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DECOMMISSIONING, SAFETY AND AFRICA'S BLUE ENERGY ECONOMY: AN ANALYSIS OF THE AFRICAN INTEGRATED MARITIME STRATEGY (AIMS)

2050

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ABSTRACT

The African maritime region is home to a variety of natural resources, including oil and gas and has significant potential for the maximisation of emerging offshore energy resources like wind, tidal and hydrogen. While these discussions on the economic exploitation of these resources and the environmental dimensions of decommissioning have been the focus of numerous studies,¹ the analysis of the legal and regulatory regime for safe decommissioning these assets and installations are quite limited. Considering that safety is an important consideration in the decommissioning of offshore oil and gas installations, this article takes a particularly unique position in critically examining the safety implications of offshore decommissioning of oil and gas infrastructures and the regulatory regime that is required to mitigate these safety risks. From an African context, it argues that the regulatory architecture for ensuring the safe removal of these offshore assets have not been given the required attention. More specifically, the decommissioning regime under the various African Conventions and particularly the African Integrated Maritime Strategy (AIMS) 2050, does not provide for a safety risk governance model as well as the various measures of regulatory scrutiny that ensures compliance in such a high and major risk operation. Drawing lessons from the European Safety Directive 2013 that was adopted following the 2010 Macondo disaster,² this article argues for the adoption of a safety case-like regulatory strategy that requires member states to promote the adoption of a Mazard report.

Keywords: Offshore, Decommissioning, Safety, Risk, Governance, Safety case, Oil and gas.

1. INTRODUCTION¹²

These prospects will translate into deploying requisite offshore infrastructure in addition to the existing inventory of offshore structures scattered across Africa's marine environment. Also, these offshore infrastructures deteriorate overtime and pose significant risk to the marine environment; thus, if not already established, it is imperative to have the relevant regulatory and legal frameworks for risk-management, fiscal, technical procedure, and allocation of liabilities (including residual liability)³ to avert this potential risk at the end of the offshore exploration and production activities when the deployed infrastructure are no longer in use. It is however important to note that although the paper places some emphasis on decommissioning, the safety issues and regulatory strategy discussed are equally relevant to other stages of offshore oil and gas operations.

In the Africa region, countries are lacking in experience on matters related to offshore decommissioning activities,⁴ although in December 2021 it was announced with scanty details that the 'first decommissioning' of an offshore installation in Africa is underway in Angola.⁵ Also, it was recently announced that the GNPC

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¹ Henrietta Nagy and Siphesihle, 'Blue Gold: Advancing Blue Economy Governance in Africa' (2021) Sustainability 1. Agenda 2063: The Africa We Want <<https://au.int/en/agenda2063/overview>> accessed 16 August 2022. See also, Acha Leke, Peter Gaius-Obaseki and Oliver Onyekweli, 'The Future of African Oil and Gas: Positioning for the Energy Transition' (McKinsey & Company, 8 June 2022) <<https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-future-of-african-oil-and-gas-positioning-for-the-energy-transition>> accessed 16 August 2022.

² Bernd Bluhm and Lito Xirotyri, 'What has Europe Learned After the Deepwater Horizon/Macondo Incident?' (2014) 1 International Oil Spill Conference Proceedings, 348-360.

³ Eric Oudenot and others, 'Preparing for the Next wave of Offshore Decommissioning' <<https://www.bcg.com/publications/2018/preparing-for-next-wave-offshore-decommissioning>> accessed 12 May 2022.

⁴ Heike Trischmann, 'Conclusions and Recommendations' in Eduardo G. Pereira, and others (eds), *The Regulation of Decommissioning, Abandonment and Reuse Initiatives in the Oil and Gas Industry: From Obligations to Opportunities* (Kluwer Law International, 2020), 691.

⁵ SAAB SEAEYE, 'First Decommissioning Underway in Africa', (SAAB SEA, 6 December 2021) <<https://www.saabseaeye.com/news/first-decommissioning-under-way-in-africa>> accessed 12 May 2022.

(Ghana National Petroleum Corporation) has commenced the decommissioning of the *Mr Louie* oil platform on Ghana's oldest oilfield, the Saltpond Oil Field.⁶

To decommission an offshore oil and gas installation, meticulous planning and huge expenditure are required.⁷ The expenditure requirement is forecasted to be in the region of about \$100 billion to decommission existing offshore infrastructure globally between 2021-2030, with Africa estimated to have 10% of the cost.⁸

The entire lifespan of oil and gas exploration and production is regulated by relevant national legislation to ensure amongst other things that the environment where these activities are conducted are protected from pollution and its adverse effect, especially in the offshore environment. The adverse effects can be catastrophically of an unimaginable scale as can be seen in the Macondo oil rig blowout in the Gulf of Mexico.⁹ To this end, it is only appropriate to provide a brief international and regional regulatory dimension to ascertain their effectiveness in terms of safety and the protection of the marine environment during and after decommissioning disused offshore oil and gas infrastructure.

Considering that safety is an important consideration in the decommissioning of offshore oil and gas installations, this article

⁶ OGV Energy "GNPC kicks off Saltpond Field decommissioning Project"(OGV Energy, 15 July 2022), <<https://www.ogv.energy/news-item/gnpc-kicks-off-salt-pond-field-decommissioning-project>> accessed 24 March 2023.

⁷ Timothy Hill QC and others, 'End of shelf life: The Regulatory Framework and Legal Issues Involved When Decommissioning Oil and Gas Platforms', (Lexology, 23 May 2016) <<https://www.lexology.com/library/detail.aspx?g=e424415c-b24d-4883-b709-ef80-ba2142b2>> accessed 12 April 2023.

⁸ IHS Markit, 'From Defunct to Refunctioning? Offshore Upstream Decommissioning and the Energy Transition', (S&P Global, 26 April 2022) <https://ihsmarkit.com/research-analysis/defunct-to-refunctioning-offshore-upstream-decommissioning.html#_ftn1> accessed 13 April 2023

⁹ For more details see, National Research Council, *Macondo Well Deepwater Horizon Blowout: Lessons for Improving Offshore Drilling Safety*, (2012, The National Academies Press, Washington DC); and several environmental pollutions in Africa, particularly in the Niger Delta of Nigeria which in November 2021 witnessed a major hydrocarbon leak of about 'two million barrels' into the Santa Barbara River and Nembe Creeks from a well head; see Agency Report, 'Nembe Oil: We will unravel cause, volume of spillage – NOSDRA' Premium Times (Yenagoa, 6 December 2021), <<https://www.premiumtimesng.com/news/more-news/499325-nembe-oil-we-will-unravel-cause-volume-of-spillage-nosdra.html>> accessed 13 April 2023.

takes a particularly unique position in critically examining the safety implications of offshore decommissioning of oil and gas infrastructures and the regulatory regime that is required to mitigate these safety risks. More particularly, from an African context, it argues that the regulatory architecture for ensuring the safe removal of these oil and gas infrastructure have not been give the required attention. More specifically, the decommissioning regime under the various African Conventions and particularly the African Integrated Maritime Strategy (AIMS) 2050, does not provide for a safety risk governance model as well as the various measures of regulatory scrutiny that ensures compliance. More specifically, the absence of a decommissioning safety plan to be approved by a regulator, independent verification, auditing, regular review mechanisms and a safety committee, renders the regime far from robust. Drawing lessons from the European Safety Directive 2013 that was adopted following the 2010 Macondo disaster,¹⁰ this article argues for the adoption of a safety case-like regulatory strategy that provides a comprehensive risk assessment and mitigation model as well as the necessary measure of regulatory scrutiny.

