been deserted and decommissioned.

- Decommissioning must commence 1 year after abandonment and finished within 6 months
- Administration of property acquisition and divesture must be complied with by the licensees or lessees.
- Host communities should as far as possible be consulted before decommissioning

Decommissioning procedures and strategies must involve:

- Offshore/Deepwater areas
- All abandoned installations footing in less than 100 meters (depth) of water and weighing less than 400 tonnes in air, positioned on the sea-bed not including the deck and the super structures, shall be detached completely.
- The procedure of removal shall shun momentous unpleasant effects upon steering or oceanic environment.

EGASPIN also makes provision on well abandonment. The pitfall with EGASPIN is that they are mere guidelines and standards and at best soft laws which are not legally binding on licensees or lessees or title holder and so not justiciable. They can, however, be transformed into a law. The Petroleum Industry Bill (PIB) which may contain comprehensive provisions on decommissioning has not been passed yet by National Assembly.

Finally, the host government contracts also constitute legal framework that governments all over the world, including Nigerian government, employ to grant petroleum rights to licensees or lessees. The categories of such contracts are the Concession or Royalty/Tax System, Production Sharing Agreements and Service Agreements (such as risk service, pure service and buy back). The host government contracts used by Nigeria are the Joint Operating Agreement (JOA) for onshore petroleum discovery and utilization while the Production Sharing Contracts (PSC) are used for offshore. Fields in the continental shelf and Exclusive Economic Zone. Although these contractual legal regimes are standard in form, they are lacking in decommissioning of installations and structures.

Article 3.1.i of the Model Joint Operating Agreements establish working committees which direct and supervise all matters relating to Joint Operations such as determination of choice, extent, timing and setting, testing, conclusion, capping and leaving behind of all wells and equipments of the joint operations, abandonment and recovery of joint property or any part thereof. Since Article 1.1 of JOA elects the 1969 Petroleum (Drilling and Production) Regulations as the applicable law, it is presumed that the Regulations govern abandonment/decommissioning under host contracts. The Extant PSCs that are applicable in Nigeria are the 1990 and 1995 Model production Sharing Contracts. These contracts or PSCs lack provisions on abandonment and decommissioning, may be due to the existence of the Petroleum Act and its Regulations and the government's implied knowledge of its reversionary interest in the land, oil and gas installations and facilities at the expiration of such contracts.

3. A Critical Analysis of Other Jurisdictions' Oil and Gas Legal Regimes.

This part of the article critically examines the legal regimes of South Africa, United Kingdom and United States of America on sustainable decommissioning management.

3.1. South Africa

Petroleum and natural gas installations in South Africa are yet to reach the end of their useful lifespan. Abandonment/decommissioning management is regulated by international, regional and national legislations in the country.

a. International laws

South Africa signed the United Nations Law of the Sea (UNCLOS) in 1982 when it was adopted but ratified it on 23rd December, 1997. She has also ratified the London Convention and its Protocol. The Country has implemented the provisions of the London Convention by Enacting the Dumping at Sea Control Act. The legal implication is that South Africa has incorporated the London Convention and its Protocol into her legal system.

b. Regional legal regimes

South Africa is a signatory to the Abidjan and Nairobi Conventions which make provisions on territorial waters and EEZs of member states. These conventions impose strict obligations on member states to put into practice globally recognized principles and procedures to avert, scrap and manage pollution as a result of dumping from ships, aircraft in their territorial waters and EEZs, take suitable steps to avert and manage toxic waste caused by or related to subaquatic and subsoil petroleum and natural gas exploration and utilization activities, as well as guarantee reasonable ecological administration of natural resources by using the most excellent and feasible ways available. It need, however, be stressed that these conventions failed to make express provisions relating to abandonment/decommissioning of onshore, proshore and seaward oil and gas platforms or structures.

c. National legal frameworks

The municipal legislations that govern abandonment/decommissioning in South include, Maritime Zone Act 1994, (MZA), Mineral and Petroleum Resources Development Act 2002 (MPRDA), the Mineral and Petroleum resources Development Regulations 2004 (MPRDR), Dumping at Sea Control Act, No.73 of 1980 which has been replaced by the Dumping at Sea Control (Amendment) Act 73 of 1995 and the National Environmental Management Act (NEMA), Act 107 of 1998.

