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# SUSTAINABLE DECOMMISSIONING IN GHANA: HISTORICAL DEVELOPMENTS, CURRENT PRACTICE AND CHALLENGES

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## ABSTRACT

When Ghana enacted its first piece of legislation dealing specifically with petroleum operations in the upstream industry in 1984 - the Petroleum (Exploration and Production) Act, 1984 (PNDCL 84) - there was only one provision in the Act which dealt directly with decommissioning. This paper takes an introspective look at developments over time in putting in place an effective and sustainable decommissioning framework for Ghana's upstream petroleum industry. It analyses the gaps therein and traces attempts over time such as a review by the Commonwealth Secretariat of existing statute, and proposals for a decommissioning scheme, to close them. It analyses measures by the government and encapsulated in statute to fill those gaps and ensure an efficient and sustainable framework. It analyses these developments through to the present when the Saltpond Field is to be decommissioned - Ghana's first decommissioning exercise. Analysing the practical challenges in decommissioning the Field, impacts and risks, and that of Ghana's upstream industry in general, the paper concludes that Ghana has through myriad measures strived to ensure that its framework is sustainable and situations such as the current one for instance where it is the government - and not the contractor - paying for decommissioning is averted.

**Keywords:** Decommissioning, Ghana, Saltpond Field, Sustainability, Decommissioning Fund, Security Arrangements.

## 1. INTRODUCTION

Altit and Igiehon define Decommissioning as "the set of activities to be undertaken to manage and dispose of installations and platforms and eliminate environmental footprint once a producing field is nearing, or reaches, the end of its economic life."[1] When a field is basically exhausted, that is, all the economic resource that can be extracted has been done, wells must be plugged and facilities dismantled. As Cabopianco et al encpasulate;

> All over the world, indeed, there are many offshore platforms which, during the period of operation, have assured the extraction of hydrocarbons into the sea. However, once the reservoir has been depleted or the structure has surpassed its shelf life, they have become large-scale structures whose disposal process is complex and expensive, and impacts the environment.[2]

They go on to define it as "the series of processes involved in deactivating a facility at the end of its life, as well as its deconstruction and dismantling and the removal of components for reuse, remanufacturing, recycling, storage, and/or disposal."[3]

Upstream oil and gas facilities will include large concrete gravity structures, floating production systems, and fixed steel platforms whilst that of onshore will include wells, gathering lines, and production platforms. Upon termination of petroleum operations, these facilities need to be dismantled. The Environmental

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1 Flávia Kaczelnik Altit and Mark Osa Igiehon, Decommissioning of Upstream Oil and Gas Facilities (Globe Law and Business 2009) 257

2 Nunzia Capobianco, Vincenzo Basile, Francesca Loia and Roberto Vona, "Toward a Sustainable Decommissioning of Offshore Platforms in the Oil and Gas Industry: A Pestle Analysis" (Sustainability 2021) 2

3 Ibid

Resources Management aptly notes, "Decommissioning is much more complex for offshore facilities, principally as a consequence of the risk, cost and controversy related to the dismantling of offshore structures."[4] As it further notes, "Most facilities were designed to suit particular development and field conditions, including steel or concrete structures, fixed or floating production systems, offshore storage and loading installations, and under-extraction systems…There is no single tried and tested method for decommissioning."[5]

This Article is divided into five (5) sections:

Section 1, the Introduction, gives a short background to what decommissioning is and then launches into a broad overview of Ghana's upstream petroleum industry in relation to decommissioning.

Section 2 analyses the gaps in Ghana's decommissioning framework as at the time of the Saltpond discovery, and traces developments over time in trying to close these gaps and put in place an effective and sustainable decommissioning scheme, that is, by a review of existing statute, proposals for a decommissioning scheme, as well as the standard for decommissioning thereof.

Section 3 discusses developments in relation to decommissioning after the large-scale discovery of crude in Ghana in respect to decommissioning, specifically the decommissioning of the Saltpond Field, and addresses the project scope and funding, and impacts and risks associated with the decommissioning of the Field.

Section 4 deals with general challenges to the decommissioning activities in Ghana and Section 5 concludes.

## 2. DECOMMISSIONING IN GHANA

The Republic of Ghana made a very small-scale discovery of crude in 1970 with subsequent start of production in 1978. However,

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[4] Environmental Resources Management "Sustainable Decommissioning of Oil Fields and Mines" (Washington DC 2009) 21

[5] Ibid 22.

when reference is made to when Ghana embarked upon oil production, it is generally made in reference to the discovery of 2007, and subsequent start of production in 2010.[6] Nonetheless, it is the case that Ghana started producing crude in 1978, from the Saltpond Field. In respect of decommissioning, Ghana is yet to fully decommission a field and is in the process of putting measures in place to decommission the Saltpond Field.

Though it is expected that there will be some challenges with decommissioning the Field as this is the first time Ghana is engaging in decommissioning of upstream oil and gas facilities, it is expected that the challenges will be manageable as firstly the Field is in shallow water and further to, Ghana has long before this stage engaged in consultations, discussion and planning towards this inevitable event and has an effective framework to tackle it. It is believed that the framework is effective enough to meet the three pillars of sustainability as well, that is, profit, people and planet.[7]

In 1984, Ghana enacted the Petroleum (Exploration and Production) Act, 1984 (PNDCL 84) to govern petroleum operations in the country. There was only one provision in the Act which dealt directly with decommissioning, that is, Section 28, titled, Restoration of Affected Lands. Section 28 of the Petroleum (Exploration and Production) Act, 1984 stated that after the termination of petroleum operations in an area, the parties involved "shall restore the affected areas and remove all causes of damage or danger to the environment in accordance with the Regulations." The provision mandated that such restoration would include removal of all property brought into the affected area but no longer required for further operations, the plugging or closing off of all abandoned wells in such a manner as may be provided by the Regulations, and the conservation and protection of natural resources in such area.[8]

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6 Ian Gary, "Ghana's Big Test: Oil's Challenge to Democratic Development" (Integrated Social Development Centre and Oxfam America 2009) 18.

7 Capobianco (n 3) 3

8 Section 28 – Restoration of Affected Lands

The Saltpond Field started producing crude on 1st October 1978[9] and 3.47 million barrels of oil is reported to have been produced over a period spanning 1978 to 1985 while 14 billion cubic feet of gas was flared.[10] Agri-Petco developed and exploited the Field from 1978 to early 1984. The crude produced from the Field dwindled from production of 4,800 barrels per day (bpd) in 1978, to 750 bpd in 1984 and Primary Fuels assumed the operation of the field. By July 1985, production had declined to 580 bpd.[11] The license reverted to GNPC, and the Field was shut-in.[12] GNPC assumed responsibility for the field pending rehabilitation, and undertook maintenance operations on the platform.[13] As the Environmental Resources Management aptly notes, "In fact, the temporary shutdown of non-commercial wells and fields is very common operationally. If the economics (due to higher oil prices, lower production costs, new technologies or changed contractual terms, etc.) present during a temporary shutdown are such that additional exploitation becomes attractive again, then the field is commissioned and brought back into production operations."[14]

The Saltpond Offshore Producing Company Limited (SOPCL) was formed by GNPC and Lushann-Eternit Energy Limited as the joint venture vehicle and local operator of the Saltpond Field. SOPCL took control of the Field in August 2000 and commenced with the repair of the Mr. Louie platform which was in a "terrible state of disrepair."[15] When the workover was completed, only two wells were able to produce between 480-600 barrels per day (bpd).

On the 4th of June 2002, the Managing Director of the national oil company, Ghana National Petroleum Corporation (GNPC),

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9 ibid.