This paper is divided into five main parts. The first part provides the required research background and context. In this section, it becomes imperative to understand what decommissioning means and the broader safety implications. This is done through an analysis of some incidents that demonstrates the uncertainties and to a large extent the complexities of offshore oil and gas decommissioning. Following this very important research background, the second section discusses the legal regimes with particular focus on the international, regional and a jurisdictional case study. While there are some descriptions of the legal regime, the primary focus of the third section is written to critically analyse the connection between safety and decommissioning and the limited safety considerations under the African regime. In the fourth section, there is a focus on what lessons can be drawn from more advanced offshore energy regimes and the European Union offshore safety directive provides some valuable lessons. Because

¹⁰ Bernd Bluhm and Lito Xirotyri, 'What has Europe Learned After the Deepwater Horizon/Macondo Incident?' (2014) 1 International Oil Spill Conference Proceedings, 348-360.

it mirrors the United Kingdom's safety case regime, it became imperative to examine the UK safety case model. This approach and indeed the overall objective of the paper is captured in the conclusion that emphasises the need for both regional and jurisdictional options that could be useful for not just the broader African continent but emerging offshore oil and gas jurisdictions.

1.1 Background of Study

The safety of workers and other sea users before, during and after decommissioning is important but particularly challenging to regulate. One reason for this challenge is the level of uncertainty during decommissioning. At the decommissioning stage, installations that have been used for decades, are left with several structural integrity questions that could undermine safety of the decommissioning operation. The uniqueness of each oil and gas platform based on the platform design and location further complicates this challenge. Furthermore, the remoteness from land combined with deep water and harsh environment makes offshore decommissioning particularly dangerous. Taking all these factors into consideration, operators are expected to design and propose the safest possible decommissioning options that will be reviewed and accepted by the regulator in consultation with other relevant stakeholders. This can be time consuming and expensive, and so is the cost of getting it wrong.¹¹ According to Ruth Bemment;

“Reaching a decision on the best decommissioning process for each installation and pipeline is a complex, rigorous process demanding the highest degree of responsibility and care in order to balance protection of the environment and other users of the sea with health, safety and technological and economic considerations during decommissioning activities”.

To achieve the level of balance being contemplated by Bemment particularly in relation to safety, the regime must be designed to ensure “that all risks to personnel associated with the decommissioning process are adequately considered, evaluated

¹¹ John Paterson, ‘Health and Safety During Decommissioning’ in Marc Hammerson & Nicholas Antonas (eds), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice*, (2nd ed, Globe Law and Business 2016) 151.

and controlled to as low as is reasonably practicable”.¹² This is particularly important because following the OSPAR Convention Decision 98/3, most of the large steel structures will not be toppled in place and all but the base section with pile bottles (or footings) must be removed.¹³ This will result in closer proximity of personnel during decommissioning and while the risks are like those arising from construction or maintenance operations, there are further complications at the end of life of the installation as well as economic tensions.¹⁴

In analysing the balance between these environmental, safety and commercial factors, the different decommissioning options are useful. For example, in a study carried out on eight offshore decommissioning projects, it was revealed that “risk to safety were considered to be higher for complete removal compared to toppling and partial removal options, mainly because of exposure of the workforce to offshore hazards”.¹⁵ From this study, it is possible to assess and rank the risk. Therefore, “toppling and partial removal are ranked quite similarly, while for total removal, risks are greater when jacket is cut up into sections for transportation to shore”.¹⁶ Some of the generic hazards associated with offshore decommissioning are; well plugging and abandonment; cutting of conductors and appurtenances, disconnecting; purging and sealing pipelines and risers; removal of pipelines, risers and associated subsea structures; removal of platform inventory; making process trains safe; final shutdown,

¹² Ruth Bemment ‘HSE Decommissioning Topic Strategy’ (Health & Safety Executive, 2001) <<https://www.hse.gov.uk/research/otopdf/2001/oto01032.pdf>> accessed 16 August 2022. See also, Bamidele B, ‘Review of the Hazards and management Control Issues in Abandonment Safety Cases’(Health and Safety Executive, 1997) < <https://www.hse.gov.uk/research/othpdf/500-599/oth547.pdf>> accessed on the 16 August 2022.

¹³ Ruth Bemment ‘HSE Decommissioning Topic Strategy’ (Health and Safety Executive ,2001) <<https://www.hse.gov.uk/research/otopdf/2001/oto01032.pdf>> accessed 16 August 2022

¹⁴ Ruth Bemment ‘HSE Decommissioning Topic Strategy’ (Health and Safety Executive , 2001) <<https://www.hse.gov.uk/research/otopdf/2001/oto01032.pdf>> accessed 16 August 2022

¹⁵ Fact Sheets and Information Pack. Offshore Decommissioning Communications Project (ODCP), Sponsored by UKOOA, E&P Forum and the Norwegian Oil Industry Association.

¹⁶ Ruth Bemment ‘HSE Decommissioning Topic Strategy’ (Health and Safety Executive ,2001) <<https://www.hse.gov.uk/research/otopdf/2001/oto01032.pdf>> accessed 16 Aug ust 2022

dismantling of removal jacket; complete removal; loading to means of transportation and fastening down; unloading from means of transport; disposal.¹⁷ Each of these hazards could lead to significant safety issues.

While the different decommissioning options have similar environmental impacts, same cannot be said for safety. Unfortunately, the overall regulatory regime for offshore decommissioning is designed with a somewhat biased and unbalanced focus on the environmental issues, and this will need to be reconsidered. Furthermore, the safety implications of the various decommissioning options also raise residual liability concerns particularly for navigational purposes. Therefore, it becomes imperative to have a robust regulatory design that addresses both pre and post-decommissioning issues. The next section will address the suitability of the international, regional, and jurisdictional frameworks in this regard.

2. DECOMMISSIONING AND SAFETY: A BRIEF INTERNATIONAL DIMENSION

International conventions have played a significant role in the development of legally binding obligations in the protection of the marine environment from pollutions and offshore oil and gas exploration and production activities. The Geneva Convention on the Continental Shelf¹⁸ set the foundation for international obligation prohibiting the abandonment of disused offshore installations in the marine environment, requiring these installations to be completely removed at the end of oil and gas exploration and production activities.¹⁹

The strict complete removal obligation imposed in the Geneva Convention was relaxed under the United Nations Convention on

¹⁷ Ruth Bemment 'HSE Decommissioning Topic Strategy' (Health and Safety Executive ,2001) <<https://www.hse.gov.uk/research/otopdf/2001/oto01032.pdf>> accessed 16 August 2022

¹⁸ United Nations Convention on the Continental Shelf (adopted 29 April 1958, entered into force 10 June 1958).

