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The decommissioning of offshore oil and gas installations in Namibia

Leon Moller
Law School, Robert Gordon University

This chapter highlights the legal framework concerning the decommissioning of offshore oil and gas installations in Namibia. It starts with a brief summary of the exploration and production activities in the country before discussing the legal and institutional set up for the decommissioning of offshore installations.

1. Background

1.1 The Namibian oil and gas industry

The Namibian coastline stretches for about 1,500 kilometres between Angola in the north and South Africa in the south. The maritime boundaries between the countries are determined by the location of the estuaries of the two major rivers which flow into the Atlantic Ocean, the Kunene River in the north and the Orange River, in the south.[1] Namibia is endowed with a rich variety of minerals including diamonds and uranium.[2] It has been stated in numerous geological studies that Namibia's offshore geology has very strong similarities to Brazil's oil rich Santos and Campos Basins.[3] This connection is said to be based on the common geological history during the Cretaceous Period, before the break-up of *Gondwana* that separated the two continents of South America and Africa.

[1] See L Moller, "The Outstanding Namibian Maritime Boundaries with Angola and South Africa", *International Journal of Marine and Coastal Law*, vol 18, no 2, June 2003.

[2] See "Summary of Namibia's geology", *Geological Survey of Namibia*, http://www.mme.gov.na/gsn/namibiageology.htm accessed 11 October 2015.

[3] See Bray, Lawrence and Swart, "Source Rock, Maturity Data Indicate Potential off Namibia", *Oil and Gas Journal*, August 1998; see also Ashipala, "Brazilians upbeat about oil in Namibia", *The Namibian Sun*, Windhoek, June 20 2011; and Mello, et al, 'Promising Giant New Hydrocarbon Frontier: The Namibian Continental Margin', *Geo ExPro*, issue 6, vol 8, 2011.

Onshore exploration in Namibia started in 1929, mainly in the Nama Basin in the south and subsequently in the northern Ovambo/Etosha Basin with mixed results.[4] Offshore drilling started in the 1970s. However, the country is still regarded as 'frontier' (underexplored) with only about 20 offshore exploration wells having been drilled. A major gas field (the Kudu gas field) was discovered in 1974.[5] In addition, a number of Deep Sea Drilling Project (DSDP) and Ocean Drilling Project (ODP) wells were drilled in the deeper waters for scientific research and these produced valuable data on the seabed and subsoil.[6] Since 2008 there has been a rapid increase of exploration activities in all the major onshore and offshore geological basins in the country with positive results showing a strong presence of hydrocarbons.[7] Consequently, the excitement about potential oil discoveries which are so often linked with bad governance certainly evoked some interesting questions from various stakeholders on the potential impacts of a future petroleum industry on the local communities, environment and the economy.[8] Linked to these concerns are questions that are perhaps not currently at the forefront of both government and industry concerning the complexities that are linked to the removal of the oil and gas infrastructure at the end of their exploration and production activities.

The decommissioning of offshore installations poses a number of challenges for both governments and industry. These include the cost of removal, the availability of

[4] For a brief historical overview of oil and gas exploration, see Namcor, <http://www.namcor.com.na/history> accessed 11 October 2015

[5] For an overview of the Kudu Gas Field, see Namcor (upstream), <http://www.namcor.com.na/kudu> accessed 2 October 2015.

[6] "Map on the Seismic DataBase and Wells Offshore Namibia", Namcor, compiled by Baumgartner which was produced for the AAPG International Pavilion 2002 (Map scale 1:1,000,000), see Namcor, www.namcor.com.na.

[7] "Ministerial briefing statement on the petroleum exploration activities 2011/2012", Minister of Mines and Energy, Namibian Parliament, Windhoek, July 6 2011; also "HRT Oil Discovery – Oil must benefit all", *Namibian Sun*, May 22 2013; "HRT fails to find commercial oil in first of three Namibia wells", *Reuters*, May 20 2013; see also "Oil Exploration in Namibia: A boost for development?", HE Neville Gertze, Namibian Ambassador to Germany, Berlin, January 31 2012.