10 Grant Ohemeng Kesse, "Oil and Gas Possibilities On-and Offshore Ghana" in M.T. Halbouty (ed), Future Petroleum Provinces of the World (American Association of Petroleum Geologists 1986) 427, 440 notes that 2,149,204 barrels of oil had been produced between 1 October 1978 and 31 December 1983.

11 Ibid.

12 Ibid.

13 Tsatsu Tsikata, "Re-Shaping the Framework for Petroleum Exploration and Pro duction – Ghana's Experience" in Einar H Bandlien (ed), Policy and Management of Petroleum Resources (Nopec a.s 1990) 291, 299.

14 Environmental Resources Management (n 5) 46

15 Saltpond Offshore Producing Company Limited, "Present Status" (Saltpond Offshore Producing Company Limited, 2010) <http://www.saltpondoffshore.com /presentstatus.html> accessed 13 June 2010

requested assistance from the Economic and Legal Section (ELS) of the Special Advisory Services Division of the Commonwealth Secretariat to review the suitability of the existing regulatory regime in Ghana for promotion of petroleum exploration in Ghana, particularly in deep water.[16] Its fiscal and non-fiscal recommendations included "to elaborate a scheme to address the decommissioning of petroleum field installations at the end of field life…"[17] The intent was to have a framework that would ensure that decommissioning was done in a way that would ensure that at the material time, decommissioning could be done effectively and comprehensively. In effect, the goal was to put in a framework that ensured there was adequate planning towards decommissioning right from the start all the way to the very end.

In this regard, the Commonwealth Secretariat came out with a Report[18] dated January 2003. Thus, Ghana's drive towards putting in place an effective and sustainable framework to ensure that decommissioning was done properly and in an environmentally sensitive manner started years back and has been progressively developed into the current framework.

The Commonwealth Secretariat noted in respect of this provision, Section 28, that, "This is an inadequate provision, particularly as no Regulations have been promulgated to flesh out the decommissioning obligation laid on the operator."[19] It further noted, "A critical question is how this obligation is to be carried out and financed, particularly as at the end of field life when the obligation arises, the contractor may not have the financial resources to make good its obligations."[20] The Commonwealth Secretariat was of the opinion that the provision as it was, was too

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16 Commonwealth Secretariat, Economic and Legal Section Special Advisory Services Division, "A Review of the Regulatory Regime for Petroleum Exploration and Production in Ghana: A Report Prepared for the Ministry of Energy and the Ghana National Petroleum Corporation," January 2003, Page 1

17 Commonwealth Secretariat, Economic and Legal Section Special Advisory Services Division "Proposals for Changes to the Regulatory Regime for Petroleum Exploration and Production in Ghana" 1

18 The Report was prepared by a team consisting of Mr. Bryan Land, Special Advisor (Economic), Mr. Makbul Rahim, Chief Programme Officer (Legal) and Mr. Victor Kitange, Chief Programme Officer (Economic).

19 Commonwealth Review (n 17) Page 41

20 Ibid

vague and difficult to enforce and so sought to flesh it out. It laid out the following as matters to be considered.

## 2.1 Matters to be considered when enhancing the Petroleum (Exploration and Production) Act, 1984.

The Secretariat noted that the need to establish a regime for dealing with decommissioning, and specifically with the treatment of decommissioning costs and security arrangements for meeting these costs, was becoming increasingly pressing for a number of States, particularly because, for the first time, a potentially large number of fields were coming to the end of their production lives."[21] It raised a number of issues for consideration in respect of Ghana's industry.

It noted firstly as a general observation, that states needed to put in place regimes to regulate the standards and the scope of removal to be required, having regards to their respective international obligations, and the allocation of responsibility for meeting those commitments."[22]

It noted secondly that an administrative as well as fiscal infrastructure needed to be devised and implemented. It further noted that the method of calculating decommissioning costs required consideration, preferably at an early stage of production, as well as the type of security arrangement to be put in place to meet such costs.[23] The Secretariat noted the question of the allocation of residual liability after decommissioning and the attendant issue of continuing contributions to secure the meeting of costs of the liability, particularly where partial decommissioning was permitted. The Secretariat noted a number of factors of relevance in determining these matters that had to be resolved, that is, the questions whether, and by how much, the State should contribute to decommissioning costs, the timing of any contribution by the State, the method by which such a contribution should be made, and security for the State against default by a party in meeting its decommissioning obligations and

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[21] Ibid
[22] Ibid 42
[23] Ibid

the fiscal treatment of and accounting of such decommissioning costs.[24]

The Commonwealth Secretariat also noted that the practical complexities of decommissioning also impacted upon the determination of a regime for decommissioning costs. It noted that for instance, having regards to the costs involved, where there was more than one installation in a field, the government had to decide whether it would require decommissioning to be undertaken in respect of each installation or whether it would be mothballed until such time as all the installations in the field could be decommissioned as a single exercise. It further noted that similarly, the length of time taken to decommission was also of relevance. The nature of the installations to be removed has implications for cost, timing and the extent of the decommissioning required.[25]

The Commonwealth Secretariat noted fourthly that, there had to be due regard to environmental considerations and that failure to do so would have serious repercussions as was the case in the U.K. and elsewhere in Europe following the attempted decommissioning of the Brent Spar platform.[26] It further noted the need to take into consideration rapid technological developments currently taking place in respect of decommissioning and ensure that there was sufficient flexibility in the regime adopted to take account of such developments which could serve to reduce costs and length of time taken to decommission.[27]

A fifth issue the Commonwealth Secretariat raised for consideration was that, in devising a regime for decommissioning costs, a government had to determine whether it wished to adopt a system that simply provided security against a contractor's failure to meet decommissioning obligations (that is, contingent security such as decommissioning guarantee which is triggered only in the event of a default) or a system by which provision was made to

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[24] Ibid
[25] Ibid 43
[26] Ibid
[27] Ibid

secure future costs of decommissioning, or a system that included both.[28]

It also noted that in the economic context, a government had to make a decision as to how it wished to deal with the question of decommissioning costs once production had ceased or during the years of production.[29] The Secretariat noted that whatever system was adopted, the end result had to be to ensure that the government could operate effectively, for instance, by ensuring that the state tax regime "complements rather than undermines it."[30] It concluded on that point by noting that the decommissioning regime must seek to ensure that neither the state nor licensee bore an unduly unbalanced share of the financial responsibility in respect of decommissioning.[31]

The Commonwealth Secretariat noted that the treatment of decommissioning costs could take one or the other or a combination of tax relief and government grants. It noted in respect of tax relief that it was the most widely employed mechanism and it was a situation where losses incurred in decommissioning installations were permitted as deductions for tax purposes. In respect of the government grant, the government paid directly to the contractor a contribution to costs incurred in decommissioning, as opposed to granting tax relief.[32]

The Commonwealth Secretariat considered a number of options in respect of security arrangements/financial assurance mechanisms[33] for dealing with the costs of decommissioning. It considered the Sinking Fund/Trust Fund,[34] escrow account,[35]

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28 Ibid 44
29 Ibid
30 Ibid
31 Ibid
32 Ibid
33 Writing in respect of both the oil and gas as well as the mining industry, the Environ mental Resources Management (n 5) 7 define it as, "the various financial instruments or alternatives available to a mining/oil and gas operator to assure that sufficient funds are reserved to return impacts of mining/oil and gas operations when activities cease and the project is no longer generating revenues to an environmentally and socially acceptable condition."
34 Ibid. This is where monies are deposited in a fund to be applied at the end of the life of the field) and where the State can appoint trustees to ensure that monies set

third Party Guarantee,[36] Parent Company Guarantee,[37] Insurance,[38] Decommissioning Bonds,[39]Mutual Guarantee Fund,[40] and abandonment levy.[41] The Secretariat noted that of the options listed above, those that appear first are those that were employed then in 2003 to deal with decommissioning and that mechanisms found in the latter part of the list constituted possible arrangements for the future not employed as at that date but which could, over time, be adopted by some countries.[42] The Secretariat noted that, in the light of international practice which it had set out in the Report, it believed that a viable scheme worth considering by Ghana was one in which decommissioning costs incurred by contractors and GNPC were dealt with by the establishment of a trust fund or escrow account where interest accrued.

