



THE UNITED REPUBLIC OF TANZANIA



NATIONAL AUDIT OFFICE

**GENERAL REPORT ON THE PERFORMANCE AND
SPECIALISED AUDITS FOR THE PERIOD ENDING 31ST
MARCH, 2017**

**REPORT OF THE CONTROLLER AND AUDITOR GENERAL
OF TANZANIA**

March 2017

THE UNITED REPUBLIC OF TANZANIA



National Audit Office

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THE UNITED REPUBLIC OF TANZANIA



NATIONAL AUDIT OFFICE

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Ref. No. FA 27/249/01/2016/2017

27th March, 2017

Your Excellency Dr. John P. Magufuli,
The President of the United Republic of Tanzania,
State House,
1Barack Obama Road,
11400 Dar es Salaam.

**Re: Submission of a General Report of the Controller and Auditor
General on the Seven Performance Audit Reports**

Pursuant to Article 143(4) of the Constitution of the United Republic of Tanzania of 1977 (as revised in 2005), and Sec.10 (1) of the Public Audit Act No. 11 of 2008, I hereby submit to you my eighth general report on Performance and Specialised Audit.

This report includes seven performance audit reports covering the area of oil and gas industry to be tabled before our August Parliament in April, 2017.

I submit.

Prof. Mussa Juma Assad
CONTROLLER AND AUDITOR GENERAL

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LIST OF ABBREVIATIONS

M&E	Monitoring and Evaluation
MEM	Ministry of Energy and Minerals
NEMC	National Environment Management Council
PSAs	Production Sharing Agreements
TPDC	Tanzania Petroleum Development Corporation
VPO	Vice President's Office

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PREFACE

I am pleased to present my eighth General Report on Performance and Specialized Audit. The report this time concerns seven individual audits focusing on oil and natural gas industry. Main audited entities were the Ministry of Energy and Minerals, Ministry of Education Science and Technology, Vice President's Office, Tanzania Petroleum Development Corporation and National Environmental Management Council.

This report aims at providing our stakeholders (Members of Parliament, Central and Local Government Officials, Media, the Donor Community, Non-Government Organisations, Community Based Organisations etc.) with analysis of the findings arising from the individual performance and specialized audits conducted by my office as of March 2017. The details of the summarized matters can be read from the individual audit reports issued to respective Accounting Officers.

This report is being submitted to the President of the United Republic of Tanzania (URT), Dr. John Pombe Magufuli, in accordance with Article 143 of the Constitution of the URT and Section 34(1) and (2) of the Public Audit Act No. 11 of 2008.

Under Article 143(4) of the Constitution of the URT of 1977 as amended from time to time, the Controller and Auditor General is required to submit to the President every report he makes pursuant to the provisions of sub Article (2) of the same Article. Upon receipt of such report, the President shall direct the persons concerned to submit such reports in the first sitting of the National Assembly before the expiration of seven days from the day the sitting of the National Assembly began. The same Article allows the Controller and Auditor General to submit his reports to the Speaker of the National Assembly should the President, for whatever reason, fail to submit the reports to the Speaker as is required by law.

The enactment of the Public Audit Act No. 11 of 2008 enhanced the operational independence of my office in the fulfilment of my constitutional mandate. The operational independence of my office is expected to enable me acquire the necessary controls over all the resources available for the office including human and financial resources, which will enable my office to perform its tasks without being under the undue influence and control of any person or authority including those that I audit.

The legislation has broadened the scope of audit to be conducted by my office by mandating me to carry out Performance, Specialised, Environmental and Special Audits in addition to the normal Regularity Audits we have been conducting over the years.

In essence, this report has enabled me to provide the necessary independent assurance to Parliament concerning the proper use and accountability, transparency and probity in the use of public resources on area of oil and gas industry specifically on: Implementation of Local Content Provisions and Verification of Recoverable Cost in the Production Sharing Agreements; Management of Human Capital Development in Oil and Natural Gas Industry; Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations as Regards to Petroleum Exploration Activities; Management of Process of Awarding Exploration and Development Contracts and Licences for Natural Gas; Management of Geophysical and Geological Data for Oil and Gas; Produced Graduates in oil and natural gas industry and Capacity of TRA in Assessing and Collecting Tax Revenues from oil and gas sector.

The main objective of conducting these audits was to examine the identified problem in the respective area; establish whether allocated resources have been effectively spent with due regard to economy, efficiency and effectiveness as intended and appropriated by Parliament in the above mentioned areas.

It is worth noting that, while my office conducts audits and reports on the performance of various Central, Local Government and Public Body programmes and activities based on various laws, rules and regulations, the ultimate responsibility for ensuring there is efficiency, economy and effectiveness in the use of public resources lies with Accounting Officers. At the same time, it is the responsibility of the Accounting Officers to ensure that the observations and recommendations raised by the Controller and Auditor General are acted upon.

Parliament looks upon the Controller and Auditor General and the National Audit Office for assurance in regard to financial reporting and public resources management in the MDAs, LGAs, Public Authorities and Other Bodies, particularly regarding economy, efficiency and effectiveness in programme implementation. My office contributes through recommendations given towards improvements in the public sector performance.

In this regard, the Central, Local Governments and Public Authorities and my office each has a role to play in contributing to parliamentary and public confidence building in the better use of public resources with a view to speeding the development process of the country and its people. However, while the roles of public sector entities and National Audit Office of Tanzania (NAOT) may differ, the desire for efficient utilization of public resources remains a common goal.

In order to meet the Parliamentarians' expectations and, more broadly, of the public at large, NAOT continually reviews its audit approaches to ensure that the audit coverage provides an effective and independent review of the performance and accountability of public sector entities. Moreover, we seek

to ensure that our audit coverage is well targeted and addresses priority areas to maximize our contribution in improving public administration. Hence, our work acts as a catalyst in improving efficient utilization of public resources.

I would like to acknowledge the professionalism and commitment of my staff in achieving our goals and undertaking the work associated with meeting our ambitious audit programs even though they have been working in very difficult conditions marked with insufficient funding, working tools, relatively low salaries and sometimes working in very remote and inaccessible locations.

I hope that the National Assembly, the media and the public at large will find the information in this report useful in holding the Government accountable for its stewardship of public funds and its delivery of services to the Tanzanian citizens. In this regard, I will appreciate to receive feedback on how to further improve this report in the future.

A handwritten signature in black ink, appearing to read 'Mussa Juma Assad', with a long horizontal line extending to the right from the end of the signature.

Prof. Mussa Juma Assad
CONTROLLER AND AUDITOR GENERAL

**National Audit Office
16 Samora Avenue
S.L.P. 9080
11101 Dar es Salaam**

27th March, 2017

ACKNOWLEDGEMENT

I would like to express my gratitude to those who created an enabling environment for me to discharge my constitutional obligations. I would like to thank every member of my staff for their endeavours to once again, meet the statutory reporting deadline. With lots of appreciation, I am obliged to pay tribute to my family and the families of my staff members for their tolerance during our long absence from our homes in fulfilling this constitutional obligation.

I would like to thank the Government and the Parliament of the United Republic of Tanzania for their continued support to my Office in carrying out its duties.

Furthermore, my sincere appreciation is extended to the donor community particularly the Netherlands Court of Audit, Swedish National Audit Office, German International Cooperation (GIZ), the World Bank through the Public Financial Management Reform Programme funding and all well-wishers who have contributed immensely towards the transformation of my office. Their contributions in developing the mental asset, IT systems and physical assets of my office have had tremendous impact in our success.

