



United Nations  
Environment  
Programme

Distr.: General

23 December 2016

Original: English



**Short Experts' meeting on Environmental management  
of the Oil and Gas sector development in the  
Western Indian Ocean Region**

*Zanzibar, Tanzania 28-29 November 2016*

***Report of the Short Experts meeting on environmental management of the oil and gas  
sector development in the Western Indian Ocean***

**A. INTRODUCTION AND OBJECTIVES**

1. *Mr. Dixon Waruinge*, head of the Nairobi Convention Secretariat opened the meeting at 9:00am. He articulated the considerable growth that the oil and gas industry is showing in the Western Indian Ocean (WIO) region, representing both economic opportunity as well as significant risks on the coastal and marine environment. Recent finds of oil and gas in the Western Indian Ocean region has brought into the limelight the entire Indian Ocean region as the new oil frontier in the world. The recent discovery of significant reserves of off-shore natural gas off the coasts of Mozambique, Tanzania and Madagascar has led to further exploration in the Western Indian Ocean belt including the nations of Mauritius, Kenya, Somalia and Seychelles.
2. *Mr. Waruinge* highlighted that the Eighth Conference of the Parties to the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Nairobi Convention) acknowledged the economic potential as well as the need for regional and national environmental safeguards, and called for concerted efforts in environment management in the oil and gas development under Decision CP8/7. There is therefore a need for strong governance frameworks that are aligned with international best practice to support effective impact mitigation strategies.
3. *Mr. Waruinge* recalled that the Seventh Conference of the Parties to the Nairobi Convention acknowledged the potential for accelerated socio-economic growth following

the exploration and production of oil and gas in the Western Indian Ocean region and identified the need for regional and national environmental and safety safeguards. Therefore, Decision CP7/1 on the Work Programme for 2013-2017 called on the Nairobi Convention Secretariat to develop and support implementation of priority projects, including capacity building in public private partnership for blue carbon and oil and gas.

4. In the same Seventh Conference of the Parties to the Nairobi Convention, Decision CP7/8 on environment management for oil and gas exploration urged Contracting Parties to take into account environmental concerns during exploration and production of oil and gas, including establishing contingency plans and mitigation measures to address negative, chronic and accidental impacts on the marine and coastal environment. The Decision also urged Contracting Parties and other partners to facilitate the collection and sharing of information and best practices on the management of environmental impacts of oil and gas exploration and production. At another level, the decision called on Contracting Parties to carry out strategic environmental assessments (**SEA**) for oil and gas exploration and production in the marine and coastal environment, and urged the Secretariat in collaboration with Contracting Parties and other partners, to facilitate the development of **regional guidelines** addressing transboundary environmental impacts of oil and gas exploration and production.
5. *Mr Waruinge* further mentioned that the Nairobi Convention has contributed to reports on the very high endemic biodiversity in the WIO region, a world renowned for its biological diversity, shrimp and tuna fisheries. Development of the extractive industry in the WIO region does overlap with the high biodiversity areas of the region. There is need to develop policies and laws that target oil and gas activities, and to create awareness about oil and gas at the government level in order to build the required guidelines. There is a need to develop modalities for governments to engage Civil Society Organizations and Non-Governmental Organizations (CSO/NGO) in the oil and gas sector as initiated by the WWF to train CSOs and develop partnerships with the central government, civil society and oil exploration companies in conducting and monitoring Environmental Impact Assessments (EIA) and Strategic Environmental Assessments (SEA).
6. *Mr. Waruinge* stated that the short session on oil and gas brought together Focal Points of the Nairobi Convention and oil and gas specialists in the Western Indian Ocean to identify a regional capacity building programme that will complement national programmes in the oil and gas sector development necessary to generate policy, business and civil society actions that will contribute towards the sustainable management of the oil and gas resources for the Nairobi Convention area. The meeting provided an opportunity to prepare and share on the environmental standards and regional guidelines for oil and gas exploration and exploitation in the Western Indian Ocean, and identified common issues and key actions needed to strengthen governance in the oil and gas sector for effective mitigation of environmental impacts.