¹⁹ Geneva Convention on the Continental Shelf 1958, Article 5(5)

the Law of the Sea (UNCLOS)²⁰ mainly because of the ‘prohibitive cost’ required for complete removal of these disused infrastructures.²¹ Under Articles 60(1) and 80, UNCLOS recognises the sovereignty of coastal states to construct and regulate oil and gas operations in their respective exclusive economic zones and continental shelves to exclusively “explore and exploit oil and gas resources...for economic purposes.” However, in the exercise of these sovereign rights, Article 60(3) imposes an obligation for coastal states to ensure the removal of those infrastructures which were constructed or deployed into the offshore environment. The purpose for their removal is mainly to protect the marine environment and ensure navigational safety.²² Article 60(3) is regarded as establishing ‘customary’ legal regime on offshore decommissioning²³ and paved the way for other ‘competent international organisations’ to adopt rules to protect the marine environment. While the safety of navigation is relevant under UNCLOS, there is no discussion on the safety of personnel or occupational safety models. This is understandable as UNCLOS is limited in its focus and objective. Perhaps one would refer to the IMO guidelines for more on the issue of safety.

The International Maritime Organization (IMO)²⁴ sets guidelines and standards for the removal of disused offshore installations following the foundation laid in Article 60(3) of UNCLOS. IMO as a ‘competent international organisations’, concerned with the potential risks of these disused offshore installations on

²⁰ United Nations Convention on the Law of the Seas (adopted 10 December 1982, entered into force 16 November 1994).

²¹ Birj M. Dimiri, ‘Offshore Platforms: A Legal Overview in Indian Ocean Perspective’ (2013) Vol. 9 Issue 1 Journal of the National Maritime Foundation of India, 80-109.

²² Robert Beckman, ‘Global Legal Regime on the Decommissioning of Offshore Installations and Structures’ in Myron Nordquist and others (eds), *The Regulation of Continental Shelf Development: Rethinking International Standards* (Martinus Nijhoff 2013).

²³ Geoff Hewitt, ‘Field Abandonment’ in Terence Daintith, G.D.M. Willoughby and Adrian Hill (eds), *United Kingdom Oil and Gas Law*, (2nd ed, Sweet & Maxwell 2012). See also Leon Moller, ‘UN Law on Decommissioning Offshore Installations’ in Marc Hammerson & Nicholas Antonas (eds), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice*, (2nd ed, Globe Law and Business 2016).

²⁴ International Maritime Organisation Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone, 1989

navigational safety and other uses of the sea, imposes a complete removal obligation, except such complete removal will pose serious safety risk to personnel or the marine environment, is technically impossible, or will entail huge financial cost, then such disused or abandoned offshore structure can be partially removed from the continental shelf or exclusive economic zones.²⁵ Regardless of the partial removal allowance, two categories of offshore structures are classified for complete removal. The first category are those structures in water depths of below 75m and weigh less than 4,000 tonnes in air, excluding the deck and superstructure, while the second category are structures that were emplaced on the seabed after January 1, 1998, are below 100m in water depth weighing less than 4,000 tonnes in air, excluding the deck and superstructure.²⁶ An analysis of the IMO guidelines does provide some indication that safety of navigation and personnel should form part of the consideration in choosing a decommissioning option. However, nothing is said about how that can be achieved, or which safety regulatory model is suited for such.

The London Dumping Convention²⁷ and the 1996 Protocol²⁸ are worth mentioning because of the standards and guidelines they established globally in prohibiting the dumping of disused offshore oil and gas installations into the marine environment. The London Dumping Convention specifically defined dumping to mean (i) 'any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea;' and (ii) 'any deliberate disposal at sea of vessels, aircraft, platforms or other man-made structures at sea'.²⁹ It created a licencing permit system where certain categories of waste can be dumped after duly considering factors such as the disposal method, location, the 'effects on marine life' and other uses of sea,

²⁵ IMO Guidelines and Standards , Article 3.1

²⁶ IMO Guidelines and Standards, Article 3.2

²⁷ Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter (London Dumping Convention) (adopted 29 December 1972, entered into force 30 August 1975).

²⁸ Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter (London Dumping Convention) (adopted 17 November 1996, entered into force 24 March 2006).

²⁹ London Dumping Convention, Article III(a)

alternative onshore disposal, etc.³⁰ The 1996 Protocol was adopted to replace the London Dumping Convention and impose stricter dumping rules. The 1996 Protocol mirrors the definition of dumping under the London Convention and included ‘any abandonment or toppling at site or platforms or other man-made structures at sea, for the purpose of deliberate disposal.’³¹ The licencing permit system and its requirements are retained in the Protocol. However, it is argued that placing disused offshore installations to be utilised as artificial reefs to protect the marine environment does not constitute dumping under the Protocol.³² Again, despite the relevance of these conventions in relation to decommissioning, it is apparent that the focus is not on safety and as such, it is not unusual that it does not form part of the consideration.

2.2 Safety and Offshore Decommissioning in Africa: A Fragmented Regulatory Regime

In line with Article 210(4) of UNCLOS, regionally in Africa there are a few conventions aimed at imposing obligations, setting rules, and standards for preventing, controlling, and reducing pollution in the marine environment, and to some extent attempting to regulate decommissioning disused offshore installations and structures. Some of these regional conventions are under the Regional Seas Programme³³ – the Abidjan Convention³⁴ and the Nairobi Convention.³⁵ While these conventions provide some

³⁰ London Dumping Convention, Annex III

³¹ Protocol to the London Dumping Convention 1996, Article 1(4)(1)

³² Alexandra Wawryk, ‘International Regulation on Decommissioning’ in Eduardo G. Pereira, and others (eds), *The Regulation of Decommissioning, Abandonment and Reuse Initiatives in the Oil and Gas Industry: From Obligations to Opportunities* (Kluwer Law International, 2020), 38.

³³ The United Nations Environment Programme (UNEP) launched the Regional Seas Programme in 1974.

³⁴ Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (adopted 23 March 1981, entered into force 5 August 1984). Contracting parties to the Abidjan Convention include Angola, Cameroon, Cape Verde, Congo (Brazzaville), Congo DR, Cote d’Ivoire, Equatorial Guinea, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mauritania, Namibia, Nigeria, Sao Tome and Principe, Senegal Sierra Leone, South Africa, and Togo.

³⁵ Convention for the Protection, Management and Development of the Marine and Coastal Environment of the East African Region (adopted 21 June 1985, entered into force 30 May 1996). Contracting parties of the Nairobi Convention include

regulatory guidance on the protection of the marine environment in relation to decommissioning, they do not provide any of such guidance in relation to safety. These regional Conventions shall be examined to determine whether in their current form, they can effectively regulate offshore decommissioning.

The Abidjan and Nairobi Conventions are similar in scope, aims and objective. While the Abidjan Convention regulate the marine environment of the West and Central Africa regions, the Nairobi Convention regulate the coastal states of Eastern Africa.