The Commonwealth Secretariat noted the need to incorporate appropriate provisions in the Petroleum (Exploration and Production) Act in order to facilitate the discharge of the obligations provided under Ghana's environmental Act, the Environmental Protection Agency Act, 1994 and regulations promulgated thereunder.[43]

aside cannot be touched by the parties or the government and from which monies cannot be removed to be applied for any other purpose).

35 Ibid. This is where a agent, usually a bank, holds the money in a fund and upon which interest accrues and the money is not released to the beneficiaries until the fulfilment of prescribed conditions.

36 I bid. This is usually in the form of bank guarantees and a bank requires security from the contractor or the payment of a fee in return for providing a guarantee to the government that the decommissioning obligations will be met or in the event of default, the contractor's obligations will be met.

37 Ibid. This is a third-party guarantee but provided by a a parent company in respect of its subsidiary.

38 A contractor will pay premiums to an insurance company in respect of an endowment policy and upon maturation, meet the decommissioning costs.

39 This is a regime where bonds are issued by the State, costs of which are deductible against taxes and royalties, and companies buy in each year of production, a bond in respect of a specific field, the amount determined by the parties to the field. The bond would be redeemable against the decommissioning expenditure.

40 A fund is established whereby the contractors pay a 'premium' which underwrites the failure of any of them to meet decommissioning obligations. The Fund is intended to meet decommissioning costs in situations where there has been a default by a party.

41 The State imposes a levy on the profits of each contractor in respect of its interest in a producing field. The monies accumulate and are applied to meeting the decommissioning obligations at the end of the life of the field.

42 Commonwealth Review (n 17) 46 - 47

43 Ibid

## 2.2 Proposals for a Decommissioning Scheme

As a result of the January 2003 Report, the Secretariat undertook a scheme to address the decommissioning of petroleum field installations when the fields were exhausted. The goal of such a scheme thus would be that there would be adequate planning over time and sustainability of the scheme so as to meet the eventual event. The scheme was based upon principles underlying the Namibian decommissioning scheme which were geared at providing a framework that would ensure adequate planning over time and sustainability of the scheme so as to cater for the eventuality.[44]

The principles underlying the Namibian decommissioning scheme were: an obligation placed on the contractor to decommission field installations at the end of the field life unless expressly released from that obligation by the State; the Contractor at the time of submitting its development plan to the government, had to include proposals for decommissioning the field; the approved decommissioning plan had to be reviewed and modified on a periodic basis to ensure that it remained consistent with the obligation to decommission; At a specified time during field operations, a decommissioning fund had to be created into which funds would from thereon, be contributed to build up funds for the eventual decommissioning of the field; Any shortfall in funds in the decommissioning fund to take care of the costs of decommissioning would not release the contractor from the obligation to complete decommissioning at the end of the field life in accordance with the approved decommissioning plan; The funds to be contributed to the decommissioning fund was to be treated as a project cost, in respect of which the contractor would be able to claim tax relief, as if an operating expense.

The Commission laid out details in respect of the proposed decommissioning scheme. It was strongly proposed that the decommissioning scheme needed to be as standardized as possible in the interest of transparency and ease of administration.[45] This proposed scheme had an eye towards ensuring that there was a

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[44] Commonwealth Proposals (n 18) 30.
[45] Ibid 35

scheme in place that would be sustainable to ensure that at the time of decommissioning, things had evolved over time and crystallized into a situation where there were enough funds and provisions put in place to ensure that the technical and financial aspect of this operation could be executed.

The foundation of the decommissioning scheme which the Committee proposed was a clear allocation of responsibility for decommissioning especially as the provisions in the Petroleum Act, 1984, that is Sections 21[46] and 28, did not make it clear where responsibility lay for which aspects.[47] As such, it was proposed that responsibility be borne by the contractor, irrespective of the ownership of physical assets at the time of decommissioning.[48] The only exception to this obligation would be where the government were to expressly excuse the contractor from that obligation such as in a situation where field facilities were to be employed by the government or removed to be used in another location.[49] This made it certain that in terms of the technical expertise, that was placed on the contractor to ensure that this was secured whether through its own expertise or finding some entity suitably qualified to engage in that venture. Thus, the contractor liability was to be joint and several and if the original contractor was to transfer its interest in full to another entity, that entity would assume the responsibility to decommission.[50] GNPC would not be deemed to be a contractor party and hence would not be liable to bear a share of the decommissioning liability.[51]

In order to have an insight right from the early stages as to how the contractor intended to meet its decommissioning responsibilities, the Contractor was obligated to prepare a decommissioning proposal. The contractor had to submit a decommissioning proposal as part of its field development

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46 Section 21(2): "…After termination of petroleum operations in any area, the contrac tor shall give the Corporation an option to acquire any movable and immovable assets used for such petroleum operations, and the operation of Section 28 of this Law may be modified accordingly at the request of the Corporation."

47 Commonwealth Proposals (n 18) 31

48 Ibid

49 Ibid

50 Ibid

51 Ibid

proposal.[52] The decommissioning proposal was to identify the facilities to be decommissioned, methods of decommissioning to be employed, an estimate of the costs involved in decommissioning and an indicative timetable for completion of operations.[53] In order to ensure the continued viability of the plan in order to ensure that it was sustainable, the plan was to be reviewed periodically during the field life.

Further, the contractor was also to fund decommissioning activities, though it needed not be the entity that carried out the actual decommissioning.[54] To ensure that funds were being gathered in a progressive and sustainable manner, the contractor was required to make regular contributions into a decommissioning fund created expressly for the purpose of defraying decommissioning costs.[55] The contractor was obligated to update the decommissioning plan at the point at which it began to set aside funds for decommissioning.[56] It was proposed that the monies in the fund be used exclusively for decommissioning and no other purpose and noted that customarily, trust funds and escrow accounts had been what was employed in the industry.[57]

In the case of the trust fund, it was to take the form of a trust established under legislation and overseen by trustees appointed for that purpose.[58] It was further proposed that the Government and the contractor each appoint half of the members of the board of the trust in order to safeguard the interests of the parties.[59] The other option considered was an escrow account.[60] This would involve an account at a bank, where the bank would act as the escrow agent operating under instructions regarding the account's operation. The selection of which bank to use would be a joint decision between the Contractor and the government.[61] It was noted that an important factor to consider regarding the escrow

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52 Ibid
53 Ibid 33
54 Ibid 32
55 Ibid
56 Ibid
57 Ibid 35
58 Ibid 35-36
59 Ibid 36
60 Ibid
61 Ibid

was the fees to be charged by the bank as that would reduce the accumulated value of the Fund.[62] The recommendation was the establishment of a trust fund since there was a legislative framework already in place in Ghana for trusts and to avoid the added costs associated with an escrow account.[63]

It was further proposed that at the end of the operations, the contractor would be responsible for funding decommissioning operations.[64] The Contractor would be entitled to withdraw funds accumulated in the decommissioning fund to meet such costs.[65] To trigger the release of the funds, the contractor would be required to furnish the trustees of the Fund or the escrow agent with a request that met the requirements set out in the rules for the operation of the trust or escrow account.[66] If there was a shortfall at the time of decommissioning, the Contractor would still be liable to decommission and the shortfall would have to be met from other sources available to the Contractor.[67] If there was an excess, it was recommended that in the first instance, such excess be transferred to any decommissioning fund(s) and if this was not an option, the excess revert in full or part to the contractor.[68] It was however observed that in the latter case, in most cases, only a portion, usually half, reverted to the contractor (which was taxable) and the remainder went to the government.[69] In respect of the treatment of the fund, it was proposed that contributions to the fund be treated as operating expenses, that is necessarily incurred to produce petroleum, in respect of which tax relief would be available.[70]

The Petroleum (Exploration and Production) Act, 1984 (PNDCL 84) was repealed by the Petroleum (Exploration and Production) Act, 2016 (Act 919). A number of Regulations have been passed under this Act and a few touch on Decommissioning as well.