[8] For an overview of issues relating to the governance of the oil and gas industry in oil-producing West African countries, see Leon Moller, "The Governance of Oil and Gas Operations in Hostile but Attractive Regions: West Africa", *International Energy Law Review*, 2010, 28, Part 4, pp110–122.

appropriate technology to carry out the decommissioning and issues of residual liability.[9] There are various legal and regulatory precedents available for newer oil-producing countries that have so far not had to deal with this as yet unavoidable and potentially controversial issue.[10] The US Gulf of Mexico and the UK North Sea, where decommissioning has been taking place over the last decade, involve all types of installations and provide particularly useful examples for Namibia to consider when designing its own decommissioning regime.[11]

1.2 The legal and policy framework for oil and gas activities

The 1991 Petroleum (Exploration and Production) Act was adopted soon after the Namibian independence in 1990 as part of a systematic way by the new national government of updating the pre-independence South African legislation.[12] For example, the Mines, Works and Minerals Ordinance of 1968 was repealed in 1991 with the adoption of specific laws that deal with minerals and petroleum separately (ie, the Minerals Act of 1990 and the Petroleum (Exploration and Production) Act of 1991).[13] These laws made it possible for international companies to invest and participate freely on their own or in joint venture arrangements in the activities related to the exploration and exploitation of minerals and petroleum in the country. Another key piece of legislation adopted is the Petroleum Taxation Act 1991, which provides for the levying and collection of petroleum income tax and an additional profits tax in

[9] See, for example, the international practice of decommissioning in various countries in M Hammerson (ed), *Oil and Gas Decommissioning: Law, Policy and Comparative Practice*, Globe Law and Business, London, 2013.

[10] See, for example, the "World Bank Report: Towards sustainable decommissioning and closure of oilfields and mines – A toolkit to assist government agencies", *World Bank Multi-Stakeholder Initiative*, March 2010, www.worldbank.org.

[11] See L. Moller, "The Cost of Decommissioning: Government and Industry Attempts at Addressing Decommissioning Liabilities", *Oil, Gas and Energy Law (OGEL)*, 4, (2007).

[12] For a detailed examination of the legal regime of the Namibian oil and gas industry, see L Moller, "Evolution of the Legal Framework for Oil and Gas Exploration and Production in Namibia", *Oil, Gas and Energy Law (OGEL)*, 5, 2013.

[13] For a brief overview of the application of South African law to Namibia see Geraldo, Nowases and Nandago, "Researching Namibian Law and the Namibian Legal System", *Hauser Global Law School Programme*, January 2013, www.nyulawglobal.org/globalex/Namibia1.htm.

connection with exploration, development and production operations.[14] A Gas Bill was developed in 2001 but not yet promulgated into law. The bill proposes the establishment of a licensing framework and national gas regulator to monitor the performance of licence conditions and promote reliability of service. [15]

Each of the above pieces of legislation applies to both onshore and offshore activities and provides for the jurisdiction of national courts in relation to offences under them committed within the territorial sea, the exclusive economic zone and the continental shelf.

The national Constitution provides the legal basis for these laws as it reiterates the state's ownership over natural resources in the country.[16] This includes land, water and natural resources below and above the surface of the land and applies to the continental shelf and areas within the territorial waters and the exclusive economic zone of Namibia.

Consequently, the 1991 Petroleum Act provides that all rights in relation to petroleum are vested in the state. This includes rights in relation to the reconnaissance or exploration for, production and disposal of, and the exercise of control over, petroleum vests, notwithstanding any right of ownership of any person in relation to any land under which petroleum is found. The Ministry of Mines and Energy issues petroleum upstream licences on behalf of the state to successful applicant companies. The next section briefly highlights the licensing regime including the government policy and institutional set up, and the types of licences.

The government adopted an Energy White Paper in 1998 as the national energy policy for the exploitation and development of the petroleum resources of the country.[17] The

[14] Petroleum (Taxation) Act 1991 (Act No 3 of 1991).

[15] See Draft Gas Bill No 2 b (June 29 2001), Ministry of Mines and Energy, Namibia.

[16] See Article 100 of the National Constitution of the Republic of Namibia.

[17] The Directorate of Energy of the Ministry of Mines and Energy formulated the Energy Policy with the assistance of energy and policy experts on the Southern African energy sector with stakeholder participation and consultation workshops throughout the country. The policy was approved by the

policy covers the exploitation of offshore petroleum resources and deals with energy demand (mainly household energy), supply (electricity, upstream oil and gas, downstream liquid fuels, downstream gas and renewable energy) and a number of cross-cutting issues (economic empowerment, environment, energy efficiency and regional energy trade and cooperation).[18] The policy on the petroleum sector is based on the fundamental issue of the national ownership of the natural resources within the country and it defines the government's role as that of regulator and promoter and that of industry as the investor/extractor of the resource. It provides for the relationship between the government and industry on the basis of petroleum licences. The policy also provides for a combination of fixed licensing rounds and for an open bidding system to attract investment into the upstream sector.