Article 2(1) of the Abidjan Convention defines pollution as “the introduction by man, directly or indirectly, of substances or energy into the marine environment, coastal zones, and related inland waters resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities, including fishing, impairment of quality for use of sea-water and reduction of amenities.” As it pertains to offshore oil and gas activities, it imposes an obligation on contracting parties to “take all appropriate measures to prevent, reduce, combat and control pollution resulting from or in connection with activities relating to the exploration and exploitation of the sea-bed and its subsoil subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction.”³⁶ The requirement to adopt ‘appropriate measures’ has been criticised for not showing clarity on whether it applies to decommissioning disused offshore installations.³⁷

In 2019, the Malabo Protocol³⁸ to the Abidjan Convention was adopted to specifically prevent, reduce, and eliminate pollution arising from offshore oil and gas exploration and production. Under Article 22 of the Malabo Protocol, specific offshore decommissioning obligations are imposed to the effect that “Contracting Parties shall ensure that at the end of the life of oil and gas fields, facilities are decommissioned in accordance with

Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, Tanzania, and South Africa.

³⁶ Abidjan Convention, Article 8

³⁷ Carlos Moreno, ‘Oil and Gas Exploration and Production in the Gulf of Guinea: Can the New Gulf be Green?’ (2009) 31 *Hous. J. Int’l L.* 419-468.

³⁸ Malabo Protocol on Environmental Norms and Standards for Offshore Oil and Gas Exploration and Development (Malabo Protocol), 2019

international norms and standards, such as those under the International Maritime Organization.” The reference to the IMO guidelines and standards implies that the decommissioning option can either be complete or partial removal.

Another relevant convention is the Nairobi Convention. The Nairobi Convention which was amended in 2010 to regulate beyond the East African region to encompass coastal states of the Western Indian Ocean.³⁹ Similar to the Abidjan Convention, Article 8 of the Nairobi Convention imposes an obligation on contracting parties to ensure that “all appropriate measures to prevent, reduce and combat pollution of the Convention area resulting directly or indirectly from exploration and exploitation of the seabed and its subsoil”. Unlike the Abidjan Convention it does not include ‘installations and structures’.

Both conventions recognise the rights of coastal member states to undertake offshore oil and gas exploration and production activities. While both conventions prohibit the ‘dumping of wastes and other matter’ from ‘manmade structures at sea’ in their respective Article 6, the Nairobi Convention falls short in having any other specific provision or protocol to regulate decommissioning disused offshore installations and structures, as is the case of the Malabo Protocol to the Abidjan Convention. While the discussed conventions remain valuable but limited in many ways that have been discussed, the African Integrated Maritime Strategy represents the latest attempt to provide a more comprehensive framework for the maximisation of resources within the African Maritime Domain and ensure sustainability. Unfortunately, the framework significantly prioritises the former and there is very limited consideration given to offshore workers safety across the installations life cycle, particularly during decommissioning. This is further analysed below.

³⁹ The Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (adopted 31 March 2010).

2.2. 1 Africa's Integrated Marine Strategy Framework (2050 Aim Strategy)

With the growing awareness of the vast living and non-living ocean resources within the African continent and following the African Union Commissions call for a coherent and strategic marine strategy, the Africa's Integrated Marine Strategy Frame was designed (2050 AIM Strategy). While the Strategy focuses on both living and non-living resources, this subheading will focus on non-living resources.

The Strategy is designed to provide a broad framework for the protection and sustainable exploitation of the Africa's Maritime Domain (AMD) for wealth creation. To achieve this, it sets out an ambitious "Plan of Action for its operationalisation with, clearly defined vision with achievable goals, including specific desirable objectives, activities and milestones towards attaining the Strategic End of Increased wealth creation in a stable and secured AMD." It then sets out seven missions that could bring this objective to reality. Of particular importance to this discourse, is the maritime dimension of the seven missions namely:

"Diverse illegal activities which include toxic wastes dumping and discharge of oil, dealing in illicit crude oil, ... energy exploitation, climate change, environmental protection and conservation and safety of life and property at sea.. research, innovation and development... maritime sector development".

The Strategy therefore calls on all stakeholders in Africa to "Rethink how to manage her inland waterways, oceans and seas" because "they are a key pillar for all AU Members States' economic and social development and are vital in the fight against poverty and unemployment". With such a mandate, the Strategy provides a clear set of goals for achieving the sustainable development of non-living resources. They are:

- (i) A comprehensive understanding of existing and potential challenges, including allocation of resources to identified priorities over a pre-determined timeframe.
- (ii) A comprehensive, concerted, coherent and coordinated approach that improves maritime conditions with respect to environmental and socio-economic development as well as

the capacity to generate wealth from sustainable governance of Africa's seas and oceans.

- (iii) A common template for the AU, the RECs/RMs,⁴⁰ and relevant Organisations; and Member States, to guide maritime review, budgetary planning and effective allocation of resources, in order to enhance maritime viability for an integrated and prosperous Africa.
- (iv) A business plan that specifies milestones, capacity building targets and implementation requirements, including technical and financial support from within Africa and also from development partners.⁴¹

The strategy recognises the need to be compatible with the existing African and internationally agreed legal frameworks. While some of these legal frameworks have been discussed above as generally applicable within the African region, in relation to non-living resources, the strategy is quite limited. There is significant emphasis on trade and human trafficking related legal regimes and on-going initiatives. However, it acknowledges that it operates within the framework for African Regional Strategy for Disaster Risk Reduction (DRR) which would mitigate offshore health, safety and environmental disasters that could be caused by oil and gas, renewable and other seabed mining activities. Perhaps the expectation is that with the establishment of the proposed Combined Exclusive Maritime Zone of Africa, these regimes could apply more effectively and reduce the risk of environmental mismanagement and other transnational threats. Therefore, in implementing the Nairobi and Abidjan Conventions, the AU together with relevant partners shall develop mechanisms to detect and prosecute environmental crimes like the dumping of toxic waste.

From a safety and ecological governance perspective, the 2050 AIM is quite limited. Although it provides for marine spatial planning and environmental and biodiversity monitoring, the content is more for definitional purposes than anything substantial. On marine spatial planning it argues for a

⁴⁰ AU- African Union, REC- Regional Economic Communities and RM - Regional Mechanisms.

⁴¹ Africa's Integrated Maritime Strategy (AIMS) 2050

“comprehensive, adaptive, integrated, coherent and ecosystem-based and transparent spatial planning process, based on sound science.”⁴² Through the adoption of a marine spatial planning regime, the AU and member states will be able to map out maritime spaces for a variety of activities and potential areas for future activities. The main priority is to “balance frequently competing sector-based interests, so that (a) marine space and resources are used efficiently and sustainably (b) decisions can be taken on sound data and in-depth knowledge of the sea and inland water ways, and (c) investors have greater legal certainty, encouraging Africa’s blue economic development”.⁴³

Regarding environmental and biodiversity monitoring, the Strategy does acknowledge the importance of an environmentally friendly maritime domain and the role it plays in self-sustaining many kinds of organisms. While the Strategy encourages the preservation of the marine ecosystem and the protection of its biodiversity, it does not articulate or provide a clear strategy of how this can be achieved other than “Providing support and technical assistance to vulnerable African states, to enhance capacity to ensure effective coastal patrols.”⁴⁴ From a marine risk governance perspective, the strategy only goes as far as defining its risk strategies and acknowledges the need to analyse the risk, evaluate them and adopt risk management measures. Unfortunately, there is no suggestion of a regulatory risk management or mitigation model that should be adopted or encouraged particularly for high and major risks.