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62 Ibid
63 Ibid
64 Ibid 36
65 Ibid
66 Ibid
67 Ibid 37
68 Ibid
69 Ibid
70 Ibid

Virtually everything proposed by the Commonwealth Secretariat is currently manifested in Ghana's laws.

Section 47 of the Petroleum Act, 2016 explicitly mandates a contractor or licensee to restore the affected areas and remove causes of damage or danger.[71] Further, a contractor or licensee is under strict liability towards the Republic for any loss or damage caused in respect of the decommissioning of the facility or implementation of the decommissioning plan,[72] and there is strict liability for pollution damage.[73] These provisions ensure that obligations to ensure that responsibility for activities associated with or arising out of decommissioning are explicitly and firmly pinned on the contractor to ensure that there are no gray areas which can be exploited to prevent effective decommissioning being done. Thus, due to the fact that it is strict liability, decommissioning is guaranteed and there is also the shifting of the burden away from the state. It is also in this vein that an assignor of an interest in a petroleum agreement has secondary liability for the financial obligations for the cost of implementing the decommissioning plan.[74] This ensures that in a situation where the assignee for whatever reason is unable to fully meet its obligations, the State can call upon another entity to help meet that obligation though the assignor's liability is limited to costs related to petroleum facilities including wells, that existed at the time of the assignment and further, constrained to a share of the costs calculated on the basis of the size of the interest assigned.[75]

GNPC is exempt from contributing towards decommissioning costs. Article 2.7(b) of the Model Petroleum Agreement states;

For the avoidance of doubt, the Corporation shall only be liable to contribute to Petroleum Costs:

(b) incurred in respect of Production Operations (excluding costs for abandonment and decommissioning) in any Development and Production Area to the extent of:

i) its Initial Participating Carried Interest; and

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71 Section 47 – Restoration of Affected Areas
72 Section 48(1) – Liability for Decommissioning
73 Section 83 – Liability for Pollution Damage
74 Section 44(7)
75 Section 44(8)

ii) any Additional Participating Interest…"

Thus, in respect to decommissioning, the State is not liable to contribute to decommissioning costs.

In respect of proposals for decommissioning the Field at the time of submission of Development Plan, Section 27(4) of the Petroleum Act, 2016 notes that;

> The description of the development and production programme shall provide detailed information on the economic, reserves, technical, operational, safety, commercial, local content and environmental components of the proposed development, including (y) decommissioning and disposal of facilities.

Further, it bears noting a provision which is not an outcome of those deliberations but captured in the Act. The Petroleum Act, 2016 mandates that the decommissioning plan be submitted not more than five years and not later than two years before the date on which the use of the petroleum facility to which the decommissioning plan relates is expected to cease operations or the petroleum agreement will expire. This provision is more of an extrapolation from Norwegian practice, more particularly, Section 5-1 of the Norwegian Act, titled, Decommissioning Plan.

Section 45 of the Petroleum Act, 2016 stipulates that a decommissioning fund be formed. It is intended that the Bank of Ghana will act as independent trustee in respect of the decommissioning fund and this is to be incorporated in Ghana's Model Petroleum Agreement (MPA). Clause 14.2(b) of the MPA will state that each contractor party shall subject to the Commission's approval, contribute to the decommissioning fund by depositing a cash amount – which amount shall be deductible - in a designated back account that has a long-term debt rating from at least two of the following agencies; by Standard & Poor's (A+), by Fitch Ratings (A+) and/or by Moody's Investors Services (A1) or their successor entities, or (2) to an agency which has a net worth of at least five (5) times the secured amount.

It is further noted that where the Contractor Party is unable to deposit 100% of the amount in cash, it may deposit 60% of the

amount in cash on the same terms enumerated above, with the remainder of 40% being in complementary securities in the form of a Letter of Credit (LC) - such posting not to be tax deductible - for its share of the decommissioning costs.

The deposit of cash shall be made in an escrow account opened with an international first tier banking institution, "designated by the Independent Trustee, that has a long term debt rating from at least two (2) of the following agencies; by Standard & Poor's (A+), by Fitch Ratings (A+) and/or by Moody's Investors Services (A1) or their successor entities."[76] This escrow account, will be managed by the Independent Trustee, Bank of Ghana, and withdrawals by the Contractor shall be made only and exclusively to finance the decommissioning activities approved by the Minister. The terms under which the funds would be managed will be agreed in a Trust Deed to be entered into between Bank of Ghana and the Contractor prior to the opening of the escrow account.

## 2.4 Standard for Decommissioning

The Environmental Resources Management aptly noted that the extremely high cost of offshore decommissioning led to revisions in national and international regulations. It noted that the thinking was that from the technical-economic perspective, the larger the structures and the deeper they are located (more than 100m), the more appropriate to leave them totally or partially intact.[77] In contrast, in shallow waters, total or at least partial structure removal is still advocated.[78]

It appears from the wording of Section 28 of the Petroleum (Exploration and Production) Act, 1984 that Ghana was prescribing an absolute standard. This is not surprising as Ghana is a signatory to the 1958 Geneva Convention on the Law of the Sea, which prescribes an absolute standard.[79] Ghana signed the 1958 Convention on 29 April 1958. However, it bears noting that Ghana is a party to the 1982 United Nations Convention on the

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[76] Proposed Clause, 14.15
[77] Environmental Resources Management (n 5) 17
[78] Ibid
[79] United Nations Convention on the Continental Shelf 1958, Article 5.5

Law of the Sea (UNCLOS) as well,[80]signing the Convention on 10 December 1982, and ratifying it on 7 June 1983. Ghana is thus bound to observe the provisions of UNCLOS as they are relevant to the decommissioning of offshore oil and gas facilities.

Ghana is a party to both the 1958 Geneva Convention on the Continental Shelf which prescribes an absolute standard of total decommissioning, and the 1982 United Nations Convention on the Law of the Sea (UNCLOS) which has the more permissive standard, permitting partial decommissioning of facilities.