1.3 The regulator for the oil and gas industry

(a) The Ministry of Mines and Energy: custodian, regulator and promoter

In Namibia, the role and responsibility for developing the natural resources sector, overseeing the industry activities and promoting the resource potential of the country is given to a government Ministry of Mines and Energy (MME/Ministry) to exercise on behalf of the state. The Namibian Constitution bestows on the state ownership of the natural resources – including oil and gas – below and above the surface of the land and in the continental shelf and within the territorial waters and the exclusive economic zone of Namibia.[19] The Petroleum Act vests all rights in relation to petroleum in the state through the MME.[20] The MME is considered the custodian of

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Cabinet and tabled in Parliament in July 1998 – see Energy Policy, <http://www.mme.gov.na/energy/index.html> accessed 12 August 2015.

[18] *Ibid*. Since independence, Namibia adopted a successful policy to promote exploration. On an evaluation of the policy, see Date-Bah, "Promoting Petroleum Exploration in Namibia", *Resources Policy*, vol 20, no 4, December 1994; see also Light and Shimutwikeni, "Namibia, Practically Unexplored, May Have Land, Offshore Potential", *Oil and Gas Journal*, 8 (1991), pp85–89.

[19] Article 100 (Sovereign ownership of natural resources).

[20] Section 2.

energy and natural resources and is responsible for the promotion, development and regulation of the mining and petroleum sectors in Namibia.[21]

The main function of the MME is to act as the state's guardian of the mineral resources – to license the use of the resources to a third party (state agency or private entity) and to regulate the commerce in petroleum so as to protect the interests of the country and its citizens. The MME is responsible for the promotion, regulation and development of the mining and petroleum sectors in Namibia. The minister, defined by the 1991 Petroleum Act as the "Minister of Mines and Energy", is head of the ministry and he is assisted by a deputy minister. Responsibility for the management and administration of the ministry lies with the permanent secretary (who is answerable to the minister). The ministry comprises four directorates: Geological Survey, Mines, Energy, and Administration and Finance.

The 1991 Petroleum Act provides for a Commissioner for Petroleum Affairs who is appointed by the minister in accordance with the rules of public services.[22] The commissioner is responsible for the administration of the act and the monitoring and regulation of the activities of the petroleum licensee companies to ensure compliance with the licence, petroleum agreement and the act. The commissioner is assisted by geologists and a chief inspector (with petroleum inspectors) who is responsible under the act to ensure legal and regulatory compliance in the areas of health, safety and environment.[23] Both commissioner and chief inspector are responsible for the regulation of the upstream industry.

[21] The minister is the head of the ministry assisted by a deputy minister. The permanent secretary is responsible for the management and administration of the ministry and is answerable to the minister. The ministry consists of the four directorates on Geological Survey, Mines, Energy, and Administration and Finance (see ministry structure, www.mme.gov.na). The minister is a member of cabinet which consists of the president, the prime minister and other ministers whom the president appoints from the National Assembly, for the purpose of administering and executing the functions of the government (see Article 35 of the Namibian Constitution).

[22] Petroleum Act 1991, Section 3(1)(a).

[23] Petroleum Act 1991, Section 3(1)(b).

On the downstream side, the activities for the supply, transportation and distribution of petroleum products are regulated by the 1990 Petroleum Products and Energy Act.[24] In addition to the regulatory functions of the ministry, the Petroleum Products Regulations regulate the import, supply, storage, possession and sale of petroleum products; the licensing of and conducting of business by wholesalers, resellers and consumer installation operators; the application of health, hygiene, safety and environmental standards and requirements; and minimum specifications regarding standards of facilities, structures and equipment and restrictions on the sale and use of petroleum products.[25]

(b) The National Oil Company: technical adviser and commercial participant

The National Petroleum Corporation (Namcor) is the technical advisory body to the minister. It is also the government agency for participation in the industry (on behalf of the state).[26]

The main functions of Namcor are set out under Part 3, Section 8 of the Petroleum Act. Consequently, when required by the minister, Namcor shall:

- carry out reconnaissance operations, exploration operations and production operations, whether on its own or together with any other person;
- carry out any process of refining, or disposing of, or dealing in, petroleum or any by-products of such petroleum, or to take part in any such process carried out by any other person;
- advise or otherwise assist the minister in relation to, or in any negotiations in relation to any agreement referred to in Section 13, or in relation to the discovery of petroleum or the development of petroleum resources.