## **B. REVIEW OF THE OIL AND GAS DEVELOPMENT IN THE WESTERN INDIAN OCEAN AND CAPACITY NEEDS**

7. *Prof. Emmanuel Kasimbazi*, an oil and gas policy and legal expert at *Makerere University School of Law*, provided a review of the oil and gas development in the Western Indian Ocean Region. He explained that the new oil and gas discovery over a larger area of the WIO region has raised socio-economic and environmental issues. It is with this respect that the Eighth Conference of Parties to the Nairobi Convention made a raft of decisions on oil and gas touching on enhancing cooperation, collaboration and support with partners (Decision CP 8/13), on environmental management of oil and gas (Decision CP8/7), and Decision CP8/6 on promoting integrated ocean management in the Northern Mozambique Channel.
8. On capacity requirements for oil and gas development, *Prof Kasimbazi* highlighted a number of areas, including an understanding oil and gas value chain; understanding the geopolitics of oil and gas; appropriate policy, legal and institutional framework; financial and technological capacity; multidisciplinary expertise; and capacity to monitor oil and gas exploration through conducting of Environmental Impact Assessment (EIA), Auditing and Strategic Environmental Assessment (SEA). At the regional level, there is need for a transboundary environmental programme for oil and gas exploration and production in the WIO region supported by well-developed regional guidelines to address transboundary environmental impacts. Added to this is the need for sufficient information about baseline situation of oil and gas exploration and production and dispute resolution mechanisms to resolve conflicts between interstates on matters related to oil and gas exploration and production. He called for increased understanding of oil and gas exploration and production issues and a regional training institution on oil and gas.
9. At the national level, capacity is required at the technical and scientific level including trained and experienced personnel in various disciplines, particularly in environmental economics and the physical sciences. Capacity to handle technical issues on oil and gas exploration and production, for example, welding and handling of emergencies were identified including guidelines for revenue sharing from oil and gas resources. The need for more geological data, strengthening of relevant institutions, awareness, and an understanding of negotiation were identified along with several other capacity needs at the national level.
10. In developing a capacity building programme, *Prof. Kasimbazi* identified those who need the programme at the national level, environmental issues that require attention from impacts of oil and gas exploration and production and concluded with an outline of what can be contained in an oil and gas capacity building programme within the three stages of the oil value chain – upstream (exploration, exploitation); midstream (shipping and/or transportation by pipeline, rail, barge, oil tanker or truck), storage and wholesale marketing of crude oil, and transport systems to move crude oil from production sites to refineries; and downstream (refining, distributing and retailing the processed oil-based products).

11. Questions were raised on how to deal with the geopolitics of oil and gas at the regional level that may arise from oil companies, revenue sharing, security issues, technological understanding and ability to undertake monitoring. **Madagascar** needed more experiences on how to enforce laws and policies that have been formulated in the oil and gas sector, and **Mozambique** added that there was need for capacity and enforcement of available laws on oil and gas. **Tanzania** sought for a capacity building strategy that can integrate local architecture in the governance and harmonization of oil and gas sectors. **Kenya** felt there was a challenge of having in place policy, legal and institutional frameworks before terrestrial oil production and transportation kicks off in 2017.
12. **France** noted that oil and gas legislation in Europe is national and that the same trend was taking shape in the Western Indian Ocean states. Priority, at regional level should therefore be identified, for example, contingency plans. The **Union of Comoros** noted that early interventions were necessary especially with the first well in the country expected to be ready by 2022, while **Somalia** underscored potential areas of conflicts between interested ministries – such as ports, sea transport, fisheries, environment, and tourism lines. **South Africa** highlighted that exploration work is ongoing in three blocks and exploitation could start by 2025. Capacity needs identified were in the area of legislation, data sharing, award of contracts, and cooperation on transboundary environmental issues.