The MZA is an outright application and by extension the domestication of UNCLOS 1982. Section 1 of this Act vests on South African Government, the sovereignty to discover and utilize petroleum and natural gas resources in the seabed of her territorial waters, EEZ and the periphery of the Continental Shelf (CS) as well as erection and, or, authority to approve the erection of installations or structures for the discovery and utilization of petroleum resources. Section 1 of MZA like Section 60(4-6) of UNCLOS define “installations as all forms of structures which include the 500-meter Safety Zone around platforms”.

MPRDA is the main legal regime that governs the discovery and utilization of petroleum resources in South Africa. Section 3(2) of the Act empowers the State through the instrumentality of the Minister of Minerals and Energy to allow the discovery and utilization of petroleum resources in the country through granting of exploration and production rights and allied permits to operators. The Minister, as the sole regulator, is empowered to make regulations pursuant to the Act, to control the activities of grantees of petroleum rights. The MPRDR were made pursuant to MPRDA.

The MPRDA, MPRDR and NEMA do not make express provisions for abandonment/decommissioning management in South Africa. Impliedly, however, Section 38(1) of MPRDA imposes a responsibility on holders of exploration permits, exploration rights, mining rights, mining permits or withholding permits to:

- “As far as it is reasonably practicable rehabilitate the environment affected by the prospecting or mining operations to its natural or predetermined state or a land use which confirms to the general accepted principle of sustainable development”. This proviso is lax and does not impose strict obligations on oil and gas operators to decommission their installations on either onshore, proshore or offshore, because of the use of the phrase, “as far as it is practicable”. The use of “environment” covers air, land, water, etc".
- "Operators are also held accountable in the event of any ecological harm, pollution or ecological degradation as a result of his or her reconnaissance prospecting or mining operations which may occur inside or outside the boundaries of the area to which such right, permit or permission relates".

The test of reasonability in the practicability of carrying our remediation on the environment after the exploitation activities by the operators is subjective, that is, based on the sole judgment of the operators. Other implied provisions of MPRDA on abandonment/decommissioning are contained in its Section 34, 41 and 43 which also impose obligations on operators, either as applicants for production rights, reconnaissance permits or exploration rights to:

- Prepare and submit to the Minister Environmental Impact Assessment Reports and Environmental Management Programmes and Closure plans. These programmes must reflect an item on financial security to take care of remediation occasioned by

their exploitation activities. The financial burden to remediation is expressly imposed on oil and gas operators. The operators can only be dispensed with the obligation of remediation only when the Minister issues closure certificates to them at the expiration of their exploration and exploitation activities.

The Dumping at Sea Control Act, now Dumping at Sea Control (Amendment) Act in Section 1(1) makes general provisions on dumping or deliberate disposal of materials at the ocean from any ship, airliner, platform or supplementary man-made structures by burning or dumping in the sea. Section 3 of the Act obliges operators to obtain specific permits from the Director General in the Ministry of Environmental Affairs and Tourism before dumping or disposing installations at sea. Section 2 states that the Director-General will consider the nature of materials to be disposed, the site, method and environmental impact of the materials to be disposed and availability of alternative land-based options before granting permit. Failure to obtain permit before dumping the structures constitute an offence under the Act, the caveat being that dumping was inevitable or logical in the circumstance to protect humanity, the platform(s) or to avoid harm.

The provisions of these statutes on abandonment/decommissioning are vague and not precise or express. legal frameworks include international conventions, regional conventions and national legislations. Provisions of UNCLOS and London Convention and its protocol are domesticated through some of the national laws. Abandonment/decommissioning which involves the removal and disposal is vaguely provided for in the statutes. There is no provision for residuary liability in any of the legislations.