[24] Petroleum Products and Energy Act 1990 (Act No 13 of 1990).

[25] The Petroleum Products Regulations 2000, made under Sections 2 and 2A of the Petroleum Products and Energy Act 1990 (Act No 13 of 1990) came into force on July 3 2000.

[26] Petroleum Act 1998, Section 8; See also the Namcor website at www.namcor.com.na.

At the same time, Namcor is also under a duty to assist the commissioner in the exercise of his powers, duties and functions under the act, including regulatory support of the decommissioning regime.

1.4 The key features of the petroleum licensing system

Namibia adopted the licensing system as its preferred arrangement with the private sector "within which both Government's objectives and the investment goals of foreign oil companies can be reconciled".[27] All rights in relation to the reconnaissance, exploration, production and disposal of petroleum are vested in the state and the Minister of Mines and Energy, acting on behalf of the state, is authorised to award licences to private entities.[28]

(a) Types of petroleum licences

This combination of state control over petroleum rights in the entire country and a licensing regime which allows for the involvement of private companies to undertake exploration and production of petroleum is a generally accepted model in the international petroleum industry.

In terms of Section 9 of the 1991 Petroleum Act, the licence is the prerequisite to carry out reconnaissance, exploration and production operations in Namibia.[29] Its importance is evident in that no one is allowed to extract any petroleum resource without a licence. The Petroleum Act provides for three types of licences:

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[27] The words of *Toivo Ya Toivo*, then Minister of Mines and Energy at the second reading in the Namibian Parliament of the Petroleum (Exploration and Production) Bill 1991, National Assembly, Windhoek, February 27 1991, as quoted by SK Date Bah, "Promoting Petroleum Exploration in Namibia", *Resources Policy*, vol 20, no 4, 1994, pp266–267.

[28] Petroleum Act 1991, Section 2.

[29] Petroleum Act 1991, Section 1(2), defines the size of the licence blocks; which are divided into 1º × 1º (approximately 10,000 km²) and 1º × 30' (approximately 5,000 km²). See the "Official Announcement, Open Licensing System in Namibia, Invitation to Apply for Onshore/Offshore Licence Areas", Simasiku, Ministry of Mines and Energy, Windhoek, August 23 1999.

- The reconnaissance licence that involves the gathering of seismic data is valid for two years and can be renewed twice for two years each time;[30]
- The exploration licence allows for data gathering and the drilling of exploratory wells and includes a "geological, geophysical, geochemical, paleontological, aerial, magnetic, gravity or seismic surveys and the appraisal of such surveys and drilling for appraisal purposes"; and "the study of the feasibility of any production operations or development operations" to be carried out in the licence area and of the environmental impact of such operations (Part VI). This licence is valid for four years and may be extended for a further two periods of two years each.[31] In addition, the minister can extend the exploration period for a further two years if he deems it to be in the interest of the development of the petroleum resources of Namibia.[32] The 1998 Petroleum Laws Amendment Act provides for an extension of the initial period of the exploration licence up to five years and a renewal period of up to three years;[33]
- A production licence allows for the extraction of the petroleum resource (Part VIII). The duration of this licence is for a period of not more than 25 years but it can be extended for a further period of 10 years.[34]

The Namibian government adopted a formal strategy set out in the 1998 Energy Policy to promote the petroleum potential of the unexplored Namibian territory through formal licensing rounds. This strategy was strongly influenced by international practice because of the fierce competition among countries to attract the much-needed investment in their sector and also because international oil companies were free to select the best investment opportunity for themselves. Since independence, four licensing rounds have been held in Namibia (for both onshore and offshore acreage).[35] However, due to the disappointing results of the third and fourth

[30] Petroleum Act 1991, Section 23(1).

[31] Petroleum Act 1991, Section 30(1).

[32] Petroleum Act 1991, Section 30(2)(b).

[33] Petroleum Laws Amendment Act 1998, Section 1.

[34] Petroleum Act 1991, Section 45(1).