### C. MANAGING THE IMPACTS OF OIL AND GAS DEVELOPMENT: STRATEGIC ENVIRONMENTAL ASSESSMENT NEEDS AND CAPACITY BUILDING GAPS

13. *Ms Ruth Fletcher, Senior Marine Programme Officer, UNEP-WCMC*, delivered a presentation via video focused on opportunities and risks in the development of offshore oil and gas, characteristics of the marine environment of relevance to management decisions, biodiversity management and mitigation approaches, governance and capacity needs. She emphasised a particular challenge in the marine context because of the inter-connected, continuous and highly dynamic nature of the marine realm. This often poses the need to know what biodiversity is present in areas under consideration for oil and gas. *Ms. Fletcher* provided a road map for developing environmental guidelines for the oil and gas industry that has four important objectives: environmental management guidelines for the oil & gas sector; enabling environment required to ensure uptake of guidelines; building capacity in relevant ministries to enable effective engagement with industry; and developing a framework and national guidance template for Strategic Environmental Assessments (SEAs). Capacity needs are required in the areas of managing environmental governance, Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), transparency, data access and sharing, business mitigation approaches, coordination within government, environmental standards, and transboundary coordination.
14. *Mr Clever Mafuta, GRID-Arendal* delivered a presentation focused on Strategic Environmental Assessment (SEA) and underscored its benefits, including supporting sustainable development, improving the evidence base for strategic decisions, facilitating

and responding to consultation with stakeholders and streamlining other processes such as EIAs of individual development projects. Examples of strategic decision making related to petroleum development may include pacing and timing of oil and gas development to adequately manage revenues, to achieve a sound macro-economic and social environment, and to obtain maximum benefit from the oil and gas reserves. Other decisions may be related to regulation of the technology choice for oil and gas exploitation that would indicate the level of ambition with respect to environmental standards. The choice of appropriate locations for exploitation requires strategic decision making in order to minimize risks to ecological values, mapping no-go areas or respective offsets. Such decisions are required in routing of major export pipelines or national and international maritime traffic in order to minimize risks of oil spills.

15. On capacity need, *Mr. Mafuta* identified several areas of intervention in legislative and policy arrangements, transboundary relations and connections, institutional arrangements and scenarios relevant in Marine Spatial Planning. Baseline data is required on interaction and inter-dependencies between and among physical, ecological and socio-economic environments. Socio-economic needs were identified in such areas as influx of workforce, increased tax income for the government, institutional capacity to assess aspects and mitigation measures adequately, capacity building amongst local population regarding their rights, expectation management and commitment from the industry. To support strategic decision making, *Mr. Mafuta* gave relevant examples from Australia to showcase the need for soft and non-technical capacity needs, and hard and technical capacity needs.

#### **D. MANAGING THE IMPACTS OF OIL DEVELOPMENT ON PROTECTED AREAS: CHALLENGES TO EFFECTIVE REGULATION AND MONITORING**

16. *Dr. John Mumbo, National Environment Management Authority, Kenya* made a presentation on managing the impacts of oil development on protected areas. Using Kenya as a case study in his presentation, *Dr. Mumbo* noted that in March 2012, oil was discovered in the terrestrial land in Kenya and similar explorations in the Tertiary Rift, the Anza and Mandera Basins are promising. Current oil resources are estimated at 600 million barrels, and gas discovery has been confirmed in the Lamu offshore basin.
17. Addressing midstream activities of transport and distribution, transit development of oil from neighbouring South Sudan and (Uganda) is underway through the Lamu Port Southern Sudan-Ethiopian Transport (LAPSSET) Corridor infrastructure project. Under LAPSSET will be a port at Manda Bay in Lamu, oil refinery at Bargoni in Lamu, oil pipelines, road network and railway lines. Expected impacts of oil development on Protected Areas will include environmental pollution of air, water, land, and sea, and from oil spill and hazardous waste management. The industry may lead to destruction of important bird areas, wildlife habitats, biodiversity hotspots and fish breeding grounds.
18. Currently there are no specific environmental and regional guidelines for oil and gas exploration and exploitation in Kenya. However, the policy and governance interventions are contained in the national Environment Management and Coordination Act, Cap 387,

and the Kenya Petroleum Bill (2015) that has been developed. At the same time the World Bank has funded the Kenya Petroleum Technical Assistance Programme (KEPTAP) to strengthen the Government of Kenya's capacity to manage its petroleum sector. This is in addition to the Environmental Management and Coordination (Deposit Bonds) Regulations (2014) extractive activities; draft Integrated Coastal Zone Management Policy (ICZM); Kenya Petroleum Master Plan being developed; and Environmental Sensitivity Atlas of Kenya's Coastline.