An analysis of the Strategy reveals that the priority is largely on trade related marine activities and, in most cases, there is the absence of a clear regulatory strategy for how non-living resources can be maximised without jeopardising the safety of workers, other sea users and the marine ecosystem. This concern is equally reflected in the action plan. An analysis of the Plan of Action for Operationalization that was adopted in Addis Ababa, Ethiopia, on

⁴² AIMS 2050.

⁴³ AIMS 2050.

⁴⁴ AIMS 2050.

December 6, 2012, reveals nothing but a road map primarily aimed at improving Africa's blue economy.⁴⁵

It outlines “the major activities or actions identified for attaining the objectives, the measures of output, the lead and other institutions responsible for the implementation of the activities.” The action plan is divided into short term (2013-2018), medium term (2019-2030) and long term (2031-2050). While the action plan is commendable in theory, there are a variety of concerns particularly in terms of the required regular review of the action plan (to occur every three years) and the uncertainty of the financial implications of the action plan. There are also institutional challenges in areas such as “maritime security enforcement, an African International judicial mechanism dealing with maritime matters.”⁴⁶ These are broader challenges with the regime but one that equally affects non-living resources, nonetheless. The Ocean Governance Strategy Scoping Report captures the general challenges with the regime in the following words:

“Besides increasing insecurity in Africa's maritime waters, enhanced illegal trafficking, and degradation of the marine environment and climate change phenomena further exacerbating the existing environmental stresses that have significant implications on the governance of the oceans, not only at the level of individual nations, but more challenging at the regional and continental levels...there invariably exists inadequate and inconsistent political and economic appreciation of the values of the ocean capital, exposing African nations to insufficient cooperation. Accordingly, there is often inadequate integration of common policy framework at national, sub-

⁴⁵ Available at <https://www.google.com/url?sa=t&rcrt=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiZirjPqtD5AhWHM8AKHRkKCpoQFnoECAUQAQ&url=https%3A%2F%2Fau.int%2Fsites%2Fdefault%2Ffiles%2Fdocuments%2F30929docannex_c_poa_eng.pdf&usq=AOvVaw1LzCRQkLdInO5pKhgDGCwk> accessed 18 August 2022.

⁴⁶ Edwin Egede, 'Institutional Gaps in the 2050 Africa's Integrated Maritime Strategy' (2016) Vol.1 Journal of Ocean Law and Governance in Africa.

regional and regional levels for delivery of a collective action to safeguard the regions oceans and seas.”⁴⁷

3. DECOMMISSIONING AND SAFETY: GENERAL CHALLENGES AND OTHER EXACERBATING FACTORS

While the many benefits of maximising oil and gas recovery are apparent, the challenges of exploiting these resources in a safe and environmentally sustainable fashion appears to have eluded the continent. The issue is particularly concerning when the offshore installations used are no longer economically viable and must be safely decommissioned. In February 2022, an oil and gas production, storage and offloading vessel offshore Nigeria exploded and was in flames.⁴⁸ While the cause of the incident remains under investigation, the company claim that there were no deaths despite having ten men on board. This claim is contrary to local reports that suggest there were fatalities. It must be noted that this is one of many offshore safety and environmental disasters in relation to the exploitation of oil and gas and such issues are not less concerning at the end of life of the installation. In fact, the above experience can be likened to concerns during the decommissioning of the Brent Spar.⁴⁹

The challenges of safety and decommissioning of offshore installations are further exacerbated by other maritime concerns within the continent that could further cause investment, socio-economic, safety and environmental challenges. These broader and ancillary concerns in addition to the more specific legal and

⁴⁷ University of Dar es salaam, Institute of Marine Sciences, ‘Development of Ocean Governance Strategy for Africa: Summary of Scoping Study and Gap Analysis’ (2018) <<https://wedocs.unep.org/handle/20.500.11822/25703;jsessionid=5B76C47CF7206ACDD54FA13C26B4602C>> accessed 16 August 2022.

⁴⁸ Ed Reed, “FPSO in Flames in Offshore Nigeria” (Energy Voice, 2022) <<https://www.energyvoice.com/oilandgas/africa/offshore-africa/384921/nigeria-shebah-trinity-spirit/>> accessed 20 April 2022.

⁴⁹ Mark Huxham and David Summer, ‘Emotion, Science and Rationality: The Case of the Brent Spar’ (1999) 8(3) *Environmental Values* 349.

regulatory gaps provide an African ocean governance regime that is far from robust and fragmented.

From a legal and regulatory standpoint, the regime is unnecessarily fragmented and complex to navigate particularly in consideration of the relationship between global and regional ocean governance regimes.⁵⁰ According to Adewumi, the relationship between global and regional ocean governance has been “shrouded in mistrust and unbalanced impressions of actors about Global Ocean Governance (GOG) schemes’ genuineness to tackle ocean challenges faced by the regions.”⁵¹ This position makes a compelling argument for a more organic approach to ocean governance that accommodates the safety of offshore decommissioning.

Furthermore, as indicated in the first part of this paper, there is an enthusiasm to maximise the non-living resources particularly when they are initially discovered that demonstrates a failure to pay close attention to the design of robust and sophisticated ocean governance regime that addresses the safety implications of offshore decommissioning. A critical analysis of the African Integrated Maritime Strategy that was discussed above is an indication of this, particularly as it fails to provide clear safety risk assessment and governance models that reassure stakeholders that the risks have been identified, assessed and appropriate measures taken to mitigate them. The regime equally does not promote the required measures of regulatory scrutiny like independent verification and a review and auditing systems that foster compliance.

From a jurisdictional standpoint, despite the commendable efforts of Agenda 2063 and the AIM Strategy 2050 in advancing the use of ocean resources, Nagy and Nene argue that “African countries are still lagging behind in taking the initial steps of identifying and prioritising blue economy sectors and understanding the risks to

⁵⁰ Ibukun Jacob Adewunmi, ‘Exploring the Nexus and Utilities Between Regional and Global Ocean Governance Architecture’ (2021) 8 *Frontiers in Marine Science* 1 - 22

⁵¹ Ibukun Jacob Adewunmi, ‘Exploring the Nexus and Utilities Between Regional and Global Ocean Governance Architecture’ (2021) 8 *Frontiers in Marine Science* 14.

sea and ocean health”⁵² particularly as “many have not developed integrated blue economy strategies and road maps.”⁵³ The Scoping Study and Gap analysis by the Institute of Marine Sciences, University of Dar es Salaam reveals that the African ocean governance regime is fraught with “complexity, multiplicity and overlapping of mandates and jurisdictions.”⁵⁴ It adds that there is a “lack of exchange of information, policy integration, coherence and coordination of legal instruments and bodies in Africa”⁵⁵ particularly because “legal instruments and bodies have been created on an ad-hoc basis”.⁵⁶

Following the above analysis on the ocean risk governance regime particularly in relation to the safety implications of offshore decommissioning, the next section examines valuable lessons that can be drawn from the European Union, particularly in the aftermath of the Macondo disaster that led to the enactment of the European Offshore Safety Directive. While understanding that the African Union and the European Union have completely different legal and political formations, the EU’s Offshore Safety Directive provides the relevant principles that are worth considering and could potentially be adopted for the African Maritime Domain.