[35] See Namcor website for more details on the licensing rounds at www.namcor.com.na.

rounds, an open licensing system approach was officially adopted in 1999.[36] The new system allows companies to apply for licences at any time. Consequently, the system proved to be successful in that a large number of new licences were since issued for both exploration and reconnaissance operations.[37]

(b) The petroleum agreement between the licence holder and the government

The 1991 Petroleum Act requires the government to enter into a petroleum agreement with the successful applicant for a petroleum licence.[38] Generally, before any petroleum agreement is concluded an inter-ministerial government negotiating team (GNT) usually chaired by the Permanent Secretary of the Ministry of Mines and Energy would evaluate the application and consider the following negotiable items:

- the technical and financial capabilities of the applicant for ensuring safe and cost-effective exploration and production of petroleum in Namibia; and
- the applicant's willingness to perform a complete evaluation of the petroleum potential in the licence area within an agreed time frame. This would include the proposed minimum work programme and expenditure; and
- the economic terms offered in accordance with the bid requirements.[39]

After the negotiations, the agreement would then be entered into between the successful applicant and the Minister of Mines and Energy and the licence issued by the Petroleum Commissioner.[40] The petroleum agreement is based on a standardised model petroleum agreement (MPA) which was first adopted by the government in

[36] See "Official Announcement, Open Licensing System in Namibia: Invitation to Apply for Onshore/Offshore Licence Areas", Simasiku, Ministry of Mines and Energy, Windhoek, August 23 1999.

[37] See Namcor – Upstream Activities <http://www.namcor.com.na/upstream-activities> accessed on 31 September 2015.

[38] Petroleum Act 1991, Section 13.

[39] See note 36, above.

[40] Section 15 requires the Commissioner to keep a register of all licences (available for public scrutiny).

1994 and revised in 1998. The MPA contains model clauses on a wide range of issues including environmental protection, the decommissioning of oil and gas installations and the liability of licence holders for pollution to the environment. It includes the basic terms and conditions relating to:

- the market value of petroleum;
- the minimum exploration or production operations to be carried out;
- the minimum expenditure in respect of such operations.

The MPA allows for the formation of joint ventures, and includes terms and conditions that are considered standard in many countries.[41]

2. Namibian law on decommissioning

2.1 International law

Namibia's international obligations on the decommissioning of offshore installations have their origins in the 1982 United Nations Convention on the Law of the Sea (UNCLOS).[42] Namibia, at the time represented by the UN Council for Namibia, signed up to the Convention on December 10 1982 (well before it entered into force in 1994). Namibia was the fifth country to ratify it on April 18 1983. In terms of the Namibian Constitution, all existing international agreements before independence, including UNCLOS, continued to be in force after independence in 1990.[43]

Article 60(3) of UNCLOS states:

> *Any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent*

[41] For a copy of the Model Petroleum agreement see Ministry website www.mme.gov.na.

[42] See L Moller "UN Law on the Decommissioning of Offshore Installations", *Oil and Gas Decommissioning: Law, Policy and Comparative Practice*, Globe Law and Business, London, 2013, pp33–43.

[43] See Articles 143 and 144 of the Namibian Constitution 1990.

international organisation. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.[44]

The competent international organisation for this purpose is the International Maritime Organisation (IMO) which, in 1989, adopted the IMO Guidelines and Standards which set out minimum global standards for the removal of offshore installations. Even though the Guidelines and Standards do not have the status of international law, and are therefore not binding on states, they are still relevant to Namibia.[45]

2.2 The Petroleum Act 1991

The principal legislation with regard to decommissioning is the Petroleum Act 1991 (as amended in 1998). The 1991 Petroleum Act contains general rules on the removal of property, such as installations, from a licence area. Initially the Act did not require a detailed decommissioning regime. Section 46(2)(i) and (vi) merely required (as part of the application for a production licence) a proposed programme of production operations and the processing of petroleum including:

- the prevention of pollution;
- the dealing with waste;
- the safeguarding of natural resources;
- the reclamation and rehabilitation of land disturbed by way of production operations; and
- the minimisation of the effect of such operations on land adjoining the production area.

[44] UNCLOS 1982, Article 60(3).

[45] See "IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone", 1989 IMO Assembly (Res A.672 (16) SC 57/27 Add.2), October 19 1989.