3.2. United Kingdom (UK)

The UK has very strict legal regimes that regulate sustainable decommissioning management in the country. This is due to her experience of the "Brent Spar" episode of the mid 90's. UK has many laws that regulate decommissioning processes. These are GC, UNCLOS, London Convention and its Protocol, OSPAR, Petroleum Act 1998, Energy Act 2008, The Coast Protection Act 1949, Trans-Frontier Shipment of Waste Regulations 2007, and Health and Safety at Work Act 1974.

a. International legislations

The British approach towards recognition of international treaties is incorporation of such treaties into the British Legal System as adumbrated in the case of Buvor v. Barbuit (1737) Cases Talbot, 281 and reaffirmed in Trendex Trading Company v. Central Bank of Nigeria (1977) 2 WLR 356 and Maclaine Watson v. Department of Trade and Industry (1988) 3 WLR 1033

The British government takes abandonment/decommissioning very seriously, hence it has budgeted £39billion for the removal of 98 out of 400 platforms and future removal of installation or structures. Between 2017 and 2025, 1625 and 98 Platforms are expected to be decommissioned (Tim, 2003:7)

b. National legislation

The Petroleum Act 1998 imposes an obligation on operators to obtain government's approval of abandonment plans before abandonment/decommissioning of structures can be embarked upon. Another feature of strict decommissioning rules and regulations are the "Guidance Notes" that are based on the provisions of International Legislation, the Petroleum Act and Opinion of Staff of the Department of Trade and Industry (DTI) and other interested members of the public. The Notes are issued by DTI to operators in the British Petroleum Industry, and they regulate abandonment/decommissioning of seaward petroleum and natural gas platforms. The current Guidance Notes for Industry: Decommissioning of Offshore Installations and Pipelines under Petroleum Act 1998 were released on 21st August, 2000, and clearly depict British government's policy on decommissioning.

Section 1.1 states that; "Government will seek to achieve effective and balanced decommissioning solutions, which are consistent with International Obligations and have a proper regard for safety, the environment, other legitimate use of the sea and economic considerations. The Government will act in line with the principles of sustainable development".

The Guidance Notes which contain specific regulations are goal-setting-driven. Their goal is the attainment of effective and balanced decommissioning of installations which is in accord with international obligations and based on safety, environmental navigation and economic considerations. The legal implication is that United Kingdom has incorporated the provisions on decommissioning as reflected in the UNCLOS, London Convention and its Protocol, IMO Guidelines and Standards and OSPAR Convention into her legal system.

Statutorily, the decommissioning process in Britain is procedural. Section 29 and 30 of the Petroleum Act stipulate that all operators in the Petroleum Industry must obtain written notice from the Secretary of State through DTI as well as submit a priced decommissioning plan for all offshore installations and underwater pipelines operations before 4 months prior to the commencement of operation. Under Section 36, there is joint liability on operators to submit the programme within the statutory time, while under Section 33 and 37, DTI is mandated to prepare an official plan me and execute same at the expenditure of the operator. Section 40 makes failure to enforce submission of decommissioning programmes or non-implementation criminally liable; the penalty is a fine or 2 years imprisonment. Section 29(4) specifies contents of a sample decommissioning plan/arrangement, which must contain costs, timeframe, sustainable maintenance of installations or pipelines if they are to be partially removed or not removed.

Chapter 5 of the Guidance Notes also specifies the stages of removal of installations, namely, preliminary discussion between Operator and offshore Decommissioning Unit of DTI, government's consideration of first draft, further consultations by operator with interested parties in line with Section 29(3) of the Act or government's and operator's joint consultation with OSPAR Member States, Final Draft and Submission to Secretary of State for approval, implementation of approval works in the programme and post-decommissioning actions such as Post-Disposal Surveys and site monitoring. Finally, the Licensee must also put into practice measures for safeguarding and administration of platforms and pipelines that are not removed. DTI always insists on financial security agreements when transfer of assets between large and small oil and gas companies is involved. Chapter 15 of the Guidance Notes takes care of residuary liability, which is vested in perpetuity on operators who own the oil and gas installation and pipelines.