I am equally indebted to all our other stakeholders including Accounting Officers of the Vice President's Office - Department of Environment, Ministry of Energy and Minerals, Tanzania Petroleum Development Corporation and National Environmental Management Council for providing full support and vital information needed for the preparation of the individual performance and specialised audit reports which are the inputs to this general report.

My special appreciation is also extended to the academic community and subject matter experts from the University of Dar es Salaam, Mzumbe University, freelance experts and retired officers who added value to our reports through critical reviews which immensely improved the output of the individual performance audit reports.

I would also like to pay tribute to the Public Accounts Committee (PAC) to which this report together with the individual reports will be subjected for scrutiny and discussion. We look forward to the PAC inputs and directives emanating from the discussion of these reports.

Last but not least, I would like to thank all the Accounting Officers and all public servants throughout Tanzania, without forgetting the role of the taxpayers to whom this report is dedicated. Their invaluable contributions in building the nation cannot be underestimated. May the Almighty God bless you all as we commit ourselves to promote greater accountability on the use of public resources in the country.

EXECUTIVE SUMMARY

Performance audits seek to improve the accountability and performance of government organizations. Also, it provides an objective and constructive assessment of the extent to which the audited body has used its resources in carrying out its responsibilities with due regard to economy, efficiency and effectiveness. Section 28 of Public Audit Act No.11 of 2008 gives the Controller and Auditor General of Tanzania mandate to carry out performance audit.

This general report provides common weaknesses noted, conclusion and recommendations in seven performance audits conducted in the year 2016 and 2017 relating to Management of Geophysical and Geological data for oil and gas; Management of Process of Awarding Exploration and Development Contracts and Licences for natural gas; Implementation of Local Content Provisions and Verification of Recoverable Costs in the Production Sharing Agreements; Management of Human Capital Development in oil and natural gas industry; Compliance Monitoring, Enforcement of Environmental Policies, Laws and Regulations as Regards to Petroleum Exploration; Produced Graduates in oil and natural gas industry; and Capacity of TRA in Assessing and Collecting Tax Revenues from Oil and Gas Sector. Specific focus has been given in the overall management of oil and natural gas industry, effectiveness of government in execution of its interventions, risk management, monitoring and evaluation in oil and gas sector performance in the Public Sector.

Generally this report aims at assisting Members of Parliament, the government, mass media, the public and other stakeholders to take informed decisions so as to implement the proposal for increased economy, efficiency and effectiveness in the conduct of government business in the oil and gas sector. However, this general report is not intended to substitute the said seven individual reports conducted and tabled in the previous financial year. The reader therefore is advised to rely on the full individual reports.

The report gives insights based on individual performance audit reports on the extent to which government entities manage the oil and natural gas sector and ensure that there is effectiveness in execution of its interventions and risk management in oil and natural gas operations for the public sector.

The following were the main findings from the examination conducted:

Effectiveness of the government in planning for its interventions

The audits found weaknesses in developing proper guidelines for managing oil and natural gas sector. The reports noted that, the existing legal framework for local content in Tanzania was not adequate. This was because MEM did not have a local content policy to guide the local content issues in oil and gas

industry in the country. Equally, MEM did not develop regulations, procedures and enforcement rules for managing local content issues such as provisions in the Production Sharing Agreements (PSAs). The legislations and its regulations also did not cover key aspects related to contracting and licensing processes for exploration and development of natural gas by International Oil Companies (IOCs). There were also no enough controls in place to ensure that the awarding process complied with the relevant procurement legislations to achieve economy, and value for money.

Conducted audit on capacity of TRA to assess and collect tax revealed inadequate planning for tax audit in the oil and gas sector particularly in information gathering stage due to weaknesses in procedures and control of information gathering. The audit manuals used by TRA to guide the assessment of tax revenue for oil and gas companies do not provide adequate guidance on procedure for planning information gathering especially from third parties in assessment of different type of tax in oil and gas sector. There is no procedure which requires supervisors to check and comment on the proper plan and use of information including data collection methodologies for each type of data needed and method of analyzing those data.

The audit indicated that MEM did not develop and issue any guideline and procedures for TPDC to plan monitoring of implementation of local content provisions in PSAs. Likewise, TPDC did not develop any guidelines for the IOCs in implementation of local content provisions in the PSAs. As a result, employment of Tanzanians to a large extent - according to the PSAs - was not measurable and could not be followed and monitored by the authorities.

MEM had no plans to secure employment for Tanzanians in IOCs and their sub-contractors as stipulated in the PSAs. Because of strict requirements for working on the oil rigs in offshore gas fields, MEM as the regulator of upstream activities was supposed to build capacity of the local experts to meet basic conditions for employment. The capacity building Marshal Plan (2012-2016) did not address some crucial professions required in the natural gas value chain. These include, Operational Engineers (Plant Operation Engineer), insulators (incl. cryogenic and operators), and boilermaker and scaffolders.

Also, MEM's plans on human capital development did not reflect needs of the government in engaging for exploration and development of oil and natural gas industry. The audit revealed that MEM conducted the skills gap analysis where a total personnel gap for bachelor and master level in the oil and gas industry was 329 for short courses 76 and 300 for trainers. However, the identified gap did not include some crucial professions required in the natural gas value chain due to inadequate needs assessments.

The audit noted that the plans developed by the Ministry of Education were found not to be effective. This was due to the fact that need analysis was not done effectively and efficiently, despite being an important prerequisite in

the planning process. The Ministry of Education did not involve actors from the private sector such as oil companies in preparing plans. The reason mentioned was the use of top down approach which did not allow contribution from lower levels. Hence developed plans failed to capture the needed skills in the Oil and natural Gas industry.

Execution of Government Interventions in the Oil and Gas Sector

Despite of having developed various interventions for oil and natural gas sector whereby responsible government entities were supposed to implement them, the reports have indicated that government entities did not implement the activities in accordance to the set plans and strategies.

The audit on human capital development indicated that the identified skills in human capital development programme in oil and natural gas sub-sector were not prioritized during the implementation. Instead, other skills which were not in the plan were implemented. As a result some of the needed professionals in the industry such as reservoir and utility engineers were marginalised.

The audit found that there was unorganised process of awarding exploration and development contracts for licenses for natural gas. Procurements activities were carried out without preparing necessary requirements such as the statement of requirements, bid evaluation criteria, preparation of fiscal terms as well as bidding documents.

The audit on human capital development indicates that the Ministry of Energy and Minerals failed to meet set plans and strategies for human capital development in natural gas sub-sector. For instance for planned long-term courses (Degree and Masters) out of 344 planned personnel, the Ministry of Energy and Minerals managed to train 46 personnel equivalent to 13 per cent of the planned number of personnel to be trained. The ministry failed to train some professionals like reservoir and utility engineers. This means that more than 80 percent of those who were supposed to receive various long-term capacity building interventions failed to get that opportunity.

The audits on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations as Regards to Petroleum Exploration Activities noted that the set targets for inspection and review of environmental impact statement were not achieved. For instance, it was reported that National Environmental Management Council carried out only 3 out of 71 inspections on registered projects (which is equivalent to 4 percent). The purpose of inspection was to check whether petroleum exploration companies consistently complied with environmental requirement.

The audit on Process of Awarding Exploration and Development Contracts and Licences for natural gas found that there was no adequate coordination in managing this sector in the government. The audit revealed inadequate

coordination and communication between different actors in the oil and natural gas sector. For instance there was no good flow of information from MEM to TPDC in providing the status of the 4th licensing round on Lake North Tanganyika block (RAKGAS Company) because of contradictory information between MEM and TPDC.