Thus, Part XA of the 1998 Petroleum Laws Amendment Act brought in a more focused regime for the decommissioning of installations. It provides for the removal of all onshore and offshore installations, equipment, pipelines and other facilities that are not used for exploration operations.[46]

If a licence has been cancelled, or has expired, or has been relinquished, the minister may issue a notice for decommissioning to the licence holder. The notice will require the removal of installations, the plugging of wells and the performance of any other actions necessary for the conservation and protection of any natural resources in the area. The minister has the discretion to specify further steps regarding this matter if he deems them necessary. The act further contains actions in the case of failure or contravention of the notice by the licence holder. These include the sale at public auction of any goods recovered from the licence holder and the deduction – from the proceeds of the sale – of the costs incurred by the government in respect of the removal or the actions and steps required by the minister concerning the removal. The licence holder shall be guilty of an offence and liable on conviction to a fine if he contravenes or fails to comply with the notice.

The MPA requires the company – on expiration or termination of the agreement or on relinquishment of part of the licence area – to remove or deal with all equipment and installations from such licence area or relinquished area to the extent and in the manner agreed with the minister in terms of the decommissioning plan approved by the minister pursuant to Section 68A(2) of the Petroleum Act.[47]

(a) Decommissioning plan

It is common practice in the international industry that those companies which have been exploiting the country's oil and gas resources submit decommissioning plans to the host government for approval. However, there are still differences in the practice of the timing of submission of the plan, the contents of the plan, the extent of the financial liability of relevant parties and the regulatory and contractual requirements

[46] The Petroleum Laws Amendment Act 1998 (entered into force on September 4 1998).

[47] See 1998 Model Petroleum Agreement, clause 11.

(ie, the differences between licensing and contractual systems in dealing with the decommissioning obligations). In Namibia, the 1998 Petroleum Amendment Act provides for the submission of a decommissioning plan subject to the satisfaction of the Minister of Mines and Energy (in consultation with the Ministries of Fisheries and Environment and Tourism) together with an application for a production licence.[48] The decommissioning plan as defined in the MPA means the package of measures proposed by the company under Section 46(2)(viA) of the 1991 Petroleum Act to be taken after cessation of production operations to remove or otherwise deal with all installations, equipment, pipelines and other facilities, whether onshore or offshore, erected or used for purposes of such operations and to rehabilitate land disturbed by way of such operations. It also includes any revisions of the plan as required under Section 68A of the 1998 Petroleum Laws Amendment Act, and the approval or any subsequent revision by the minister.[49]

The 1998 Petroleum Laws Amendment Act requires separate decommissioning plans in respect of separate production areas (ie, any area outside a production area where activities in connection with the production operations in such production area are being carried out). The plan requires the approval of the minister (acting in consultation with the ministers responsible for environment, fisheries and finance). The following items need to be addressed in the plan:

- the estimated time at which such decommissioning would occur;
- the extent of such decommissioning;
- the manner in which such decommissioning would take place;
- the estimated cost of such decommissioning; and
- such other measures or information as the minister may determine.

(b) Review, revision or amendment of decommissioning plans

The holder of a production licence is required to review and, if necessary, revise the decommissioning plans one year before the estimated date on which 50% of the

[48] Section 4 amended Section 46 of the Petroleum Act 1991.

[49] See 1998 Model Petroleum Agreement, clause 1 (definitions).

estimated recoverable reserves of petroleum in the production area would have been produced.[50] The reviewed or revised plan will need to be resubmitted for ministerial approval (again in consultation with the ministries responsible for the environment, fisheries and finance). The minister could refer the plan to the licensee for such amendments as the minister may deem necessary. If the licensee fails to make the necessary changes the minister could impose the changes and recover the costs from the licensee. The licensee could request expert determination if not satisfied with the decisions of the minister concerning the required review or amendments.

(c) Decommissioning trust fund

The 1998 Petroleum Laws Amendment Act, Section 68B sets out detailed financial provisions concerning the decommissioning of onshore and offshore facilities after production activities. In terms of the petroleum agreement signed between the company and the ministry, the company is required to establish a trust fund in accordance with the provisions of Section 68(B) of the act for the purpose of decommissioning facilities on cessation of production operations. In terms of the act, the production licence holder is required to establish a trust fund after 50% of the estimated recoverable reserves of the relevant production area has been produced. Thereafter the holder is required to make annual payments into the fund on the basis of a specified formula based on the levels of production, as may from time to time be determined by the minister by notice in the *Government Gazette*. After the deductions of the costs of administering the fund, the money is used mainly to finance the decommissioning of the petroleum installations used to produce the petroleum from the relevant field. The payments made by the holder into the fund are deductible in the computation of the petroleum income tax and the additional profits tax. Separate trust funds are required for decommissioning outside the production area where facilities are used in connection with the production operations of the holder of the production licence in question.