The prevention of Oil Pollution Act 1972 regulates the expulsion of oil while the Control of Pollution Act 1974 governs the discarding of special wastes. Chapter 3, Part 3 of the Energy Act 2008 gives extensive powers to the Secretary of State to prosecute joint or severally offenders who fail to comply with statutory decommissioning requirements, insist on provision of financial security by operators during the life time of their oil fields particularly if their risks to tax payers are intolerable, and protect the resources set aside for decommissioning in the incident of liquidation of the operator. The money can alternatively be used for decommissioning. The Energy Act 2008: Gas Storage and Import Infrastructure and Carbon Capture and Storage regulates the decommissioning of offshore gas storage and import infrastructure. Section 34, Part II of the Coast Protection Act 1949 imposes an obligation on operators to obtain approval from the Secretary of State for Energy and Climate Change before he can place installations and pipelines on the country's continental shelf. Regulations No.1013/2006/EC contained in the Trans-Frontier Shipment of Wastes Regulations 2007 also pertains to decommissioning of offshore installations while Health and Safety at work ETC Act 1974 regulates onshore disposal of installations, pipelines and other wastes. It need be stated that UK's legislations extended liability to parent companies of oil and gas companies operating in her oil and natural gas industry and also criminal liability to officers, directors and managers of their local branches, if it can be proved that offences committed under the laws were committed with their consent, connivance and negligence.

3.3. United States of American (USA)

The USA has had the most experience of abandonment/decommissioning in the world. She has more than 5000 installations in her Gulf of Mexico (GOM), off the Southern Californian Coast and Beaufort and Chukchi Seas North of Alaska. Over 4000 platforms have been decommissioned since 1980s, decommissioning is still ongoing and there was an average of 130 platforms that were detached every twelve months in the last ten years (International Market Insights Report Series, 2018: 23) It has been estimated that 2000 platforms need to be removed between 2017 and 2025 at a cost estimate of $39.56 billion.

The Institutional Regulatory Frameworks that enforce abandonment/decommissioning platforms regulations include Department of the Interior (DOI), Bureau for Safety and Environmental Enforcement (BSEE), Bureau for Ocean Energy Management (BOEM), US Army Corps of Engineers (USACE) and Department of Commerce's National Oceanic and Atmospheric Administration (NOAA). The legal instruments include UNCLOS, GC, LC and National Legislations such as outer Continental Shelf Land Act (OCSLA) and its regulations, Rivers and Harbours Act 1899, National Fishing Enhancement Act 1984, Clean Water Act, Ocean Pumping Act, National Environmental Policy Act, State Laws and Regional Convention(s).

a. International and regional conventions

The US is a party to Geneva Convention (GC) 1958, UNCLOS 1982 and London Convention (LC) 1972. USA also adopts the doctrine of incorporation of International Treaties into her legal system before strict compliance can be enforced. Evidence from the Kyoto Protocol to the United Nations Framework Convention on Climate Change shows US more or less prefers to rely on her national laws to provisions of treaties she has acceded to. This preference is predicated on constitutional, political and economic reasons. She is, however, a signatory to the aforementioned conventions. In the Committee of United States Citizens Living in Nicaragua V. Reagan (1967) 2Q.B. 116, 143. It was decided that no Act of Congress can be disputed on the ground that it contravenes Customary International Laws. Treaties, by Art II of the US Constitution, can only be enforced internally, if they are ratified by at least two-third of the Senate. Some of the conventions have been domesticated through this process such as domestication of guidelines and regulations in the LC into the US Ocean Dumping Act in respect of Deep-Water Disposal.

b. National legal framework

The National Legislation allows for total removal and discarding of installations at the ocean in the Rigs to Reef Programme, which must be approved by the relevant Coastal State and BSEE. In 2015 alone, 470 platforms were transformed into artificial reefs. Before the shoreline State and BSEE approve the Rigs to Reef Programme, they must take into consideration the suitability of the structure for a reef and also the local environmental impacts. Before embarking on the programme, wells connected with the platform must be capped and deserted.