19. *Dr. Mumbo* listed the challenges to effective regulation and monitoring, and offered recommendations. Some of the recommendations include regulations and guidelines on offshore exploration and production, and training of leaders on coastal and marine conservation, compliance and monitoring and conflict resolution mechanisms. Additionally, train environmental regulators and inspectors on compliance and monitoring, implementation of cross-border pollution and pro-active spatial planning on oil and gas development.
20. *Marc Rohfritsch, Engineer of Mines, Office of the exploration and production of hydrocarbons in the Ministry of Environment, Energy and the Sea, France*, presented the case of France in managing the impacts of oil development and challenges to effective regulation and monitoring. While France has sunk over 8000 wells, only a few are offshore in French Guyana. In the Northern Mozambique Channel, France energy policy is on renewable energy. In general, exploratory licenses are issued by two ministries – the Ministry of Energy and the Ministry of Economy. Local authorities also have offshore platforms and can also give authorizations.
21. The interventions that ensued from the presentations related to SEA and plans in place in the countries. **Kenya** noted that in 2017, its crude oil will be transported to the port city by tracks and rail line as the pipeline is not yet ready. **Tanzania** added that the 2004 assessment on oil and gas identified capacity building gaps in land use planning, SEA, environmental compliance, oil spill preparedness, planning and clean-up, and efforts are being made with partners to build capacity in these areas. **Mozambique** acknowledged having an approved SEA, with a gas pipeline running to South Africa. At the same time **South Africa** and Tanzania pointed out the need to consolidate and harmonise laws and policies in the oil and gas industry to SEA standard.
22. *Prof. Kasimbazi*, gave a closing presentation on developing legal and institutional frameworks for the oil and gas sector. He highlighted existing legal and institutional frameworks at both international and regional levels that are relevant in the oil and gas sector in the region. He also outlined frameworks contained in agreements, conventions, protocol and Contracting Parties decisions. He delved on existing national legal and policy frameworks in Tanzania, Mozambique, Kenya, Madagascar, Comoros, Seychelles, Mauritius and South Africa.
23. In concluding the presentation, *Prof Kasimbazi* listed a number of challenges in the national legal, policy and institutional framework related to human and financial capacity and coordination. He proposed some recommendations such as establishment of policy dialogue platforms that would bring together governments, donors and other stakeholders within the oil and gas sector. Another recommendation was on developing strategies for

sustaining scientific information on oil and gas, because science provides for well-informed policies. He highlighted the need for strengthening partnerships, and developing or strengthening capacities to handle oil and gas exploration by organizing capacity building initiatives, including training of local communities and government officials, as there is an urgent need to develop specialized training in this emerging sector in the Western Indian Ocean.

24. **Mozambique** identified with the presentation and noted that there exists in the country a developing approach on matters oil and gas. The National Directorate of Environment guides on biodiversity issues on proposed areas of economic development to ensure no net loss. In **South Africa**, the development of marine spatial planning and accompanying Bill (under discussion) provides a legal and institutional framework.

## **E. GROUP DISCUSSION: STRUCTURE OF CAPACITY BUILDING PROGRAMME IN THE OIL AND GAS SECTOR**

25. Participants, in two working groups, discussed the structure of a capacity building programme that can be presented to the Contracting Parties in March/April 2017. While responding to what is required in a capacity building programme on oil and gas development, discussions were guided by four questions: Who needs capacity building in oil and gas? What is at stake in the coastal and marine ecosystems and what are the mitigation options? What is contained in an oil and gas capacity building programme? How regular should training be held for capacity building in oil and gas development?
26. The discussants came up with two documents which were later consolidated by the respective group rapporteurs – Dr. Aboud Jumbe and Dr. John Mumbo. The programme was finalised in the week of 12-16 December 2016 in Nairobi. The finalised Nairobi Convention capacity building programme on oil and gas is attached.
27. On the way forward, participants agreed that priority focus should be based on progress in oil and gas development in each country. A needs assessment will be necessary in order to standardise the regional level capacity building programme. **Seychelles** asserted that the transboundary and dynamic nature of the oil and gas industry will remain an important focus of the Nairobi Convention and which is well appreciated. **Madagascar** recognised the importance of the oil and gas in the WIO region and looked forward to the

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_10461](https://www.yunbaogao.cn/report/index/report?reportId=5_10461)