The audit found that, funds allocated by the Ministry of Education to support skills production in terms of quality and numbers were inadequate. This limited the production of sufficient number of skilled people needed in the Oil and natural Gas industry in line with the plans. Funds released for skills enhancement activities were less than the approved budget. As a result, several important educational activities in the learning institutions were cancelled.

The audit on the capacity of TRA to assess and collect tax indicated that tax audit case files for companies in oil and gas sector at TRA were using the taxpayers' information in conducting their tax audits. The manual provided the general procedure for testing reliance of information only associated with taxpayer's accounting system or information used to generate tax returns. Since the practice of using third parties information in collaborating evidence was not seen in the audit files reviewed, focus was then on the methodologies in place to check whether TRA has the procedures. The audit found that TRA has no procedures which require the tax auditors to test the reliability and validity of sources of information.

Also, the audit indicated that the current procedures for collecting tax revenue from oil and gas companies has not been efficient in terms of minimizing costs of collection and simplifying tax collection. Recent procedures in collection of tax revenue for exempted capital goods involved prepayment of VAT and then reclaim the refund later. The procedure increases the costs components to the government and complicates the collection of revenue by imposing additional tasks of verifying the refunds when the government has to repay the refunds.

Effectiveness of Government Measures in Risk Management in Oil and Gas Sector

The audits conducted indicated that the government was not adequately managing the different categories of risks that potentially affect or will affect the realisation of the government in benefiting from oil and natural gas sector.

It has been pointed that TPDC is not in full control about quality, accuracy and quantity of geophysical and geological data they managed. System to prevent Geological and Geophysical data loss is inadequately functioning. TPDC use server-based devices for data storage but there was no centralised data server system to back up the available information in case of emergency.

The reports pointed the presence of a risk to misinterpretation and misleading results due to inadequate expertise to process geological data. TPDC has no effective mechanism in ensuring that data processing steps related to isolation, analysis and validation of geophysical data are taken care of. TPDC use several data management software such as Petrel and SMT as per data manipulation's requirements. But officials responsible for geophysical and geological data management have limited skills to conduct proper analysis using the available software.

The audits found that there were no formal risk management measures developed to provide reasonable assurance on the TPDC's procurement and bidding objectives for the IOCs. Despite of having a fully-fledged risk management unit, TPDC did not have proper measures to oversee the risks arising from its procurement bidding processes.

Reports have indicated that, NEMC did not develop risk-based inspection plans to conduct inspections in petroleum exploration. The audit noted that NEMC officials and the strategic plan and annual work plans lacked tools and equipment which contributed to weak inspections. Due to absence of planning system, NEMC has failed to identify and prioritize the risky exploration sites

Government Measures in Monitoring and Evaluation of Oil and Gas Sector

The audits found that MEM despite of being the overseer of implementation of environmental enforcement compliance has not developed monitoring system which could have been used for monitoring the performance of NEMC specifically in the petroleum sector. Equally, there was no documented statement in the Ministry's Strategic Plan detailing the overall objectives, strategies and priorities for monitoring NEMC's operations.

The audits revealed that there were no effective Performance indicators to monitor the status of Geophysical and Geological Data management activities. Reports indicate that MEM does not effectively use performance indicators in their operations. MEM formulated M&E strategy which covered years 2011/12 to 2015/16 However, it was noted that the performance indicators in the strategy did not include issues related to local content. Also, it did not mention how the local content issues were to be monitored and evaluated by the MEM.

The audit noted that MEM did not conduct M&E for the implementation of Human Capital Programme as required by National Natural Gas Policy (2013). The policy also requires MEM to develop Monitoring and Evaluation Plan through a consultative process as part of the Policy Implementation Strategy, and outline milestones and key performance indicators. However, there were no performance reports for implementation of programme. Furthermore, MEM

did not meet with stakeholders identified in the programme to discuss the progress of the programme.

The audits noted further that MEM entrusted all the regulatory activities for the oil and gas industry to TPDC and the Ministry remained only with the policy making issues. However, MEM did not conduct monitoring and evaluation of TPDC activities to ensure that the activities they have delegated to TPDC are implemented as required, especially activities regarding implementation of local content provisions in the PSAs.

The audits noted that the human capital development programme in oil and natural gas sub-sector is not implemented in accordance with the set plans. Audits indicated that many beneficiaries attended courses which are not identified in the plans. As a result some of the crucial professionals in the industry such as reservoir engineering and utility engineers have been marginalised. Instead, MEM focused much on short-term course trainings whereby they went beyond the plan for about 165.4 percent.

The audits conducted found that Ministry of Education did not conduct adequate monitoring and evaluation on skills enhancement activities. The Ministry of Education just conducted monitoring through telephone on basic issues related to oil and gas, specifically on the number of registered candidates. However, inadequate allocation of resources hindered the monitoring activities by the Ministry of Education, NACTE and TCU.

The audits conducted indicated that there were gaps in working tools and resources for supporting smooth implementation of monitoring and evaluation system. VPO was not monitoring NEMC's environmental enforcement performance because of lacking well analysed information tool to enable them to take proper actions or decision. VPO was also not able to assess the systems for actual performance of NEMC based on actual input of resources injected in the environmental enforcement activities against the actual output resulting from NEMC's enforcement activities. It was also noted that MEM is operating with inadequate number of required personnel.

Conclusion

In general, the audits recognized government's efforts in developing and managing oil and gas sector in the country through the Ministry of Energy and Minerals which is the parent organ accountable for the success of the entire sector. However, there are areas for improvement which MEM as principal ministry, should take charge and lead other government organs in achieving the goals set. These weaknesses are mainly found in planning, execution, monitoring and evaluation (M&E) and management of risks associated with this sector.

Recommendations

Improving planning for oil and natural Gas Interventions

The Prime Minister's Office should ensure that Ministry of Energy and Minerals, Ministry of Education, Science and Technology, Petroleum Upstream Regulatory Authority, Tanzania Petroleum Development Corporations and National Environmental Management Council:

1. carry-out intensive skills gap analysis and employment opportunities for Tanzanians in oil and Gas Industry in collaboration with key stakeholders which would reflect real needs of Human Capital as well as the opportunities for employment in the oil and natural gas sector;
2. prepare a specific and comprehensive Human Capital Development Plans and Strategies which would address all professions/disciplines needed at each level of oil and natural gas value chain and ensure that the plans are followed and the results of their implementations are regularly communicated to all identified stakeholders in the public and private sector;
3. formulate data management policy that will act as a road-map towards effective and efficient geophysical and geological data management; and
4. prepare specific and comprehensive plans that govern activities of geophysical and geological data and ensure that they are followed and the results of its implementation are regularly reported to the Ministry of Energy and Minerals.

Improving Implementation of oil and natural Gas Interventions

The Prime Minister's Office should ensure that Ministry of Energy and Minerals, Ministry of Education, Science and Technology and Vice President's Office - Directorate of Environment:

1. in collaboration with the Ministry of Finance and Planning should set strategic measures to raise capital for the Tanzania Petroleum Development Corporation (TPDC) to participate in the oil and gas business in the commercial production stage.
2. develop an effective coordination mechanism that will ensure that the Ministry of Energy and Minerals is effectively coordinating with all key stakeholders in the oil and natural gas sector by involving them in identification of needs and challenges, developing plans and strategies for interventions, implementing approved plans and strategies and

provide them with timely feedback regarding the implementation of those plans and strategies through performance reporting;

3. environmental enforcement activities which are carried out by NEMC, Sector Ministries and LGAs are properly coordinated, harmonized and that all stakeholders establish a firm reporting line of environmental matters; and
4. general environmental status report on petroleum sector in the country is prepared annually. An annual compilation of reports on environmental enforcement roles in the petroleum sector as carried out by other government departments are made available and used for assessing enforcement of performance annually and constitute the basis for further improvements.