The minister's approval – after consultation with the Minister of Finance – is required for the trust deed that set up the trust fund including the appointment and functions of

[50] Petroleum Laws Amendment Act 1998, Part XA.

the board of trustees and the winding up of the trust fund. The board of trustees is responsible for the management of the fund and the trustees are nominated by the minister and the licence holder, with the chairperson nominated by the minister. The main responsibilities of the board of trustees are:

- to open an account at a reputable financial institution (to be approved by the minister after consultation with the minister responsible for finance);
- to review the state of the trust fund annually;
- to determine the amount to be deposited into the trust fund each year; and
- to provide an annual report on the state of the fund to the minister.

The setting up of the trust fund is also required under the MPA and the fund is exempt from any tax or levy on income.[51] However, any surplus amounts in the trust funds after completion of the decommissioning process are subject to tax (Part IIIA, Section 22A).

2.3 Environmental regulation

The environmental impacts of oil and gas related developments are regulated by a number of cross-sectoral laws involving the interaction of the Ministry of Mines and Energy and various line ministries which are involved in the evaluation of environmental impact assessments (EIAs) for activities in the environment. The Environmental Management Act 2007 provides for the promotion of the sustainable management of the environment and the use of natural resources by establishing principles for decision making on matters affecting the environment; the appointment of the Environmental Commissioner and environmental officers; and to provide for a process of assessment and control of activities which may have significant effects on the environment.[52] Responsibility for the management of impact of mining and petroleum exploration and production activities on the environment is shared between the Ministry of Mines and Energy (MME), the Ministry of Environment and Tourism

[51] Model Petroleum Agreement 1998, clause 11(17); See also Section 68C of the Petroleum Amendment Act 1998.

[52] The Environmental Management Act 2007 (Act No 7 of 2007) came into force on February 6 2012.

(MET), the Ministry of Fisheries and Marine Resources (MFMR) and the Ministry of Agriculture, Water and Rural Development (MAWRD). With regard to the onshore environment, MAWRD and MET are responsible for controlling pollution of the land environment (including marine pollution from onshore activities).[53] The Namibia Ports Authority (Namport) is responsible for the operation of the ports and together with the MFMR and MAWRD it is also responsible for the regulation of pollution in all the Namibian ports.[54] The Environmental Management Act provides for the coordination and harmonisation of environmental policies and plans of relevant ministries to minimise duplication and to ensure consistency (eg, the involvement of the ministries responsible for fisheries, mines and energy, and the environment over offshore oil and gas activities).[55]

The 1998 Energy Policy acknowledges the interaction between the energy sector and the environment and also that energy-related activities (from investigation through production to consumption) can impact on the environment. It further commits the government to coordinating and working with the other relevant government bodies, such as MET and MFMR with regard to requiring and enforcing EIAs for all major energy-related projects, policies and programmes that have a potential impact on the natural environment. It also commits the government and associated ministries to take account of environmental and social costs of new energy projects when deciding about such projects.

Section 12 of the 1991 Petroleum Act empowers the minister, when considering a licence application, to require the applicant to carry out environmental impact studies concerning its proposed upstream operations within its licence area.[56] It provides for

[53] Water Act 1956 (Act No 54 of 1956).

[54] All ports have their own local oil spill contingency plans that fall under the National Oil Spill Contingency Plan (NOSCP) that was established by the Directorate of Maritime Affairs of the Ministry of Works, Transport and Communication produced the NOSCP with the assistance of the International Maritime Organisation (IMO) in September 2007, <http://www.itopf.co.uk/_assets/country/namibia.pdf> accessed 1 September 2015.

[55] Environmental Management Act 2007, Section 23.

[56] The Environmental Management Act provides for environmental impact assessments including procedures for the application environmental clearance certificates (see Part VII (Environmental

the control of environmental pollution caused by such activities. Section 71 provides for the "Liability of holders of production licences for pollution of environment or other damages or losses caused". Additionally, in terms of the Environmental Management Act any person who causes damage to the environment must pay the costs associated with rehabilitation of damage to the environment and to human health caused by pollution, including costs for measures as are reasonably required to be implemented to prevent further environmental damage.[57]

As stated above, in terms of Section 21, the minister can also issue directions in order to ensure good oilfield practices on the conservation of petroleum resources; the prevention of the waste of such resources; the prevention of the spilling of water or drilling fluid or water and drilling fluid or any other substance extracted from a well drilled for purposes or in connection with reconnaissance operations, exploration operations or production operations, or used in relation to the drilling of such a well.