In terms of the practice in Ghana in regards to decommissioning specifically, prior to large scale commercial discovery in 2007, the Petroleum Act, 1984, prescribed that the area be restored to its original state, which would imply, total decommissioning. That was the only provision in statute that dealt directly with decommissioning. The Petroleum Act, 2016 (Act 919), has a similar provision.[81] However, there are also provisions in the statute as well, covering partial decommissioning. The Petroleum Act, 2016 (Act 919) notes in Section 43(6) that a disposal may include removal of petroleum facilities for use elsewhere,[82] uses other than for petroleum activities,[83] or complete or partial removal or abandonment of the facilities.[84] Thus, as noted, Section 43(6)(c) states that a disposal may include complete or partial removal of the facilities. Regulation 169(2) of the Petroleum (Exploration and Production)(Health Safety and Environment) Regulations, 2017 (L.I. 2258) states that a contractor shall ensure "…that a petroleum facility or part of a petroleum facility is decommissioned, abandoned or removed in a prudent manner…"[85] It appears that though the standard in Ghana is total decommissioning, the law also makes provision for circumstances

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80. United Nations Convention on the Law of the Sea (Montego Bay), 10 December 1982 (in force 16 November 1994) 1833 U.N.T.S. 397, 21 I.L.M. 1261 (1982).

81 Section 47 – Restoration of Affected Areas; Also see Petroleum (Exploration and Production)(General) Regulations, 2018 (L.I. 2359), Section 63

82 Section 53(6)(a)

83 Section 43(6)(b)

84 Section 43(6)(c)

85 Regulation 169 – Decommissioning, Abandonment and Removal of Petroleum Faci lity; see also Petroleum (Exploration and Production)(General) Regulations, 2018 (L.I. 2359), Section 65(1)

where the exigencies of the situation might necessitate partial decommissioning.

It bears noting that though international guidelines have prescribed that abandoned or disused installations be removed, the huge costs in decommissioning as well as environmental considerations have led to a more flexible approach. Capobianco et al note that;

> Indeed, experts and scholars have agreed that the partial removal options can deliver better environmental outcomes than complete removal for platforms in terms of biodiversity enhancement, provision of reef habitat, and protection from bottom trawling, aspects that are instead negatively affected by the complete removal. This awareness has led some nations to leave obsolete structures to act as artificial reefs and/or to find alternative solutions for their sustainable reuse of these assets."[86]

## 3. DEVELOPMENTS AFTER THE LARGE-SCALE COMMERCIAL DISCOVERY OF CRUDE IN 2007

As at September 2009, the Saltpond Field was producing about 600 barrels a day[87] and only one of the two wells was producing at full capacity with the other working at half its capacity due to technical problems.[88] The government had plans to revamp the Field in order to increase the production to about 2,000 barrels of oil per day (bpd) in order to make it more viable and productive.[89] However, on 10th June 2010, GNPC announced that it had pulled out of SOPCL.

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[86] Capobiano (n 3) 2

[87] Saltpond Offshore Producing Company Limited, "SOPCL to Increase Produc tion" (Saltpond Offshore Producing Company Limited, 2010) <http://www.salt pondoffshore.com/newsreleases1.html> accessed 13 June 2010

[88] Ibid

[89] Saltpond Offshore Producing Company Limited, "Ghana Government to Revamp Saltpond Oil Project" <http://www.saltpondoffshore.com/newsreleases2.html> (Saltpond Offshore Producing Company Limited, 2010) accessed 13 June 2010

In 2014, approximately 79,602 barrels of oil were produced from the Saltpond Field.[90] In 2015, total liftings from the Saltpond Field dropped.[91] Though oil production from the Saltpond Field had been declining over the previous four years, the 2015 decline in output was due to a five-month shutdown as a result of the faulty rig, consequent upon which it was being maintained by a skeleton crew until operations resumed.[92]

This low production from the Field led to repeated calls from the Public Interest and Accountability Committee (PIAC) for the field to be decommissioned. On 23rd December 2015, production operations ceased due to the Field's inability to remain commercially viable.[93] In 2016, the Saltpond Field remained shut down, still awaiting decommissioning, and in maintaining GNPC's skeletal staff on the production platform, GNPC spent US$74,192.57 on staff emoluments and maintenance related costs.[94] PIAC noted; ""GNPC should as a matter of urgency complete the de-commissioning of the Saltpond Field as the cost of funding skeletal staff in SOPCL is not a judicious use of resources."[95]

The decommissioning of the Saltpond Field was among key recommendations submitted to the Ministry of Energy by an inter-agency committee established in 2016 to advise the Minister on the operations of SOPCL.[96] In 2016, the Minister for Energy terminated the Lushann petroleum agreement dated 30th July 2004, and directed GNPC to commence the process of putting measures in place to have the Field decommissioned.[97] PIAC noted; "PIAC's repeated call for the cessation of operations on the Saltpond Field due to non-performance/profitability, was finally

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90 Public Interest and Accountability Committee, "Annual Report on the Manage ment of Petroleum Revenues for Year 2014" 17

91 Public Interest and Accountability Committee, "Annual Report on the Manage ment of Petroleum Revenues for Year 2015" 26

92 Ibid.

93 Public Interest and Accountability Committee, "Semi-Annual Report on the Mana gement of Petroleum Revenues for Year 2019" 16

94 Public Interest and Accountability Committee, "Semi-Annual Report on the Mana gement of Petroleum Revenues for Year 2017" 10

95 Ibid 61

96 Public Interest and Accountability Committee, "Annual Report on the Manage ment of Petroleum Revenues for Year 2017" 10

97 Ibid

answered during the period under review when the Minister of Petroleum per a letter dated August 18, 2016 formally terminated the Petroleum Agreement on the Saltpond Field." [98]

The GNPC is in the process of decommissioning the Field in phases."[99] GNPC's strategy was to advise the Minister on identifying a technically competent operator for the Saltpond Field for the decommissioning process.[100] Phase 1 began in October 2016 and entailed selecting a consultant to lead the process.[101] Technical and financial proposals from shortlisted consultants were submitted and evaluations completed.[102]

In 2017, GNPC secured the services of a Project Management consultant (PMC), PAP Energy Limited, an integrated oil and gas services company[103] for Phase 1 of the Saltpond Decommissioning Project.[104] PAP Energy, provides a wide range of products for exploration, drilling, production and decommissioning and is registered with the Petroleum Commission per the Petroleum (Local Content and Local Participation) Regulations, 2013 (L.I. 2204).[105] A consultancy contract for the preparation of a Decommissioning Execution Plan (DEP) was signed with PAP Energy Ghana Limited on 12th March 2018.[106] As at the end of June 2018, the progress of work was 42 percent against a planned progress of 47 percent.[107] The contract cost was US$850,000.00 excluding the tax and logistics component, which was to be provided by GNPC.[108] The final DEP was anticipated to be ready by the end of November 2018.[109] As at the end of 2018, the plan had been completed, and was being subject to the internal

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98 Public Interest and Accountability Committee, "Annual Report on the Manage ment of Petroleum Revenues for Year 2016" 13
99 Ibid
100 PIAC (n 97) 10
101 Ibid
102 Ibid
103 Ibid
104 Ibid
105 Ibid
106 Public Interest and Accountability Committee, "Semi-Annual Report on the Mana gement of Petroleum Revenues for Year 2018" 15
107 Ibid
108 Ibid
109 Ibid

approval process of GNPC.[110] Subsequent to this, it was to be submitted to the Minister for Energy for approval in accordance with Sections 43-49 of the Petroleum Act, 2016.[111] The exercise was projected to cost between US$61.5 million and US$90 million.[112] The Plan was approved by the Minister for Energy in November 2019, and processes for procuring decommissioning contractor(s) commenced soon after.[113]

The decommissioning process is in three phases. Phase 1 is Pre-decommissioning planning and consultation. Phase 2 is permanent abandonment of wells, decommissioning of topside and other facilities. Phase 3 is post-decommissioning activities, including well and environmental monitoring and evaluation.[114] In the first half of 2020, $US1.40 million was spent on the Field's decommissioning, representing 0.7 percent of total receipts. This expenditure was for the remuneration of skeletal staff, feeding, consultancy services, crew change costs and other related expenses on the Mr. Louie platform.[115]