Improving Risk Assessment in Procedures for oil and natural Gas Interventions

The Prime Minister's Office should ensure that National Environmental Management Council:

1. establishes performance standards or parameters for enforcement activities including carrying out risk assessment, developing enforcement manuals, guidelines, and setting timeframes for each enforcement activity in the petroleum sector;

Improving Monitoring and Follow up of oil and natural gas Interventions

The Prime Minister's Office should ensure that Ministry of Energy and Minerals, Tanzania Petroleum Development Corporations and National Environmental Management Council:

1. develop a system that will allow tracking of progress of the Ministry and entities in implementing oil and natural gas activities in the country; and
2. develop a monitoring system for assessing completeness and accuracy of geophysical and geological data once received from International Oil Companies as well as ensuring that geophysical and geological data are adequately protected against manipulation, theft and loss;
3. establish inspection performance information system of which most of its data will be sourced from NEMC's petroleum environmental database (Central Environmental Information System); and
5. develop comprehensive action plans for monitoring and evaluating the implementation of approved plans and strategies in the oil and natural

gas sector and ensure that monitoring and evaluation on their implementations are done periodically.

CHAPTER ONE

INTRODUCTION

1.1 Background

Performance audit in a public sector is important since they seek to improve the accountability and performance of government organizations so that the citizens receive good services from the government. A number of factors are considered in selecting areas of focus in performance and specialized audits. These include public outcry and importance of the area in relation to socio-economic development.

Performance audits aim to evaluate whether activities, programmes or projects involving collection or use of public funds in Ministries, Departments, Local Government Authorities and other public organizations have been managed with regard to economy, efficiency and effectiveness:

- **Economy** - Minimizing the cost of resources used for an activity, having regard to appropriate quality;
- **Efficiency** - The relationship between inputs and outputs, in terms of goods, services and results, and the resources used to produce them in such a way that minimum inputs are used to produce same outputs or same inputs are used to produce more outputs; and
- **Effectiveness** - The extent to which objectives are achieved and the relationship between the intended impact and the actual impact of an activity.

1.2 Mandate

The Controller and Auditor General of Tanzania is given the legal mandate to carry out performance audit by the Public Audit Act No.11 of 2008. Section 28 of the Act states that:

*“The Controller and Auditor-General shall, for the purposes of establishing the **economy, efficiency and effectiveness** of any expenditure or use of resources of the entities, enquire into, examine, investigate and report, in so far as he considers necessary on:*

- (a) The expenditure of public monies and the use of resources by such Ministries, Departments, Agencies, Local Authorities and all such public authorities and other bodies;*

- (b) The conduct of and the performance of their functions by Accounting Officers, Head of Departments and Chief Executives of all such entities;*
- (c) Compliance with environmental laws, regulations and internal environmental policies and standards.*

The performance audit attempts to determine whether the initial objectives set at the beginning of an undertaking were achieved. As a consequence of that, it is then deduced as to whether due regard for economy, efficiency and effectiveness was considered. Recommendations for improvement are made in those areas where it is felt that deficiencies occurred.

Audits were conducted in accordance with the International Standards for Supreme Audit Institutions on performance auditing. Those standards require the NAOT to plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for findings and conclusions based on audit objective(s). The evidence obtained provides - according to NAOT - a reasonable basis for the conclusion and recommendations based on the audit objective(s).

1.3 Purpose of this general report

The presentation of this general report aims at assisting Members of Parliament, the Government, Mass Media, the Public and other stakeholders to take informed decisions in order to implement the requirements for increased economy, efficiency and effectiveness in the conduct of government business. The report provides highlights on the issues revealed in the conducted performance audit against what was expected in terms of planned interventions, implementation of interventions, risk management, monitoring and evaluation of oil and gas operations. This is based on the analysis conducted by NAOT from the seven performance audits on oil and gas activities. These are performance audits on management of:

- i. Geophysical and geological data for oil and gas in Tanzania;
- ii. The process of awarding exploration and development contracts and licences for natural gas;
- iii. Human capital development in oil and natural gas industry in Tanzania;
- iv. Implementation of local content provisions and verification of recoverable cost in the production sharing agreements;
- v. Compliance monitoring and enforcement of environmental policies, laws and regulations as regards to petroleum exploration activities in Tanzania.

- vi. Produced Graduates in Oil and Natural Gas Industry; and
- vii. Capacity of TRA to Assess and Collect Tax Revenue from Oil and Gas Operations

1.4 Main Focus of this report

This report focused on presenting issues regarding the preparedness of government in managing oil and gas activities. According to the Petroleum Policy of Tanzania 2013, Petroleum is a finite resource belonging to the people of Tanzania. Thus, it should be managed and utilised for the long-term benefit of the nation as a whole. Similarly, the policy states that natural gas resource is a potential source of revenue to the government. However, if not properly managed such resource is likely to be a curse instead of a blessing. It is on this basis the Controller and Auditor General decided to come up with the general report on the performance audits on management of oil and gas operations in the public sector.

1.5 Data Validation Process

The audited Ministries, Departments and Agencies were given opportunities to discuss and comment on the individual audit findings and correct factual misrepresentation.

1.6 Structure of the Report

This general report is structured into eight chapters as follows:

Chapter one provides an introduction part of the performance audit, mandate and the purpose of the general report; *Chapter two* focuses on the brief description of the management of oil and natural gas industry in Tanzania; *Chapter Three* covers common weaknesses on the effectiveness of government in planning its interventions in the oil and gas sector identified in the seven conducted audits; *Chapter Four* covers common weaknesses on the effectiveness of government in executing its interventions in the oil and gas sector identified in the seven conducted audits; *Chapter Five* covers common weaknesses on the effectiveness of government measures in managing risk associated with oil and gas sector operations identified in the conducted audits; *Chapter Six* covers common weaknesses on the measures of the government in monitoring and evaluation of oil and gas sector performance; *Chapter Seven and Eight* focus on overall conclusion and recommendations respectively of the issues observed in the focus areas.

CHAPTER TWO

THE MANAGEMENT OF OIL AND NATURAL GAS INDUSTRY IN TANZANIA

2.1 Background

After more than half a century of oil and gas exploration, Tanzania has at last found natural gas reserves, which is estimated to be 55.08 Trillion Cubic Feet. More discoveries are expected. The discovery of such huge quantities of natural gas presents a golden opportunity for expediting the country's economic growth.

Proper utilization of natural gas resources can trigger sustainable development and maximization of the benefits that will contribute to the transformation and diversification of the Tanzanian economy and further improve the quality of life for Tanzanian people. These benefits provide government with a financial base for development and improved social service delivery to the society.

However, lack of experience and awareness in effectively managing oil and natural gas industry, poor infrastructure, low capacity of local human capital and unpreparedness of relevant institutions, all stand as major factors that might hold back the nation from capitalizing on this golden opportunity.

If these challenges are not addressed immediately and properly, the country might fall into the category of developing countries in Africa with huge reserves of oil and gas that have failed to raise the standard of living of their people even after more than three decades of production.

In the countries such as Norway and Russia that have achieved good results from exploring their natural gas reserves, experience showed that existence of the right quality and quantity of skilled labour plays a very important role in ensuring success. Therefore, Tanzania has to prepare itself to maximize the opportunities offered by the industry.