⁵² Henrietta Nagy and Siphesihle Nene, ‘Blue Gold: Advancing Blue Economy Governance in Africa’ (2021) 13 Sustainability 7153.

⁵³ Henrietta Nagy and Siphesihle Nene, ‘Blue Gold: Advancing Blue Economy Governance in Africa’ (2021) 13 Sustainability 9.

⁵⁴ Institute of Marine Sciences, University of Dar es salaam ‘Developing of Ocean Governance Strategy for Africa: Summary of Scoping Study and Gap Analysis’ (2018). <https://wedocs.unep.org/bitstream/handle/20.500.11822/25703/IMS_Ocean_Governance_Strategy.pdf?sequence=1&isAllowed=y> accessed 20 April 2022

⁵⁵ Institute of Marine Sciences, University of Dar es salaam, ‘Developing of Ocean Governance Strategy for Africa: Summary of Scoping Study and Gap Analysis’ (2018). <https://wedocs.unep.org/bitstream/handle/20.500.11822/25703/IMS_Ocean_Governance_Strategy.pdf?sequence=1&isAllowed=y> accessed 18 August 2022.

⁵⁶ Institute of Marine Sciences, University of Dar es salaam, ‘Developing of Ocean Governance Strategy for Africa: Summary of Scoping Study and Gap Analysis’ (2018). <https://wedocs.unep.org/bitstream/handle/20.500.11822/25703/IMS_Ocean_Governance_Strategy.pdf?sequence=1&isAllowed=y> accessed 18 August 2022.

4. OFFSHORE DECOMMISSIONING AND SAFETY IN EU: BACKGROUND AND CONTEXT

Whilst the Gulf of Mexico is the most mature when it comes to decommissioning of oil and gas installations,⁵⁷ the European region particularly the North Sea Region is equally mature and has experienced the decommissioning of a variety of offshore oil and gas installation activities. An example that occurred in 2020 is the removal of Shell's Brent Alpha oil and gas platform from the UK North Sea.⁵⁸

Indeed, a lot of decommissioning activities have been ongoing within the region, with the Offshore Energy UK⁵⁹ forecasting that spending on decommissioning in the UKCS in 2020 would be around 1.5 billion pounds.⁶⁰ This was despite the disruptions caused by the COVID-19 pandemic. 2020 and 2021 saw the decommissioning of a plethora of assets including 234 wells, 21 topsides, 18 jackets, about 50 kilometres of pipeline, about 4,500 tonnes of subsea structures and around 1,600 mattresses.⁶¹

Looking at mainland Europe, the Norwegian Petroleum Directorate estimated as far back as 2010 that decommissioning could cost around NOK 160 billion⁶² and forecasts for the next five years (2022 – 2027) indicate that on the Norwegian Continental Shelf (NCS) alone, an average of 25 wells per year up until 2024 and up to 94 wells in 2025 will be decommissioned.⁶³

⁵⁷ Kaiser, M. J., & Siddhartha, N., 'Gulf of Mexico Decommissioning Trends and Operating Cost Estimation', (2018) US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2019-2023.

⁵⁸ Nermina Kulovic 'Shell's Brent platform reaches UK port ahead of final dismantling' (Offshore Energy Biz, 25 June 2020). <<https://www.offshore-energy.biz/gallery-shells-brent-platform-reaches-uk-port-ahead-of-final-dismantling/>> accessed 18 May 2022.

⁵⁹ Offshore Energy UK (formally known as Oil and Gas UK) is the trade association for the UK's offshore energy industry that includes the UK's offshore Oil and Gas industry.

⁶⁰ OGUK 'Decommissioning Insight' 2021, 6.

⁶¹ OGUK 'Decommissioning Insight' 2021, 6.

⁶² Norwegian Climate and Pollution Agency 'Decommissioning of offshore installations' 2010.

⁶³ Mordor Intelligence 'Norway Offshore Oil & Gas Decommissioning Market – Growth, Trends, Covid-19 Impact, and Forecast (2022-2027).

Also, it has been forecasted that within the next decade, 417 wells, 313 platforms and 104 subsea wells will be decommissioned in the NCS.

The ramification of the aforementioned statistics is that Europe is an active hub for decommissioning from which lessons can be learned for Africa. This is particularly in view of the sophisticated and advanced safety regulatory model that regulates offshore oil and gas activities across its life cycle including decommissioning in Europe. More specifically, the requirement for a major hazard report represents a meta-regulatory approach to risk assessment that is not significantly different from the United Kingdom's safety case approach.

Indeed, the principles of the EU's major hazard report and the UK safety case model are largely the same, only that following the Macondo Disaster⁶⁴ and the resultant catastrophic environmental damage,⁶⁵ the EU, through Directive 2013/30/EU,⁶⁶ mandated the inclusion of environmental issues in major hazard reports. This Directive in turn led to the amendment of the UK's safety case regime through the enactment of the UK's Offshore Installations (Safety Directive) (Safety Case, etc.) Regulations 2015 (the 2015 Regulations) that replaced the Offshore Installations (Safety Case) Regulations 2005.

As clearly stated in the HSE's Guidance on the 2015 Regulations:

“The primary aim of SCR 2015 is to reduce the risks from major accident hazards to the health and safety of the

⁶⁴ Caroline Haquet, 'Macondo: the disaster that changed the rules' Technical Newsletter (France, April 2014). <https://www.scor.com/en/download/file/15886?token=def502007c48654f11f63b77bf5f08be716c3e3cd821044e9df3fc_48698fa53d2fe18fb177ff09bc54a1bf93ee21be74720459cd8312c3503406babbee310e7268fb07a4d95bdffac629e8392de00256466538c361c695d5884007b1069c815f4d1cb1103c1f46b3c03cc7fd300f636095aec66430ddeb9eebe245137dae5555758e81fec8> accessed 11 July 2022.

⁶⁵ Further information on the monumental environmental and biodiversity damage caused by the Macondo Disaster, also known as the Deepwater Horizon Oil Spill, Available at <<https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexi-co-oil-spill>> accessed July 4, 2022, as well as <<https://www.nationalgeographic.com/science/article/bp-oil-spill-still-dont-know-effects-decade-later>> accessed July 4, 2022.