National legislations are replete with technical standards and financial security arrangements that must be complied with by operators. BSEE is the sole regulators of decommissioning, because it is in charge of approving decommissioning programmes as well as enforcement of safety and environmental regulations as stipulated by OCSLA Act. BOEM issued a notice NTL NO 2010 – GO5M 2010 directing operators in USA Oil and Gas Industry that all disused wells and platforms of 5 years must within 3 years be enduringly or provisionally capped and discarded or zonally isolated.

The OCSLA and its regulations provide for decommissioning obligations on operators by making them to sign an offshore lease as stipulated by the Act as well as applying for and obtaining approval for future removal of installations and pipelines within 1 year either prior to or at the annihilation of the lease, in the event that the operator or DOI feels that the platform are obsolete, safe or have reached the end of their useful life. The objective of OCSLA and its regulation is to reduce environmental and safety risks and possible conflict with other clients of the US Federal Outer Continental Shelf (OCS) (such as marketable fishing, armed forces activities, haulage or navigation, and other petroleum/renewable energy operations, etc) as a result of leaving idle platforms in the ocean.

The OCSLA provides that operators must obtain approval for the method of removing installations from BSEE before the removal process by applying to it in writing. Environmental Policy Act also stipulates that a site-driven ecological review is carried out for all removal applications. BSEE can impose requisite mitigating measures as relevant requirements for approval of the applications. Methods of removing platforms are not provided for under international, regional and national laws; but they are either mechanical or explosive severance. As stipulated by OCSLA total removal of installations involves:

- Plugging all wells and severing of casings or conductors 15 feet beneath the mud line.
- clean-up and removing all assembly and pipeline risers.
- Removal of platforms from base by removing all underneath founded components no less than 15 feet beneath the mud line.
- Getting rid of the platform in a junk yard or manufacturing yard or using platforms as artificial reefs.
- Performance of site approval authentication at the site of installations to make sure all wreckage or possible barriers to other users of OCS have been removed.

The National Fishing Enhancement Act (NFEA) 1984 modified the OCSLA's provision on complete removal of platforms from USA offshore. Under NFEA obsolete oil and gas installations can now be used for artificial reefs to breed fish under the National Artificial Reef Plan (NARP) of 1985. Both the Federal and oil-rich states government have evolved their separate NARPS and artificial reef programmes as governed by their district legislations. Decommissioning in USA is in three phases: planning, permitting and implementation stages, hence USA's approach to abandonment/decommissioning is preventive. Partial-removal of offshore installations is now remarkably

allowed because of the alternative uses of obsolete platforms for artificial reefs and proposed alternative energy projects (wind and wave energy: WWE) or offshore wind farms, aquaculture activities, Liquefied Natural Gas (LNG) receiving terminal, locations for mooring elements of ocean observing systems and offshore hotels. It is apparent from the regulatory requirements of OCSLA that residual liability lies on the oil and gas operators in USA's outer continental shelf and EEZ.

4. Comparative Analysis of Nigeria's, South Africa's, UK' s and USA's Legal Framework on Abandonment/ Decommissioning

In the four jurisdictions onshore decommissioning/abandonment is regulated by national legislations and host government contract whereas offshore abandonment/decommissioning is governed by International Conventions, Regional Conventions, National or Domestic Laws and host government contracts. In South Africa, UK and USA, some of these international and regional conventions have been incorporated into their legal systems for easy and smooth compliance and enforcement and to meet constitutional requirements. Nigeria has not domesticated any of the conventions she has approved except EGASPIN which contains only guidelines and standards of IMO.