The rapid growth in the natural gas industry in Tanzania requires the involvement of the Government in directing resources and leading other players towards a desired development direction. The Government should participate in investment and ownership of strategic infrastructure.

2.2 Experience in Other African Countries

In Africa rich resources countries like Angola, Sudan, Ghana, and Nigeria struggle in managing their resources to ensure better living of their people. They have more or less the same challenges which required collective effort to overcome them. Specific challenges in African countries in oil and natural gas industry have been witnessed.

In Nigeria for example, it is believed by the international community that the oil and gas industry lacks skilled oil and gas professionals, thereby justifying the flooding of petroleum professionals and contractors into the country from abroad. Ghana's oil and gas sector possesses strong growth potential although it faces some challenges. Among its challenges is lack of a skilled workforce, inadequate number of drillers, engineers, managers, and production and operational workers to support the industry.

Transparency within the oil and gas sector in Nigeria and Angola, the Africa's giant producing countries, has historically been a problem. Government purchases of goods and services and the awarding of profitable contracts have been vulnerable to alleged corruption. In some cases, companies seeking to win a government contract may not be required to participate in a competitive bid process.

In February 2012, the Securities and Exchange Commission (SEC) charged three oil services executives with allegedly bribing customs officials in Nigeria to obtain illicit permits for oil rigs in order to retain business under lucrative drilling contracts.

Furthermore, in Nigeria oil exploration and exploitation has been on-going for several decades in the Niger Delta. It has had disastrous impacts on the environment in the region and has adversely affected people inhabiting that region. The Niger Delta consists of diverse ecosystems of mangrove swamps, fresh water swamps, rain forest and is the largest wetland in Africa and among the ten most important wetland and marine ecosystems in the world, but due to oil pollution the area is now characterized by contaminated streams and rivers, forest destruction and biodiversity loss in general. The area is an ecological wasteland.

This affects the livelihood of the indigenous people who depend on the ecosystem services for survival leading to increased poverty and displacement of people. The oil industry located within this region has contributed immensely to the growth and development of the country which is a fact that cannot be disputed but unsustainable oil exploration activities has rendered the Niger Delta region one of the five most severely petroleum damaged ecosystems in the world.

The fiscal year 1999 joint MIREM/World Bank Mining Sector Policy Review identified four major constraints to the development of the extractive industries sector in Mozambique: insufficient geological information available on the country; deficient legal and regulatory framework; lack of capacity of government institutions in the sector; and lack of infrastructure.

In view of the above facts about exposure and experience of Oil and Gas in the African producing countries, Tanzania is itself at both risk and facing some

critical challenges. Tanzania is at risk of losing the value of its geosciences data due to absence of proper management of the same.

The absence of geosciences data management policies, unfavourable data environment and facilities storages are some of the issues facing the Oil and Gas Industry in Tanzania. It also faces the challenge of inadequate plans and strategies that will ensure availability and sustainability of human capital that are capable of effectively driving this economic train of Oil and Gas.

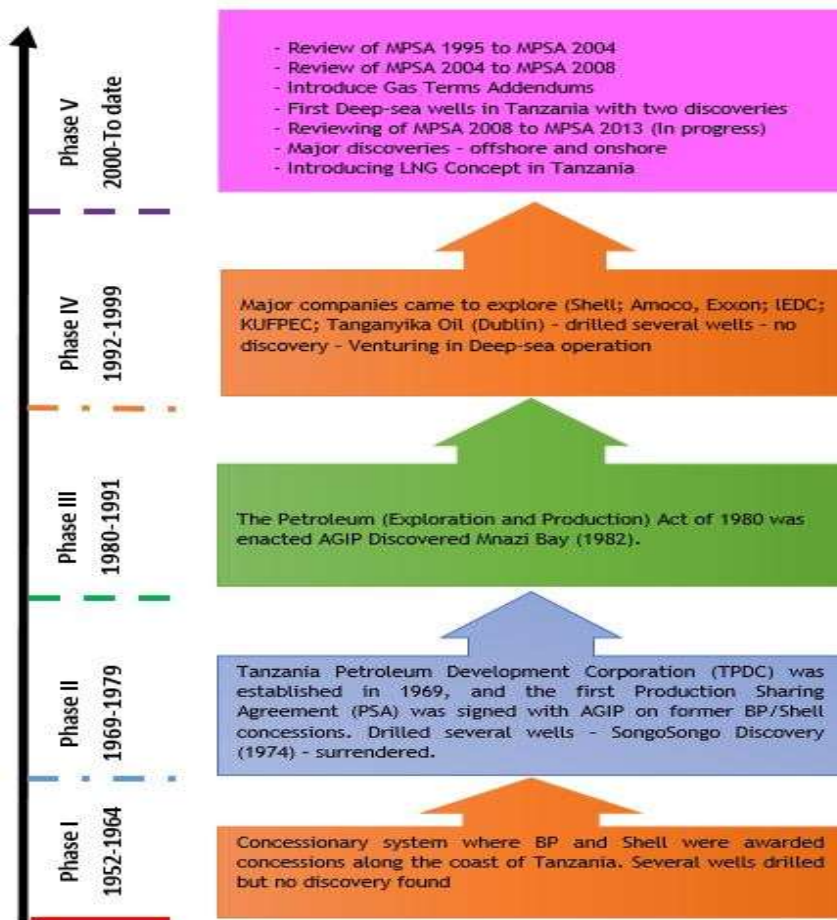
In addition to that there is ineffective coordination mechanism among key stakeholders in the industry such that human capital development activities are not properly managed. Further, our environments are also at risk due to exploration and production operations if principles of environmental conservation are not followed.

2.3 History of Oil and Natural Gas Industry in Tanzania

In Tanzania history, the exploration of oil and gas started in 1952. The success of exploration activities for the first time was obtained 22 years later when the natural gas discovery was made in 1974 at Songosongo, Lindi region. Later on in 1983 another discovery was made at Mnazi Bay in Mtwara region.

Since then intensive exploration activities were going on and by June, 2015 the discovery of natural gas was estimated to be 55.08 Trillion Cubic. **Figure 2.1** shows time line for transition of exploration of the natural gas in Tanzania.

Figure 2.1: Timeline for Transition of Exploration of the Natural Gas in Tanzania



2.4 Legal and Regulatory Framework

The main law regulating exploration and production in the United Republic of Tanzania is the Petroleum Act, 2015 replacing the Petroleum (Exploration and Production) Act, 1980 (Cap 328 RE 2002). Other laws relevant to the upstream oil and gas industry include the Income Tax Act 2004, the Environmental Management Act, 2004, and the Fair Competition Act, 2003.