⁶⁶ Which is the Directive on safety of offshore oil and gas operations and amending Directive 2004/35/EC.

workforce employed on offshore installations or in connected activities. The Regulations also aim to increase the protection of the marine environment and coastal economies against pollution and ensure improved response mechanisms in the event of such an incident. (Emphasis provided).⁶⁷

More particularly, unlike the 2005 Safety Case Regulations, the 2015 Regulations now have Regulation 7⁶⁸ and (more particularly), Regulation 8⁶⁹ to make environmental risks prevention more robust and effective. It should be noted that these requirements are distinct from the requirements for production installations,⁷⁰ non-production installations⁷¹ and more importantly and specific to this paper, for decommissioning operations.⁷²

Thus, it can be seen from the foregoing paragraphs, that UK's safety case regulatory model adequately reflects what obtains under the European model and the focus on the UK's safety case model as it pertains to decommissioning of offshore installations will suffice for the sake of this article. This is particularly in view of the fact that at the time the 2015 Regulations were enacted, the UK was still an integral part of the EU and the 2015 Regulations were enacted as a direct reaction to the EU's Directive 2013/30.—

4.1 Safety in the EU in the Context of Decommissioning: An Analysis of the Major Hazard Report/Safety Case Model.

The removal of oil and gas installations is governed by a plethora of legal instruments that include international, regional, and national regulations.⁷³ It might be helpful to state at the outset that in the UK, the risk governance model, in terms of safety

⁶⁷ Health and Safety Executive 'The Offshore Installations (Offshore Safety Directive) (Safety Case etc) Regulations 2015 Guidance on Regulations' (2015) HSE Books, page 5.

⁶⁸ Corporate major accident prevention policy.

⁶⁹ Safety and environmental management system.

⁷⁰ Covered by Regulation 17 - Safety case for production installation.

⁷¹ Safety case for non-production installation, Regulation 18

⁷² Safety case for dismantling fixed installation, Regulation 20

⁷³ Callum Falconer, 'Preface', in Marc Hammerson (ed), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice* (Globe Business Publishing Limited, 2013), 158.

regulation of oil and gas operations, including decommissioning operations, is firmly anchored on the safety case model.

Before proceeding any further, it is helpful to explain what is meant by 'safety case'. A safety case document is "the document by which the operator of an installation makes the case that the design, construction and operation of an installation are safe."⁷⁴ It is now apposite to briefly mention the theoretical underpinning of the safety case regulatory approach.

Safety case is a form of meta-regulation, which in turn is a form of self-regulation. According to Fiona Haines:

"Meta-regulation has developed as a method of harnessing the self-regulatory capacity within regulated sites whilst retaining governmental authority in determining the goals and levels of risk reduction that regulation should achieved."⁷⁵

As can be gleaned from the above, meta-regulation encourages self-regulation, whilst the regulator retains the duty of verifying and actively monitoring the self-regulating entities in order to ensure that they are working in line with the goal set by the regulator. This is the reason why the safety case has also been called the goal-setting regime.⁷⁶ This form of regulation is ideal for high risk and ever-changing industries such as the oil and gas industry. This is especially because in these kinds of industries, it is the members of the industry who creates and understands the risks that are best placed to manage and eliminate the risks.⁷⁷ Having stated the theoretical underpinnings of safety case, the succeeding paragraphs will focus on the regime itself, particularly as it relates to decommissioning of offshore assets.

⁷⁴ John Paterson, 'Health and Safety During Decommissioning' in Marc Hammerson (ed), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice* (Globe Business Publishing Limited, 2013), 158.

⁷⁵ Fiona Haines 'Regulatory Failures and Regulatory Solutions: A Characteristic Analysis of Meta-regulation' (2009), *Law & Social Inquiry* <<https://doi.org/10.1111/j.1747-4469.2009.01138.x>> accessed 4 July 2022

⁷⁶ John Paterson, "Health and Safety at Work Offshore" in G. Gordon, J. Patterson and E. Usenmez (eds), *Oil and Gas Law-Current Practice and Emerging Trends* (DU Press, 2011).

⁷⁷ Lord Robens, *Safety and Health at Work: Report of the Robens Committee* (Cmnd 5034, 1972).

As aptly noted in the MOU between the UK's HSE⁷⁸ and Norway's Petroleum Safety Authority⁷⁹ on Health and Safety Interventions related to Pipelines and Offshore Installations,⁸⁰ a safety case is:

The means by which a duty holder shows that:

- all hazards that could cause a major accident have been identified and evaluated;
- controls are in place to ensure that the relevant statutory provisions will be complied with; and
- the management system is adequate to ensure compliance with all health and safety law.⁸¹

Transferring the foregoing to decommissioning, a safety case risk governance model is a regulatory regime that demands that the decommissioner (be it the operator or the licensee) submits a document that makes the case and proves (through the comprehensiveness of the risk analysis) that the decommissioning operations will be safely executed. Such a document must have a detailed assessment and analysis of every conceivable risk that will be encountered during the decommissioning. More specifically, this requires the decommissioner to:

“identify the hazards that face the installation, assess the risk (including where appropriate by quantitative risk assessment (QRA) and indicate the means by which the risk will be reduced to a level which is as low as reasonably practicable (ALARP). The safety case would therefore perform the function of demonstrating how the operator would achieve the goals set for it in the regulations.”

⁷⁸ The Health and Safety Executive, the UK's government agency responsible for the regulation and enforcement of Health and Safety.

⁷⁹ The Norwegian government agency responsible for regulating safety of both onshore and offshore petroleum activities in Norway.

⁸⁰ Memorandum of Understanding Between the Health and Safety Executive and the Petroleum Safety Authority Norway Concerning Health and Safety Interventions Related to Pipelines and Offshore Installations Governed by Agreements Between the UK and Norway (2012).

⁸¹ Memorandum of Understanding Between the Health and Safety Executive and the Petroleum Safety Authority Norway Concerning Health and Safety Interventions Related to Pipelines and Offshore Installations Governed by Agreements Between the UK and Norway (2012), p 18.

Thus, such a document, must embody, to use the phrase contained in the EU Directive, a Report of Major Hazard (RoMH)⁸² and contain clear plans on how these identified hazards will be avoided in the course of the decommissioning. This document must be submitted by a licensee, after which it will be assessed and approved by the competent authority, and in the case of EU countries, even before authorisation to start oil and gas production is granted.⁸³ As an aside, it should be stated that this is different from what obtains in some African jurisdictions, including Ghana, where decommissioning plans are only submitted some years before the license expiration or the expected date of operation cessation.⁸⁴

One good feature of the safety case regime is that it is not the regulator, but the operator⁸⁵/licensee that intends to decommission the oil and gas installation (and who is thus best placed to know the installation) that has the task of determining how a safe decommissioning will be executed.⁸⁶ This practice is in furtherance of the truism that those who created and worked with the risks are best placed to manage and eliminate the risks.⁸⁷

The safety case model is also the backbone of the goal-setting regulatory governance model. This is because the regulator sets the goal, which in this case, is the safe and environmentally sound decommissioning of oil and gas installations but does not prescribe the way this goal will be achieved but allows the operator/licensee (who in any case is better placed to determine the most effective way to achieve the goal) to determine how to achieve the goal that is already set by the regulator. As such, the regulator's role will be (i) the assessment of the safety case to ensure that it can achieve the goal already set; and (2) after approval, monitor to ensure that the decommissioning is being

⁸² Directive 2013/30/EU, Articles 12, 13

⁸³ Directive 2013/30/EU, Annex III point 3(v)

⁸⁴ (Ghana's) Petroleum (Exploration and Production) Act 2016 Act 919, Sections 43(2)(a), 43(2)(b)

⁸⁵ Offshore Installations (Safety Case) Regulations 2005, Regulations 5 (a), (b).