UK's and USA's legal frameworks expressly provide for residual liability to be borne by International Oil Companies (IOCs) or operators. Their legislations contain Decommissioning Security Agreements (DSAs) by way of creating funds for decommissioning thereby safeguarding their tax payer's monies. Residual liability is not provided for under Nigeria's and South Africa's legal regimes.

UK's and USA's legislations adopt the precautionary and polluter-pays principle to ensure operators maintain sustainable decommissioning management of their onshore and offshore environments. Hence, they employ prescriptive and goal-setting legislative approaches respectively to make laws that regulate decommissioning of onshore and offshore platforms and facilities. Their legislations set detailed requirements for operators to comply with as well as setting legal boundaries and objectives which the operator must meet. These protocols consist of but are not restricted to safe requirements, remediation, the require depth, for instance, USA's OCSLA prescribes that the depth of plugging all wells and severing casings or conductors of platforms must be 15feet below the mudline. Nigeria's and South Africa's laws are vague and ambiguous. They are tersely prescriptive in approach.

Legislations in UK and USA were made with a view to catering for emerging risks, future generations and technological changes. For instance, alternative uses for obsolete installations have been devised in the USA. This futuristic outlook of their law is informed by their many years of experience of decommissioning management. Nigeria's and South Africa's laws are obsolete and not meant for 21st Century decommissioning management of environment.

UK's and USA's laws cater for the unborn generations and sustainable environmental management. This is achieved through the establishment of trust fund (in particularly UK) which is held by the government until the expiration of decommissioning. In addition, the petroleum industry is made to develop Decommissioning Security Agreements (DSAs) in which each participant in a Joint Operation Agreement is made to pay cash or other forms of security into the trust fund. The DSAs and JOA take care of insolvency of the operator as well as remove overlapping liabilities.

UK's and USA's legislations contain strict enforcement procedures or compliance designs for instance, where an operator in UK fails to meet its decommissioning obligations, the provision of her national legislations hold all the owners of an International Oil Company (IOC) jointly and severally liable. In UK, such liability is not only extended to parent companies of IOCs, but officers, directors and managers will also be held criminally liable, if it is proved that they consented, connived or were negligent over the offences charged on the IOC. Under the South African Dumping at Sea Control Act, failure by an operator to obtain permit from the Director General in the Ministry of Environmental Affairs and Tourism constitutes an offence "unless the disposal was necessary or reasonable in the circumstance in order to save human life, the installation or to prevent damage". This provision is lax and imprecise but only cogent if failure to obtain permit is to save human life. Nigerian legislations do not contain civil or criminal approaches for decommissioning offences by IOCs.

National laws and host government contract regulations are poorly framed to regulate onshore decommissioning in UK, USA, Nigeria and South Africa. They more or do not contain Decommissioning and Rehabilitation Plan (DRP). In UK and USA, they are left with local government authorities which have less

defined regulations. In 2005, Nigeria, in an attempt to address this anomaly established the decommissioning fund for model Production Sharing Contract (PSC) but with Poor Implementation Strategy (PIS). In South Africa too, onshore decommissioning is poorly regulated.

5. Findings/Observations

In carrying out this research, it was observed that: The preparedness of a country for decommissioning of onshore and seaward petroleum and natural gas installations is dependent on its decommissioning experience. African countries have had no experience with decommissioning; hence they are lax with the issue even though oil and gas platforms in their domain are nearing the end of their useful production and structural lifetimes. USA has had several decades of decommissioning experience while the Brent spar episode taught UK a bitter lesson. This explains why both countries have reviewed and re-enacted their oil and gas legal framework with strict legal requirements to meet with the emerging risks and exigencies.

Alternative uses for obsolete platforms have been found in USA, one of which was been in active utilization for some decades now: rig-to-reef programme. However, these alternative uses of platforms can only postpone but do remove the necessity to decommission them.