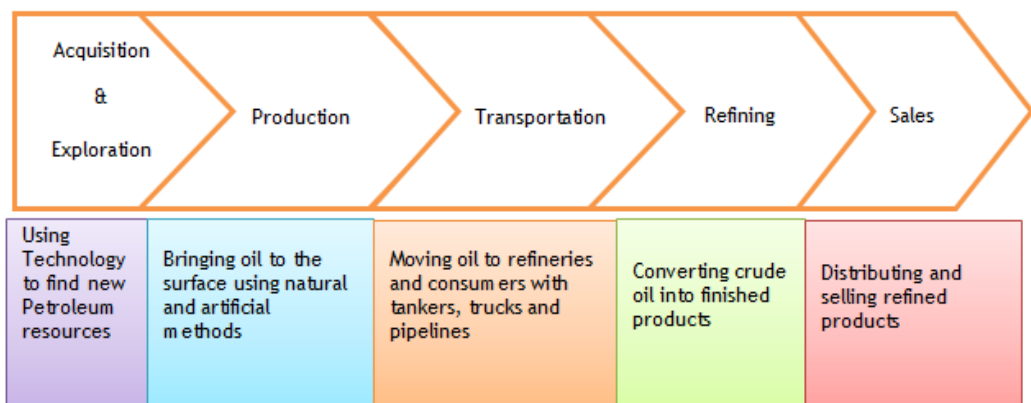
Currently, Tanzania has passed three new laws including: the Petroleum Act, 2015, the Oil and Gas Revenues Management Act, 2015 and the Tanzania Extractive Industries (Transparency and Accountability) Act, 2015 aimed at improving quality of management, services and operations in the Oil and Gas Industry for the interest of Tanzania and its people.

2.5 Oil and Natural Gas Value Chain

The oil and gas industry encompasses a range of different activities and processes which jointly contribute to the transformation of underlying petroleum resources into useable end-products valued by industrial and private customers.

These different activities are inherently linked with each other (conceptually, contractually and/or physically), and these linkages might occur within or across individual firms, and within or across national boundaries. Figure 2.2 indicates the oil and natural gas value chain model.

Figure 2.2: Oil and Natural Gas Value Chain



Source: A report by South African Oil and Gas Alliance, 2017

2.6 Need for Audit in the Extractive Industry

National Audit Office of Tanzania decided to carry out performance audit in seven different areas of the extractive industry. These areas are of significant importance since they can trigger the government of Tanzania to grasp opportunities offered by the industry.

First, human resource is certainly the most important factor of production because it is capable of transforming all the other factors for the betterment of human life and human welfare. Hence, by building capacity of Tanzanians in oil and natural industry, the country can maximize benefits accruing through exploration and production of Oil and Natural gas in the country.

Second, geophysical data gives assurance of searching for hydrocarbons (oil and gas), since they are used to prospect the presence of hydrocarbons underneath, it is important that these data be accurate, valid and reliable. These conditions depend largely on how the geophysical data are managed.

Third, it is important to undergo licensing round since it allows the country to enter cost effective contracts with best oil companies. So, the country will later benefit from its resources and Tanzanians expectations from these resources to be fully met.

Fourth, environmental management is among the key issues which require special attention by country such as Tanzania as it strives to develop. Protection of environment and sustainable use of natural resources will ensure safety and add value to the environment and its people through achieving the quality of lives aspired for Tanzanians.

Fifth, the benefits of petroleum to the economy can come in the form of revenues and indirectly through the local content provision. Therefore it is important to understand how the government assesses and verifies the reported revenue from oil and gas. This is critical for ensuring government gets its rightful share of the revenues through proper implementation of Local Content provisions in the Production Sharing Agreements (PSAs) and verification of recoverable costs.

Finally, since oil and natural gas industry and its technology is complex, its management requires well experienced and skilled personnel. Therefore, it is important to ensure quality and number of graduates produced in the oil and natural gas industry meet the needs of the industry.

2.7 Key Players in Oil and Natural Gas Industry in Tanzania

There is a number of key-stakeholders in this area of oil and natural gas management in Tanzania. These stakeholders are grouped into four main categories. These are the Sector Ministry, Oversight Institutions, the International Oil Companies and Institutions which provide support to the industry.

Sector Ministry: This includes mainly the Ministry of Energy and Minerals. This Ministry is charged to oversee the oil and natural gas industry in the country. Among other duties MEM is also responsible for formulating and reviewing Government policies and regulations in the petroleum industry.

Oversight Institutions: These include institutions such as Tanzania Petroleum Development Corporation (TPDC), National Environmental Management Council (NEMC), Occupational Health and Safety Authority (OSHA) and Tanzania Revenue Authority. These government institutions have the duty of overseeing specific areas such as day to day operations of IOCs, environment, occupational health and safety as well as revenue.

The International Oil Companies: they are ought to carry-out the petroleum operations in the contract area in accordance with the applicable laws, with due regard to Best International Petroleum Industry Practices.

Institutions which provide support to the industry: These include institutions such as the Ministry of Education, Science and Technology and Ministry of Labour. These Ministries through their Training institutions such as Universities, Colleges and Vocational Training Centres have the role of building the capacity of the Tanzanians to engage in oil and natural gas economy. On the other hand, they are ought to protect local contents and enforce labour laws in the same industry. Ministry of Finance and Planning is responsible for fiscal management and ensuring appropriate management of petroleum revenues. The Oil and Gas Fund operates under the Ministry of Finance and Planning.

2.8 Performance Audit Reports Conducted

The National Audit Office conducted seven Performance Audits in this area of oil and natural gas. The intention of the Audit office is to ensure that there is enhanced performance in those areas at these early stages of this industry.

These performance audits focused on: local content and verification of recoverable costs; human capital development; processes for awarding contract and licenses; management of geophysical and geological data; monitoring and enforcing environmental compliance in petroleum exploration activities; produced graduates in oil and natural gas industry and capacity of TRA to assess and collect tax revenue from oil and gas operations.

The audit findings and conclusions from seven audit reports have been used to develop the general overview of the entire natural gas industry in the country which is presented in the remaining chapters of this general report.

CHAPTER THREE

PLANNING OF GOVERNMENT INTERVENTIONS IN THE OIL AND GAS SECTOR

3.1 Introduction

The planning process includes formulating policies, identifying the goals and objectives to be achieved, formulation of strategies to achieve them, and lastly arranging or creating the means (guidelines) required to implement, direct and monitor all the steps¹.

This chapter covers subjects of formulation of policy, identification of goals and objectives, plans and strategies and lastly guidelines developed as identified in seven performance audit reports on oil and gas. All these issues carry important functions to ensure effective management of oil and natural gas. Planning in all seven reports was given more emphasis because of the distinct complexity of the oil and natural gas operation and management.

To minimize the poor performance in terms of management of various activities in the Oil and natural Gas sector, the Ministry of Energy and Minerals (MEM), Ministry of Education, Science and Technology (Most) and Tanzania Petroleum Development Corporation (TPDC) together with other stakeholders such as National Environmental Management Council (NEMC), Vice President's Office Directorate of Environment, Petroleum Upstream Regulatory Authority (PURA) Tanzania Revenue Authority (TRA) are required to have a comprehensive plan in their interventions. There were weaknesses reported in the seven performance audit reports as detailed in the following sections of this chapter.

3.2 Inadequate Frameworks for Managing Oil and Natural Gas Operations

Three reports broadly covered issues related to policies, legal and institutional frameworks in connection to oil and natural gas value chain. Key issues noted include weaknesses related to adequacy of policies, legal and institutional set up of the oil and gas sector. The analysis of the findings showed that MEM and TPDC lacked some of the guiding documents and the available ones did not address all the important issues.

As pointed out in the performance audit on Implementation of Local Content Provisions and Verification of Recoverable Cost in the Production Sharing Agreements, the existing legal framework for local content in Tanzania was not adequate. This was because MEM did not have a local content policy to guide the local content issues in oil and gas industry in the country. Equally, MEM did not develop regulations, procedures and enforcement rules for

¹www.businessdictionary.com/definition/planning.html visited on 11th March 2017

managing local content issues such as provisions in the Production Sharing Agreements (PSAs).

Likewise, the same audit noted weaknesses on the institutional and regulatory framework for local content. It was expected government to set up relevant institutional frameworks to govern implementation of local content provisions in the PSAs by the International Oil Companies (IOCs).