As far as decommissioning is concerned, the MPA requires the carrying out of an environmental impact assessment prior to the commencement of exploration operations and also prior to the commencement of production operations. Clause 11 requires the licence holder to, among other things, minimise environmental damage to the licence area and adjoining or neighbouring lands; to take into account the international standards applicable in similar circumstances; and to submit for consideration by the parties, measures and methods for minimising environmental damage and carrying out site restoration in the licence area.[58]

2.4 Health and safety regulations and offshore installations

Assessment); Part VIII (Environmental Assessment Process); and Part IX (Special Provisions Relating to Environmental Assessments)).

[57] Environmental Management Act 2007,Section 3(2)(J).

[58] Model Petroleum Agreement 1998, clause 11. See also Regulation 74 of the 1998 Petroleum Health and Safety Regulations which requires operators to ensure compliance with their oil spill contingency plan and to ensure that the prevention of pollution of the environment and the coastline.

The first regulations for the health and safety of employees in the oil and gas industry were adopted in 1998 to complement the legal requirements of the 1991 Petroleum Act.[59]

The petroleum regulations include goal-setting (as opposed to prescriptive) requirements on health, safety and environment with which the operators of offshore installations have to comply.[60] It sets out a basic framework to provide for general duties and responsibilities of operators including the establishment of an internal control system; the registration and location of installations; marking, testing, inspection and control of installations. There are also requirements relating to installations, equipment and facilities, machinery, electricity, fires and explosives, transport, subsea operations, emergency preparedness, pipelines and safety zones around installations. Regulation 15 deals with the location of installations.

The operator is obliged to report to the Commissioner when an installation is no longer in use. The decommissioning or abandonment should then be carried out in accordance with the Petroleum Act. The regulations do not require the complete removal of offshore installations. The operator should remove the installation, structure and equipment, and give publicity of the depth, position and dimension of any structure which is not entirely removed. The regulations require that all abandoned wells should be plugged and closed off. They also require that the environment should be restored in the case of the removal of onshore installations.

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[59] Petroleum Health and Safety Regulations 1998, "Regulations relating to the Health, Safety and Welfare of persons employed, and protection of other persons, property, the environment and natural resources, in, at or in the vicinity of exploration and production areas", *Government Gazette* No 190, Windhoek, September 23 1998.

[60] The trend for adopting goal-setting regulations was set in the aftermath of the *Piper Alpha* accident which happened during April 1988 in the UK North Sea in which 167 people died after a gas leak resulted in a fire and explosion and the complete destruction of the installation (most victims suffocated in the toxic fumes). See *Piper Alpha oil rig ablaze*, BBC News, April 6 1988 at http://news.bbc.co.uk/onthisday/hi/dates/stories/july/6/newsid_3017000/3017294.stm. The Cullen Inquiry led to the revised offshore safety regulations in the United Kingdom, see Oil and Gas UK, Piper Alpha: Lessons Learnt, 2008 <http://www.oilandgasuk.co.uk/cmsfiles/modules/publications/pdfs/HS048.pdf> accessed 12 September 2015.

The regulations apply to all petroleum activities within the territorial sea, the exclusive economic zone and on the continental shelf of Namibia.[61]

Finally, the regulations require operators to have due regard to good oilfield practices, and to provide the necessary funds and take necessary measures to ensure the protection of the environment and natural resources in, at or in the vicinity of such area from hazards arising from petroleum activities.

3. Conclusion

The legal and regulatory framework of Namibia shows that a number of crucial areas have been addressed to a reasonable degree of success including the setting up of an effective legal and regulatory framework, the management and administration of the policy and law, the licensing system, the regulation of offshore health safety and environmental issues, including decommissioning. The framework incorporated international approaches in providing for a manageable licensing system to ensure that oil and gas operations comply with health, safety and environmental requirements (including the decommissioning of installations at the end of their operations). The harsh complexities of decommissioning that a number of producing regions are currently facing (eg, North Sea and Gulf of Mexico) include a wide range of issues and all types of installations but they may prove to be useful examples for Namibia to consider when designing its own decommissioning regime.

[61] Health and Safety Regulations 1998, Regulation 2.