⁸⁶ John Paterson, 'Health and Safety During Decommissioning' in Marc Hammerson (ed), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice* (Globe Business Publishing Limited, 2013), 158.

⁸⁷ Lord Robens, *Safety and Health at Work: Report of the Robens Committee* (Cmnd 5034, 1972)

carried out according to the plan, standards, and procedure that the operator has itself proposed'.⁸⁸

However, the fact that the operator/licensee prepares the safety case document should not be taken to mean that the regulator plays a passive role. This is because the safety case is a highly proactive risk mitigation model,⁸⁹ that "should be initiated at the earliest possible stage in the safety programme so that hazards are identified and dealt with while the opportunities for their exclusion exist."⁹⁰ Thus, it is seen that the early development, submission, evaluation and then approval of the safety case documents for oil and gas installations and operations, including decommissioning, is a feature that makes it proactive. This proactiveness also ensures that "it must be integrated within the development lifecycle, which will ensure a seamless development of the safety case from one phase to the next."⁹¹

This safety case risk governance model sees statutory expression in such European legal instruments as the UK's Offshore Installations (Offshore Safety Directive) (Safety Case etc) Regulations 2015, SI 2015/398 and the Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on Safety of Offshore Oil and Gas Operations.⁹²

4.2 Justifications for the Safety Case and Measures of Regulatory Scrutiny

A pertinent question is what makes the safety case regulatory model a better risk governance regime? A ready answer is the high measure of regulatory scrutiny that is built into the system. This

⁸⁸ John Paterson, 'Health and Safety During Decommissioning' in Marc Hammerson (ed), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice* (Globe Business Publishing Limited, 2013), 158.

⁸⁹ Dr Eddy Wifa 'A review of the UK's offshore oil and gas safety case regulatory model: is it worth "the hype"?' *I.E.L.R.* 2018, 6, 206-211, 208.

⁹⁰ T. Kelly, 'A Systematic Approach to safety case Management' (2003) Society of Automotive Engineers (SAE) International (University of York, 2021) <<https://www-users.cs.york.ac.uk/tpk/04AE-149.pdf>> accessed 12 July 2021.

⁹¹ Dr Eddy Wifa 'A review of the UK's offshore oil and gas safety case regulatory model: is it worth "the hype"?' *I.E.L.R.* 2018, 6, 206-211, 208.

⁹² Which was amended Directive 2004/35/EC.

regulatory scrutiny manifests in the form of independent verification system, recurrent review, and auditing system.

As stated above, the fact that the safety case does appear to be self-regulation in some sense, does not in any way suggest that the regulator plays a passive role. Indeed, the 2015 Regulations contains ample provisions that require the regulator to be actively involved in scrutinising the operators and this elevates the safety case from what would have ordinarily been self-regulatory mechanism to a sophisticated meta-regulatory tool. Some of these provisions include:

Regulation 16 (3), 2015 Regulations provides for an audit that means “systematic assessment of the adequacy of the management system to achieve the purpose referred to in Paragraph (1)(a) carried out by a person who is sufficiently independent of the system (but who may be employed by the duty holder) to ensure that such assessment is objective. This requirement is self-explanatory enough to require further elucidation.

Regulations 9 (1) (A) (B) provides that:

The duty holder must establish a scheme (a “verification scheme”) for ensuring, by the means described in paragraph (2), that the safety and environmental-critical elements and the specified plant –

- (a) are or, where they remain to be provided, will be suitable; and
- (b) where they have been provided, remain in good repair and condition.

The point of this provision is that the sufficiency of the ‘safety case’ advanced in the safety case document are verified by a competent and independent person. This verification involves “examination, including testing where appropriate, of the safety and environmental-critical elements and the specified plant by a verifier.”⁹³ The examination and testing also extends to “examination of any design, specification, certificate, CE marking or other document, marking or standard relating to those elements

⁹³ 2015 Regulations, Regulation 9 (2) (A)

or that plant by a verifier.”⁹⁴ Upon the conclusion of the verification, the recommendations of the independent verifier shall be accepted by the operator, who is expected to take remedial actions where required.⁹⁵

Another key regulatory scrutiny is that of the thorough review of the safety case document

- (a) no more than five years after the date on which the safety case was first accepted by the competent authority under regulation 17 or 18; and
- (b) at suitable intervals not exceeding five years following the first review mentioned in sub-paragraph (a).⁹⁶

The essence of this seasonal review is to ensure that the safety case remains a living document that is consistently updated to “take account of changing circumstances and knowledge.”⁹⁷ What is apparent from the above is that the safety case model is a proactive and effective regime where the regulator keeps a watchful eye over the operator towards ensuring that the mutually agreed goal of a safe environment and working condition is consistently paramount in all considerations and operations.

5. RECOMMENDATIONS AND CONCLUSION

This paper has provided a critical examination of the decommissioning offshore installations in relation to safety critical issues. It has also highlighted the tensions and imbalance between environmental, commercial and safety issues. The situation is particular concerning when the tensions between safety and cost are juxtaposed especially as these installations are no longer economically viable. It is in this regard that law as an instrument

⁹⁴ 2015 Regulations, Regulation 9 (2) (B)

⁹⁵ 2015 Regulations, Regulation 9 (3)

⁹⁶ 2015 Regulations, Regulation 23

⁹⁷ John Paterson, ‘Health and Safety During Decommissioning’ in Marc Hammerson (ed), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice* (Globe Business Publishing Limited, 2013), 160.

of social engineering is expected to contribute in mitigating the safety risk. Unfortunately, the article does highlight the limitations of the international and regional regimes from an African perspective. The absence of a regulatory strategy that requires the comprehensive assessment of the decommissioning plan from a safety standpoint and the lack of measures of regulatory scrutiny that should foster compliance is quite concerning. It is in this regard that valuable lessons have been drawn from the EU Offshore safety Directive.

Beyond the utilitarian value of properly decommissioning disused offshore installations, in the form of ensuring safe sea lanes and protecting the biodiversity of African waters, decommissioning of assets provides jobs, which is one of the aims of the AIMS 2050, which mandates the need to ensure that OHS is enthroned. This will ensure that the African workers involved in these high-risk decommissioning operations are adequately protected to ensure that these highly skilled workers are not lost to workplace incidents that will lead to injuries and loss of lives with the resultant diminishing of the badly needed skilled workforce for the African continent. Therefore, it is highly recommended that future Action Points and Strategies on the exploitation of Africa's maritime resources equally focuses on establishing a safety regime that is robust, effective, and fit for purpose for all conceivable operations. As already argued above, the safety case regulatory regime, which as stated above, has proven to be an effecting risk governance model is a viable system that can be evaluated for necessary legal transplantation.