Many countries do not apply the legal requirements of international and regional conventions because of the theory of double obligations. This is because states parties' obligation to international and regional conventions is inconsistent with their internal laws of fundamental importance, that is, their constitutions, which usually stipulates that convention must undergo transformation and, or, incorporation processes before they can be enforced. USA largely prefers her domestic laws to even international and regional treaties, while many African countries are hesitant in domesticating international and regional environmental conventions they have acceded to because of their quest for rapid economic growth and development.

Abandonment/decommissioning management is costly but has environmental, scientific and socio-economic benefits. It is a process that presents an opportunity for operators to fulfill their initial lease obligations by removing installations existing on the ocean thus the ocean floor is restored to its normal state. Partial decommissioning helps in the preservation of a large part of ecological communities (different varieties of fish and other mammals) that live in the structures. The conversion of platforms to alternative uses in USA has engendered economic and scientific benefits. Above all, state governments can benefit financially if residual liability is enshrined in their oil and gas laws, thus making financial resources available for environmental and socio-economic projects that are beneficial to their citizenry.

International and regional conventions that are analyzed in this article do not provide for the removal of offshore pipelines or ban the use of explosives to severe offshore platforms, which can destroy ocean life. Most domestic laws (except Nigeria's domestic laws) do not also provide for the removal of onshore pipelines. This lacuna may largely be due to the fact that International Rules pertaining to decommissioning of petroleum and natural gas installations and facilities is still developing in many regimes in the world.

6. Recommendations

It is recommended that international and regional conventions, municipal laws of Nigeria, South Africa, UK and USA be reviewed urgently to meet with International decommissioning best practices. This review will entail the formulation and establishment of comprehensive and broad legal and institutional regulatory frameworks and planning. New legislations that are recommended in this article should specify detailed procedures for pre, decommissioning and post decommissioning phases as well as adopt preventive, prescriptive and goal-setting approaches.

6.1. International and Regional Conventions

This article advocates the review of UNCLOS, Abidjan and Nairobi Conventions through the means of adoption of protocols to reflect and cover detailed provisions on abandonment and decommissioning, other deficiencies in the conventions should be incorporated into the Protocol. IMO Guidelines and Standards can be crystallized into a protocol. The issue of domestication of international treaties should be addressed by the United Nations through persuasion. Abidjan and Nairobi conventions should be reviewed to include detailed provisions on abandonment and decommissioning.

6.2 Municipal Laws and Host Government Contracts

a. Nigeria and South Africa

Nigeria's and South Africa's oil and gas laws are obsolete and need urgent review. It is shameful that the

Nigerian Petroleum Industry Bill (PIB 2012) which provided particularly for abandonment and decommissioning expenditure through the Nigerian Hydrocarbon Tax in Sections 299 to 352 has been passed after about a decade. It need be outrightly stressed that the owner of petroleum installations and structures has the onus of abandonment and decommissioning cost under domestic and international law. The new laws that are canvassed for Nigeria and South Africa should introduce best abandonment and decommissioning practices, such as providing that hazardous waste should not be disposed at sea, and that discarding at structures or facilities in both coastal or International waters must be completely accepted by their regulatory authorities based on proof of validation that onshore removal or reprocessing of structures are not available or not practicable in the instances. This, however, is contained in the South African Law but it is based on reasonability instead. In Nigeria, EGASPIN which is not a legal framework but merely guidelines and standards have taken care of it.

PIB 2012 should be reviewed to include the following provisions, if it does not contain them before being passed by the National Assembly: when members jettison ethnic chauvinism.

All installations and facilities owners should be made to draw up their Decommissioning and Rehabilitation Plan (DRP).

Decommissioning time should be streamlined and IOCs made to report in writing all idle structures to the Department of Petroleum Resources (DPR). Decommissioning Units (DU) should be established in DPR, and Nigeria National Petroleum Corporation (NNPC) and staffed with some experts on decommissioning issues.