The Petroleum Commission engaged GNPC on the overall implementation strategy as well as preliminary budget estimates for the project execution.[116] The execution phase of the project was categorized into three (3) stages; well Plugging & Abandonment (P & A) concluding with removal of conductor pipes, topside removal of the Platform, dismantling and waste management and installation of surveillance and marine lights.[117] It is expected that the Field will be totally decommissioned mainly because of environmental and navigational concerns. It bears noting that some have advocated generally that offshore platforms

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110 Public Interest and Accountability Committee, "Annual Report on the Manage ment of Petroleum Revenues for Year 2018" 25

111 Ibid

112 Public Interest and Accountability Committee, "Annual Report on the Manage ment of Petroleum Revenues for Year 2019" 26

113 Ibid 26-27

114 PIAC (n 97) 10

115 Public Interest and Accountability Committee, "Annual Report on the Manage ment of Petroleum Revenues for Year 2020" 59

116 Public Interest and Accountability Committee, "Semi-Annual Report on the Mana gement of Petroleum Revenues for Year 2019" 16

117 Ibid 16

need not be totally decommissioned but can be sites that can offer a naturalistic experience and a platform for tourists.[118]

The official position in regards to the status of the Field is that the decommissioning has become necessary as the Field has drastically declined in production, and is no longer an economically viable venture.[119] In 2018, the Petroleum Commission, indicated the possibility of re-activating the Field after it received some proposals from certain companies that claimed there were interesting prospects there.[120] However, GNPC later announced that the Saltpond Field was to be decommissioned, and noted that it was with the backing of the Petroleum Commission. Thus, preparation towards decommissioning continued, albeit at a slow pace.

It has been further noted that the generally low output of the wells, coupled with grave concerns and challenges in respect to health, safety and the environment (HSE), and the possibility of a disaster on the platform, required decommissioning of the Field.[121] Benjamin Asante, the then Geophysics Manager at GNPC stated that, "the rig is a kind of death trap and there has been problems with it so we need to decommission it."[122]

GNPC in a presentation to coastal communities possibly affected by the decommissioning noted a number of reasons why the decommissioning was to be done.[123] It noted firstly that the field had exhausted the recoverable reserves and therefore the oil produced was so low that it was unable to meet operational cost and hence had become unprofitable.[124] It also noted that the platform and wells were in a deplorable state posing danger to the

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118 Capobiano (n 3) 11
119 PIAC (n 97) 10
120 Myjoyonline, "Activities at Saltpond Oil Fields to Continue – Petroleum Commission" <https://www.myjoyonline.com/business/2018/January-18th/activities-at-saltpond-oil-fields-to-continue-petroleum-commission.php>(MyJoyBusiness, 18 January 2018) accessed 7 June 2020
121 PIAC (n 97) 10
122 Myjoyonline.com, "GNPC Takes Steps to Decommission Saltpond Field" (Graphic Online, 3 October 2018) <https://www.myjoyonline.com/business/2018/october-3rd/gnpc-takes-steps-to-decommission-saltpond-field.php> accessed 7 June 2020
123 Page 6
124 Ibid

crew on board and seafarers[125] and a breach of which could lead to spillage of oil which could adversely impact on the aquatic life as well as that of fishermen and those with facilities along the beach.[126] Thirdly, it noted that the Petroleum Act, 2016 and best international practice, require that oil and gas fields are decommissioned to avoid disaster.[127] Lastly, it noted that a major incident could affect the reputation of GNPC and Ghana as a whole.[128]

### 3.1 Project Scope[129] and Funding

GNPC notes that it has been authorized by the Government of Ghana through the Ministry of Energy to decommission the Field.

The first phase of the decommissioning, that is the decommissioning plan/strategy was completed in November 2018, using PAP Energy and a consortium comprising Deitsmann, Zeal and Oxand.[130] The tender process for the decommissioning contractor started in July 2020.[131]

There will be permanent plugging of the six wells and removal of the surface infrastructure,[132] recovery of well completions equipment, the setting of cement plugs to seal the wells, and the cutting and retrieval of pipes from the seabed. The well plugging operation will involve cement plugs being set across the reservoir, and extra cement bags of 150m thickness being placed in the wellbore.[133]

There will be the removal and dismantling of the Mr. Louie platform. This involves the platform equipment preparation, the removal of the equipment and the cutting and the dismantling of the structure. The conductors will be cut from the seabed and

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125 Ibid
126 Ibid
127 Ibid
128 Ibid
129 Slide 8 of 28
130 Slide 6
131 Ibid
132 Slide 23 of 28
133 Slide 23 of 28

retrieved to the surface.[134] The surface infrastructure will also have all equipment removed, hazardous material treated, and the platform scrapped to feed the steel mills.[135]

There will further be the installation of marine surveillance lighting, which involves the installation of navigation buoy with marine light in compliance with International Maritime Organization (IMO) laws. The last stage is disposal and waste management. The Project is expected to last for a period of 12 months[136] (starting May 2022 to April 2023) and the Contractor for the project is Hans & Co. Oil and Gas Limited[137] a locally owned oil and gas service provider, along with Shelf Drilling, Halliburton, H T Marine, OSRL Limited, Emval, and Atlantic Marine and Oil Service Limited.

The decommissioning is funded by petroleum revenue from the producing fields as there is no decommissioning fund to take care of decommissioning. A decommissioning Fund was set up but was non-existent at the time of the decommissioning of the Field as it had been realized as security in respect of default in payment obligations. So in effect, a situation arose where the country had not set up the Fund properly and did not monitor or audit it, and at the time of decommissioning, the entity whose liability it was to decommission was bankrupt. It had not provided any bank guarantee to fall on, the company was worthless but navigational and environmental risk was on the country so the country had no option but to take on the cost of decommissioning. Questions arise.

A Fund properly set up, should have had a trustee to manage the Fund? How was the contractor able to use the Fund as security on the blind side of GNPC/Ghana? The whole principle is that when the Fund is set up, the nation needs to determine at what point in the field's life money should be placed in and how much per year. This means that at the time the development plan is submitted, there should also be the submission of a decommissioning plan which should state how much it will cost the contractor to

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134 Ibid
135 Slide 23 of 28
136 Slide 13 of 28
137 Slide 14 of 28

decommission. Thus, based on the field life and how much it will cost to decommission, an estimate can be reached as to how much to put into the Fund. As enumerated earlier, there should also be a provision that decommissioning costs will be reviewed periodically and the amount set aside will be adjusted periodically. In the case of the Saltpond Field, none of this was done. The contractors were basically asked to set up the Fund and put away money into it which after a few years, was not being done. If the Fund was being audited, would that have arisen? Would there have been a solution to the problem at that time?

### 3.2 Impacts and Risks Associated with the Decommissioning of the Saltpond Field

The coastal communities are expected to see jack-up barge, jack-up rig and movement of supply and support vessels whilst the project is being undertaken. They have been notified to also expect to see personnel movements between the shores of Abandze and the Saltpond platform.[138] GNPC identifies various impacts and risks associated with this decommissioning.[139]

As with all decommissioning operations, there is always the possibility of some gas influx or oil spill into the sea. There is also the concern that some contaminated circulation fluid can escape into the sea water. They could be a high impact but not high probability. One is supposed to 'kill' all the wells[140] so if it is done by industry standards, the risk of any fluid coming into the sea is minimal. GNPC also notes that there will be restricted access to this area of the sea during the period and as such, there will be no access to conduct fishing activities in the area during this period.[141] Casting of nets upstream of the area where operations are taking place will have to be suspended as a drifting net is likely to be trapped in the thrusters of the vessels and cause a downtime, at

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[138] Slide 19 of 28

[139] Slide 15 of 28

[140] Petroleum (Exploration and Production)(Health, Safety and Environment) Regu lations, 2017 (LI 2258), Regulation 167 titled Permanent Plugging and Abando nment of Wells states that a well shall be abandoned in a manner that inter alia ensures down-hole isolation of hydrocarbon zones and prevents migration of formation fluids within the wellbore or to the land surface or the seafloor.