The audit also found that MEM transferred responsibilities to TPDC to regulate upstream activities although this was not documented. As a result, TPDC was working as the National Oil Company and at the same time regulating the upstream activities in the oil and gas sector.

Likewise, in performance audit on Management of Process of Awarding Explorations and Development Contracts and Licensing of Natural Gas, it was found that, the Procurement Management Units relied on Public Procurement Act in managing their natural gas procurement activities. However, the legislations and its regulations did not cover key aspects related to contracting and licensing processes for exploration and development of natural gas by International Oil Companies (IOCs). There were also no enough controls in place to ensure that the awarding process complied with the relevant procurement legislations to achieve economy, and value for money.

This was because the Public Procurement Act, 2011 and Petroleum Act, 1980 did not cover the process of allocating blocks to IOCs. Even the Petroleum Act of 1980 was silent on application of competitive methods that can be used to allocate Blocks to International Oil Companies through procurement procedures. This was noted through the interviews held with officials from TPDC, MEM and Public Procurement Regulatory Authority (PPRA). Thus, TPDC did not have effective control over the procurement process.

In addition, performance audit on Management of Geophysical and Geological Data for Oil and Gas in Tanzania indicated that TPDC had not prepared plans specifically for the management of geophysical and geological data for oil and natural gas. The TPDC's annual plans for 2012/13 and 2013/14 did not provide information on managerial aspects regarding seismic data with respect to its processing, storage and interpretation. Moreover, the audit team found out that the same plans have no information regarding geological samples.

The main cause for non-preparations of plans was absence of formal guideline framework² and procedures for developing plans for the implementation of various activities regarding geophysical and geological data management. The situation has rendered geophysical and geological data management activities

²Framework in this audit entails the entire integral component of data management process activities. This includes issues of planning of activities, development, Implementation, monitoring and following up. Planning which entails the pre definition of the activities, challenges and risks of implementation and the means of mitigation of the risks is a key component of a framework.

to be given little attention and resulted into lack of a well-defined protocol for activities to be carried out by the personnel attached to data acquisition during operation when on-site.

Absence of plans and guideline was also reported to affect activities such as inspection and adherence to physical storage of geological samples, as it leads to inadequate awareness of geological samples storage requirements in terms of humidity, temperate and the general environment. As a result, the geological samples were not handled properly and might lose their geo-scientific properties necessary for laboratory checking. Thus, there was a possibility for having unrealistic geological results.

3.3 Inadequate Guidelines Developed for Managing Oil and Natural Gas Sector

The audits noted that, there were weaknesses within MEM and TPDC in developing and putting to use guidelines for planning and management of oil and natural gas operations. The weaknesses were noted in the conducted performance audits as explained below.

The audit on implementation of local content provisions showed that TPDC did not develop any guidelines for the IOCs in implementation of local content provisions in the PSAs. As a result, employment of Tanzanians to at large extent - according to the PSAs - was not measurable and could not be followed up and monitored by the authorities. The PSAs did not have sanction clauses to be used if the IOCs fail to fulfil local content provisions.

On the same note, MEM and TPDC did not establish guidelines and procedures to guide the process of issuing and extension of work permits of the foreign workers in the oil and gas industry. Because of lack of guidance, MEM did not collaborate with other institutions responsible for issuing work permits. The audit report, found that, IOCs did not route their work permit application through MEM and TPDC which is contrary to the requirement of the PSA. As a result, for three years from 2011/12 to 2013/14 MEM has processed total of only 42 work permits. In fact, the audit report noted that, in five IOCs there were over 68 foreign workers who are working at the five selected IOCs, which means that 26 did not have working permit.

The audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations Activities in Tanzania, found that, despite the National Environmental Management Council (NEMC) having a National Environmental Investigation Manual as a guide for environmental enforcement purposes, yet there was no clearly defined procedure or mechanism of conducting enforcement specifically in the petroleum sector.

In addition, NEMC did not have well documented enforcement manuals which were tailored specifically for enforcement of petroleum activities.

From the performance audit on Management of Geophysical and Geological Data for Oil and Gas in Tanzania, it was noted that TPDC has no guidelines to govern management of geophysical and geological data. The guideline could help TPDC to trace data from acquisition, transfer, storage and retrieval. Also, appropriate guideline can help TPDC in assessing issues of data quality such as completeness, uniqueness, consistency and validity.

TPDC did not have departmental data review guidelines to guide reviewers on issues to be reviewed, methods to be followed and how to report results of the reviews. Thus, there is a risk of TPDC using geophysical and geological data that do not reflect the reality because of the review procedures used. Due to weaknesses explained above, both NEMC and TPDC did not have full control of: quality and accuracy of information such as quantity of human capital, geophysical and geological data; as well as procedures for handling various operations such procurement, data management.

Also, the performance audit on TRA capacity to assess and collect tax revenue noted that the audit procedures found in tax audit manual were not linked to the support provided by International Tax Unit (ITU). The reasons were lack of proper procedures for documenting type of request made by tax auditor and actual support provided by ITU in terms of provision of information.

3.4 Inadequate Strategies and Plans for Managing Oil and Natural Gas Operations

All seven performance audit reports broadly discussed issues related to strategies and plans covering all areas of oil and natural gas value chain. Key issues noted include the weaknesses related to adequacy and quality of strategies and plans developed by responsible Ministries and Agencies involved in oil and gas value chain. These include Ministry of Energy and Minerals, Tanzania Petroleum Development Corporation and other stakeholders such as Ministry of Education, Science Technology.

The audit on local contents noted that Ministry of Energy and Minerals and TPDC did not have action plans for ensuring it actively participates in implementation in Oil and Gas Business. It indicates that Ministry of Energy and Minerals and Petroleum Corporation's strategic plans, budgets, and annual plans for 2012 - 2014 did not have provision for raising the capital to facilitate their participation in the oil and gas business.

Lack of proper initiatives to raise capital has denied TPDC the opportunity to participate in the Songosongo Production Sharing Agreements. Participating in the Songosongo gas business could give Tanzania Petroleum Development Corporation and the country at large more benefits from the profit to be generated from the sell proceedings of gas and on top of that the tax and royalty as the sources of revenue in the oil and gas sector.

Similarly, performance audit on local content revealed that Ministry of Energy and Minerals did not have adequate strategies to ensure employment of Tanzanians in oil and natural gas industry such as International Oil Companies (IOCs) and their sub-contractors to the maximum possible extent as stipulated in the Production Sharing Agreements. While Ministry of Energy and Minerals was supposed to build capacity of the local experts to meet basic conditions for employment by the sub-contractors of the International Oil Companies, the report indicated that the ministry did not plan for capacity building in its strategic plan of 2011/12 to 2015/2016.

Also, performance audit on Management of Human Capital Development in Oil and Natural Gas Industry in Tanzania noted that MEM conducted the skills gap analysis in 2012. The result of analysed skill gap showed a gap of 329 personnel for bachelor and master level, and 76 personnel for short courses and 300 personnel as trainers. However, the capacity Building Marshal Plan (2012-2016) did not address some crucial professions required in the natural gas value chain. These include, Operational Engineers (Plant Operation Engineer), insulators (incl. cryogenic and operators), and boilermaker and scaffolders.

In addition, the Ministry of Energy and Minerals has plans and strategies which were not effective for ensuring availability and sustainability of the human capital for engaging in the natural gas industry in Tanzania. As a result, MEM could not also manage to improve technical and professional capacity within the government as a promoter of Tanzania's public interest and being a countervailing power to the International Oil Companies.