Residual liability should be included, but IOCs should be granted tax reliefs of 20 – 50% to cushion the cost effect of their financing decommissioning. The new Act should expressly state that operators must put up with the price of decommissioning. This provision must take account of the establishment of Decommissioning Security Agreement (DSA) and Decommissioning Challenge Fund (DCF) as is done in UK to prevent the financial burden of decommissioning falling on government in cases of insolvency of IOCs or their clandestine abandonment of operations without the knowledge of government.

Remediation, recycling and disposal should be comprehensively provided for in PIB and South African new law that is advocated in this article. The provision on this subject in both countries' extant laws are vague and not expressive. Disposal sites should be named in the Acts.

The new laws should impose the duty of robust Corporate Social Responsibility (CSR) on IOCs or operators. The provision on consultation with host communities should be clear. The laws should impose this responsibility on operators.

Decommissioning and abandonment stages should be clearly, spelt out in the laws, to include planning, submission of decommissioning programmes to DPR some years prior to the process, review of Decommissioning and Rehabilitation Plan (DRP) and post decommissioning programme, and monitor and proactive enforcement of the laws to save from harm the socio-economic and ecological interest of Nigeria and South Africa.

The laws should make operators integrate their decommissioning plans into the life cycles of their projects right from project feasibility phase and the entire life of the fields (LOFs). The operators' Decommissioning and Rehabilitation Plans (DRPs) should be updated and reviewed from design, pre-feasibility, construction to five years prior to the end of the life of the field. The first DRP should contain Environmental, Social, Health and Safety Impact Assessment (ESHSIA).

The law should contain provisions which encourage operators to reduce cost of decommissioning through cluster decommissioning programmes and divestment of assets to larger operators from smaller operators as is done in UK.

The laws ought to contain a provision on vicarious liability and corporate personality as is done in UK, that is, parent companies of operators, their officers, directors and managers are prosecuted in respect of operator's offences. The implication of this provision is that the Act(s) should adopt criminal approach to adjudication.

The laws should prescribe alternative uses of installations, and the Licensee Liability Rating (LLR), to assist existing companies fund decommissioning cost as Canadian Alberta Energy Regulator has done to decommission wells that have been clandestinely abandoned. USA also need to review OCSLA to address this problem.

Nigeria and South African should review their host government contracts to address the current problems of onshore decommissioning since International and regional conventions do not extend to include taking

away and disposal of onshore structures due to the doctrine of territorial sovereignty. Nigeria's 2005 Production Sharing Contract (PSC) should be reviewed to increase its acreage and include detailed abandonment and decommissioning processes.

7. Conclusions

Abandonment and decommissioning are very crucial issues that present socio-economic and environmental implications for not merely the present but as well as future generations. They should not be treated with kid gloves by any responsible government and, or, operator. Decommissioning of former/old oil and gas sites is universal and is done because of the following reasons:

Abandonment of oil and gas installations is unsafe because of the residual hydrocarbons that are left below the surface of oceans/land. This may ultimately lead to the pollution of the surrounding environment, that is, water sources with oil, methane, poisonous gases consisting of hydrogen and sulphide which are toxic to humanity and wellbeing.

The wastes from drilling of oil and gas such as fluids, cuttings, other solid wastes that remain on sites constitute pollutants that are dangerous to human health.

Abandoned Oil and Gas installations can obstruct alternative uses of land and damage various species of fish and mammals in the seabed as well as hinder navigation.

Decommissioned oil and gas structures have large quantities of materials that can be recycled for alternative uses, for instance, rig-to-reef, mostly practiced by USA oil-rich States, such as Texas, Louisiana, California, Mississippi, Alabama, etc.

Nigeria and South Africa, nay, all countries with weak extant legislations on oil and gas exploration and exploitation should wake up from slumber and do something urgently to save humanity and costs.

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