[141] Slide 15 of 28

huge expense to the country.[142] GNPC further notes that the project is likely to affect the livelihood of the fishermen and their fishing activities to the extent that they will not be able to come near the platform and the operating vessels.[143] GNPC notes however that mitigation measures have been put in place to mitigate the impact[144] and social interventions based on a needs impact will be undertaken.[145]

Further, the decommissioning might generate both hazardous and non-hazardous waste, which can have an effect on marine life. These wastes include contaminated solid materials and scrap metal.[146] There is also the possibility that the rig may destabilize at the point when it is to be lifted from the Field.

Further still, there is the risk that the removal of conductors may destabilize the platform. The platform has 12 'legs,' one of the most stable arrangements. It was made years ago and was done to have a lot of redundancy though its current state depends on such matters as effects of corrosion, when it was last inspected, and the like. If no inspections were being conducted, then that risk is there. The flow work should be planned in such a way as to remove parts sequentially and to minimize this risk. As the Environmental Resources Management notes, "…When an offshore structure cannot merely be floated away, the best solution is normally to cut the structure into smaller more manageable sections, lift them onto barges and subsequently bring them back to shore for re-use, re-cycling or disposal."[147] In respect of the Saltpond Field, the legs of the platform go to the seabed and the divers will have to go down and cut it. If one gets the minimum safe abandonment depth wrong and cuts them too high, it can pose navigational risks for ships.

A Fault has been encountered in Well 10-A3 but it is millions of years old and does not come to the surface. The weight of a rig if

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142 Slide 24 of 28
143 Slide 26 of 28
144 Ibid
145 Slide 27 of 28
146 Slide 15 of 28
147 Slide 3

dropped even on the sea floor, will not activate it. It is a plausible but very remote risk.

There is a risk, considered as relatively remote, of the local communities not cooperating and disrupting decommissioning activities. However, it bears noting that at the development stage, a certain process was gone through, that is, involvement of the EPA, sensitization of the local community, and community engagement before the facility was put there. When the facility is to be removed, that same process will be gone through. If there is a proper community engagement and sensitization of the communities and they are assured of getting a fair share of the benefits, the question is; why would they pose a challenge to decommissioning activities? If a proper community engagement is done and the communities are appraised on how it is to be done and how the place will be left safe for them, it is unlikely that they will pose problems to the decommissioning being done. As the Environmental Resources Management notes when commenting on the decommissioning plan; "In developing this plan, consultation should be made with local residents, communities and host government authorities. The social/community aspects should be taken into account in the decommissioning plan for the entire oil and gas field."[148]

GNPC has carried out sensitization workshops in communities with the possibility of being affected[149] seeking to achieve a number of objectives. It has sought firstly to educate the people in the communities about the decommissioning exercise, that is on how the project is going to be carried out, and make them aware of the risks and benefits.[150] The communities will also be advised that social interventions based on a needs assessment will also be undertaken.[151] GNPC has also sought to obtain feedback from the communities as to their concerns, which feedback it is hoped, will help improve the decommissioning project.

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[148] Environmental Resources Management (n 5) 47

[149] It has held workshops at Kormantse No. 1, Kormantse No. 2, Egya No. 1, Egya No. 2, Saltpond, Ankaful, Egyaa No. 3, Anomabo, Hini, Suprudo, Pebi, Nakesedo, Winneba, Ekumfi, and Ekumpoano.

[150] Slide 3

[151] Slide 27 of 28

There has also been a sustained focus on educating the fisherfolk that there is a 500 metres exclusive zone[152] around the project area and to warn them to stay away from the facility, especially as the fisherfolk are inclined to go there as there are not only a lot of fishes in that area but different species as well. According to GNPC personnel, it has been the case that fishermen have gone there at night and even on occasion, some have tied their canoes to the platform to the 'legs' of the platform whilst waiting on their catch. The area is to be cordoned off and with signs warning people to stay away. Even though the gas volume is low, there are remnants there which can possibly be inflamed. The navy and marine police will be outside this cordoned area and ward off potential intruders.

When the facility is removed, the mandated 500 metre restriction from the facility will no longer exist and so the fishermen can now go into an area that hitherto was a restricted one. That should be positive news for the fishermen and should rather make them happy that the facility is to be removed. The downside for the fishermen is that the installation's lights attract fish so fishermen – who still used to go there intermittently despite the fact that they are not supposed to – will no longer have a place of an assured bounty catch. The Ghanaian navy has been dispatched on some occasions to drive the fishermen from areas deemed too close to the rigs.

It bears noting that it is being considered whether remnants of the facility where aquaculture has blossomed and helped in production of marine life should be left. As Capobiano et al aptly note;

> …During their productive lives, the platforms can support numerous and diversified fish and invertebrate assemblages, also useful as aquaculture food, many of which are of great ecological importance and/or protected by different international and national legislations. These favorable conditions are reinforced by the enforcement of exclusion zones around oil platforms that prevent the exploitation of

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[152] Ghana Shipping (Protection of Offshore Operations and Assets) Regulations, 2012 (L.I 2010) - Regulation 1(3) - Establishment and protection of safety zones

> living biological resources. It is therefore unlikely that the removal of these structures represents the best practice from an environmental/ecological point of view, and this awareness has led some nations to leave obsolete structures to act as artificial reefs and/or to find alternative solutions for their sustainable reuse.[153]

In a workshop with community folks at Senya Bereku, GNPC officials informed them of the possibility of leaving some minor remnants that had been enhancing the population growth of marine life in the area and upon advisement of the Environmental Protection Agency (EPA), this would be done if it would not prove environmentally harmful and would result in an increase in the marine population.

Lastly, the yards to execute decommissioning are not readily available in Ghana. Commenting on this in general, the Environmental Resources Management notes that, "Although there may be some dismantling yards in the region, they may not accept particular offshore structures due to potential contamination issues, and complications related to import-export regulations."[154] Further, if the state does not have the facilities and the equipment in order to engage in decommissioning, it will have to bring in the equipment such as barges and cranes from outside which increases the costs.

GNPC assures that all activities have been risk assessed to know the probability of occurrence, the potential impact and mitigation measures put in place to reduce its impact to As Low As Reasonably Practicable (ALARP) using work procedures, social controls, technical assessment and technology.

## 4. GENERAL CHALLENGES TO DEALING WITH DECOMMISSIONING ACTIVITIES

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[153] Capobiano (n 3) 13
[154] Environmental Resources Management (n 5) 22

As enumerated above, socially and technically, decommissioning should not be a problem.

It has been argued that the main challenge with decommissioning in Ghana is the issue of capacity. In respect of the Saltpond Field, this will be the first decommissioning of an oilfield by Ghana and thus, it simply does not have the practical experience yet in regards to how to decommission a facility. It is counterargued that removing the facility should not be a challenge and that when the infrastructure was being put there, there were consultants and project managers to guide in executing the task and so when removing the facility, Ghana will similarly consult to do it. Thus, it is argued that this lack of capacity will largely be counteracted by the use of external expertise, that is, reliance on a consultant. In respect of the physical decommissioning, there is enough technology and there are companies around the world that can do it. In respect of such technical matters, GNPC has in the past, in respect of seismic gathering for instance, used a Quality control officer – hired by the company - and a second person seconded by GNPC who evaluated the seismic. Thus, in respect of decommissioning for instance, GNPC will employ the services of a project manager and a quality control officer, and will work alongside them to ensure that the sealing of wells are done appropriately. The issue will be the issue of capability of the entity doing the work. The hope is that adequate provision has been made within GNPC and EPA so that the process is documented and maintained so that in respect of the next field to be decommissioned, Ghana can fall on that experience. The Petroleum Commission has requested from GNPC that a video of the decommissioning be done from the beginning to the end so that the video can be studied and capacity can be built based on that.

Further, though Ghana is engaging the services of a contractor to undertake this project, it is debatable whether it has enough expertise to verify on its own whether the contractor is carrying out the work to the optimum standard. In respect of the industry in general, though Ghana has developed its capacity significantly, it still has challenges in respect of capacity in many respects, including policy, tax, operational, regulatory and environmental. The question has been frequently asked whether Ghana is getting

the best from the fields, and this concern cuts across right from exploration, to development and production. It is mainly for this reason that GNPC formed Explorco through a Joint Venture to develop the capacity. The capacity being referred to is as an entity, that is, processes and procedures, policies and project management.

Another practical challenge is that the concept of a Decommissioning Fund to be set up during the lifetime of the field to cater for decommissioning is a relatively new practice in Ghana's petroleum industry. In this regard, the Saltpond Field which started producing long before the enactment of the Petroleum Act, 2016 has no decommissioning fund in place in the sense that, there is no stockpile of money to be drawn upon to execute decommissioning. A fund was set up but the money in the fund was used by the contractor as security on the blind side of GNPC/Ghana, which security was utilized when the contractor could not meet its obligations. The installation is on the territory of Ghana and there is navigational risk and the like and so the government is left with the responsibility to decommission it. The challenge there is that the country is using money from current petroleum revenues to do it when it should have been money from that field.

In respect of decommissioning in Ghana generally, production from the fields may extend beyond the license period. Section 14(1) of the Petroleum (Exploration and Production) Act, 2016, states that a petroleum agreement "shall, subject to subsection (2), be for a period of not more than twenty-five years."[155] Section 14(2) states that, where a field's production is projected to extend beyond the original term of 25 years of the agreement, the Minister may either approve an extension of the petroleum agreement on terms agreed to by the parties or execute a new petroleum agreement by direct negotiation. The challenge is that where the government opts not to extend the agreement and takes over the field, it assumes the full decommissioning liability for which it does not have the expertise. Ghana may acquire some experience from the decommissioning of the Saltpond Field which

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[155] Under the Agreements entered into under the Petroleum (Exploration and Produc tion) Act of 1984, the duration is for a term not exceeding thirty years (Section 12 – Period of Validity of Petroleum Agreement).

is in shallow waters but that may prove inadequate preparation when dealing with decommissioning in respect of the fields which are currently in production, which are in deep waters. Ghana, as noted earlier, could procure a contractor to execute the project but decommissioning is a billion-dollar project and even assuming there is enough money in the decommissioning fund, Ghana will still need not only adequate financing upfront but also the expertise to design the scope and assess contractor's proposed pricing, and to accept all liabilities if the contractor commits an error.

Further, where the government takes over a field, the government will thus take over the liability as well as the assets. If there is a decommissioning fund, it will be transferred to the government. The danger is that the government could utilize the money for some other purpose. That's the risk. Where a government that has taken over a Field – and in this respect, also, the decommissioning fund – it could expend the money in the Fund on some other activity leaving no money for decommissioning when the inevitable event occurs.

There is also the practical reality that the decommissioning fund might be inadequate to fund decommissioning when the field is exhausted. Where the parties do not have the financial strength to make up the shortfall, this will create practical challenges with completing decommissioning even though Ghana requires them to take assurance or a bank guarantee. There is also the issue of the ability of Ghana to determine the Fund's adequacy.

The Petroleum Act, 2016 simply states in respect of the Decommissioning Fund that, "A licensee or contractor shall establish a decommissioning fund as prescribed'"[156] The last part of the provision which states "… as prescribed" indicates that there is an intention to pass regulations to give flesh to provisions. It is expected that the Decommissioning Regulations will contain provisions that will elaborate how the decommissioning fund is to operate and will inter alia, clearly mandate that the Fund is to be applied only towards decommissioning, and direct the manner in which the funds should be expended. Thus, this issue will only

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[156] Petroleum Act, 2016, s. 45 – Decommissioning Fund.

remain a cause for concern in the event that the Regulations fail to provide guidance on how the decommissioning funds are to be managed and utilized.

In respect of the law, there are some broad provisions on decommissioning under the Petroleum Act, 2016, thus setting out the basic framework and rules for decommissioning. Further detail has been provided in the Petroleum (Exploration and Production) (General) Regulations, and its amendment. However, it is the intention to put much more detail to these provisions through firstly the Model Petroleum Agreement and later concretize them in the Decommissioning Regulations to the 2016 Act.[157]

As earlier noted, under Ghana's revised Model Petroleum Agreement of 2019, GNPC is exempt from contributing to the cost of decommissioning. Contractors operating under the earlier petroleum agreements have expressed the sentiment that GNPC be made to pay towards the cost of decommissioning and not be exempt.

## 5. RECOMMENDATIONS AND CONCLUSION

Ghana is about to decommission an installation for the first time since it started producing oil in 1978 from the Saltpond Field. Though Ghana did not have extensive provisions on decommissioning when it made the large scale-commercial discovery of oil in the Jubilee Field in 2007, it had been engaging in discussions, particularly with the Commonwealth Secretariat as to a framework to put in place for sustainable and effective decommissioning of facilities. Hence, when the Petroleum (Exploration and Production) Act, 2016 (Act 919) was enacted, it had more extensive provisions on decommissioning as opposed to the now repealed Petroleum Act, 1984. Thus, upon the decision to

[157] The Minister is empowered to make Regulations to provide for "decommissioning and decommissioning fund': Petroleum Act, 2016, section 94(2)(t)

decommission the Saltpond Field in and around that time, there was a framework and considerable discussions that had already gone into that and so Ghana was not operating from a position of ignorance. Ghana was well placed to assess the situation and to put in measures towards executing the task. Considering the fact that it has not had practical experience with decommissioning, it has naturally had to rely on external entities with the expertise in the area to map out the plan to decommission as well as the actual decommissioning. Though it has been envisaged that there will be some challenges mainly stemming from the lack of capacity to engage in the actual practical decommissioning itself, it is expected that the Saltpond Field will be decommissioned successfully without major hitches mainly stemming from the fact that the Field is in shallow waters coupled with the fact that this eventuality had been considered far back and extensive discussions and recommendations made for this. It is hoped that Ghana will draw practical experience from this decommissioning and enhance its capacity greatly to play a major role in actual decommissioning the next time around.

Ghana has strived to ensure that its framework is sustainable by putting in such measures as ensuring that a plan for decommissioning is submitted along with the Plan of Development, that liability lies on the contractor, and that there is strict liability for decommissioning and even secondary liability for assignors, as well as strict liability for pollution. It has also ensured that there is the requirement to set up a decommissioning fund to ensure that there is a stockpile of funds to fund the decommissioning with proper mechanisms such as a trustee to oversee it, that there is a requirement to submit a decommissioning plan well in advance of the time when the event eventuates, and an express stipulation in its laws to restore the affected area after operations cease.


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