Further, Performance audit on Management of Process of Awarding Explorations and Development Contracts and for Natural Gas noted that, TPDC and MEM did not have a developed procurement strategy for procuring International Oil Companies. In addition, there was no strategy for managing the whole contracting and licensing process for exploration and development of natural gas in the country. The interviewed officials from TPDC and MEM said that they only have general strategic plans for the whole organization whereby to a small extent issues about management of contracting and licensing were covered.

On top of that, World Bank insists on having a good procurement strategy with well-defined bid criteria, good terms of reference, and negotiating favourable contract terms in any procuring entity³. While Procurement Strategy provides an overview of the governance framework and road map for the way the procurement activities are intending to achieve and to be conducted⁴. MEM and TPDC had no procurement strategies for procuring IOCs.

³http://ieg.worldbank.org/Data/reports/chapters/procurement_vol2_appendix.pdf

⁴Chartered Institute of Procurement & Supply (CIPS)

The same issues were noted in the performance audit on Management of Geophysical and Geological Data for Oil and Gas in Tanzania. TPDC did not prepare plans specifically for management of geophysical and geological data for oil and natural gas. The only plans available are 10 years Strategic Plan and the Annual Operational Plan for the Upstream Directorate. However, the annual plan missed detailed information on Geophysical and Geological Data Management. In addition, TPDC's annual plans for 2012/13 and 2013/14 did not provide information on managerial details on seismic data for its processing, storage and interpretation.

Further, the audit noted that NEMC did not develop risk-based inspection plans for conducting inspections in petroleum explorations activities. According to the performance audit report on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations as regard to Petroleum Exploration activities in Tanzania, the reason for such weaknesses in preparation of strategies was complexity of the oil and gas industry.

In addition, MEM and TPDC did not prepare guidelines and plans to guide them to merge strategies and plans for local content, environmental policies, human capital, procurement of IOCs and management of seismic, physiological and geological data into their respective strategies and plans.

As a result, MEM and TPDC as key players in oil and gas industry and other stakeholders failed to carry out activities that could safeguard public interest. Such activities include: management of PSAs to ensure that public interests are safeguarded within the agreements; environmental inspections to IOCs operations sites to ensure laws and regulations related to environment are safeguarded and complied with; human capital development strategies in respect to oil and gas are adequately streamlined and procurement of IOCs is featured in procurement strategies to allow proper allocation of resources and funding.

The performance audit on Produced Graduates for oil and natural gas industry noted that Ministry of Education did not consider skills needed for the whole Oil and Natural Gas value chain. The Ministry of Education considered specialized skills like welding, plumbing, cookery, scaffolding, electrical, mechanical, civil, mining and mineral, gas pipe line and hydrology. Skills like oil drillers and seismic crews, boilers, health, safety, security and environmental, petroleum attorney, petroleum accountant, petroleum economist, analyst and traders and truckers were not covered in the national development Strategy. This was because of inadequate need analysis conducted by the Ministry and non-involvement of all key oil and gas stakeholders during planning.

The audit on TRA capacity to assess and collect tax revenue noted weakness of relying on single source of information in verifying submitted returns. The audit revealed that in planning for information gathering, tax auditors do not

include information from third parties such as government institutions. The information which is identified in the plan is only from the taxpayer. Furthermore, information gathering plan did not include that from International Taxation Unit in TRA. The Unit was established to support tax audits including providing information related to cross border transactions and transfer pricing auditing.

3.5 Inadequate Needs Assessment for Oil and Natural Gas Requirements

A needs assessment is a systematic process for determining and addressing needs, or "gaps" between current conditions and desired conditions or "wants". The difference between the current condition and wanted condition must be measured to identify the need properly. The need can be a wish to improve current performance or to correct a deficiency⁵. Three out of seven audits indicated weakness and inefficiencies of need assessment by MEM and TPDC.

In the performance audit on Management of Human Capital Development in Oil and Natural Gas Industry in Tanzania, need assessment was found to be inadequately addressed in relation to human capital development. MEM plans on human capital development did not reflect needs of the government in engaging for exploration and development of oil and natural gas industry. The audit report pointed out that MEM conducted the skills gap analysis where a total personnel gap in the oil and gas industry was 329 for bachelor and master level, 76 for short courses and 300 for trainers. However, the identified gap did not include some crucial professions required in the natural gas value chain due to inadequate needs assessments.

In addition, the gap identified did not indicate clearly which skills and the required number needed at each level of oil and natural gas value chain. Also, it did not state clearly whether the gap reflected the needs of the government institutions and that of the industry. This led to failure to set proper priorities and to conduct monitoring and evaluation of the set plans. For instance the extract from the Marshal plan reveals deficit miscalculations in needs as measured against available staff as indicated in **Table 3.1**.

⁵<http://www.adprima.com/needs.htm>Kizlik, B., "Needs Assessment Information", ADPRIMA, last access 16 October 2010

Table 3.1: Extract of capacity building marshal plan showing miscalculated staff requirement

Professional/Field	Available	Requirement	Actual Deficit	Miscalculated Deficit
Mechanical Engineer	5	10	5	40
Process/chemical Engineer	2	10	8	25
Petroleum Geologist	22	15	7	8
Petroleum Geochemist	0	10	10	5
Statisticians and Database Management	4	20	16	15

Source: Human Capital Development Programme in Oil and Natural Gas Sub-sector (2012)

From Table 3.1, it can be observed that, required number of experts for various professions was not properly calculated. The prepared Capacity Building Marshal Plan for the period of 2012 to 2016, despite having errors, was used by MEM from 2012 to date without addressing those errors due to lack of review of their plans and strategies.

Similarly, audit of Produced Graduates in oil and natural gas industry found that Ministry of Education did not conduct skill need analysis effectively although its strategic plan of 2012/13- 2014/15 requires it to conduct market research on skills needed in the Oil and natural Gas industry. As a result, the Ministry failed to identify all skills that are highly needed in the Oil and Natural Gas industry and may lead to production of too many graduates contrary to what are actually needed in the market, as a result they all may not be absorbed by the industry.

The same scenario was found in the performance audit on Implementation of Local Content Provisions and Verification of Recoverable Cost in the Production Sharing Agreements whereas it was noted that MEM and TPDC did not take necessary actions which would ensure implementation of local content requirements to the fullest. The necessary action includes, conducting assessments of needs required to facilitate TPDC to actively participate in the oil and gas business as expected.

It was further noted that IOCs in the oil and gas industry did not fulfil the requirement to employ Tanzanian citizens with required qualifications as provided by the Production Sharing Agreements. Further, Ministry of Energy and Minerals (MEM) did not determine the potential number of employment opportunities expected to be offered by the oil and gas industry in the country. As a result, MEM had no information on the status of Tanzanians who were absorbed in the oil and gas operation.

Likewise, MEM and TPDC did not collect enough information on employment of Tanzanians from the IOCs and their subcontractors. Sub-contracted companies from IOCs offered more employment opportunities than IOCs themselves as most of IOCs activities were outsourced. However, MEM and TPDC did not have direct access to information from sub-contractors.

On the other hand, performance audit on Management of Geophysical and Geological Data for Oil and Gas in Tanzania found that, TPDC did not adequately conduct needs assessment. As a result, TPDC was not able to find out challenges related to software for data management. As a consequence, TPDC personnel at the upstream directorate had limited skills to apply the Petrel and Surface Mount Technology software to solve different geophysical data management tasks. This brings out a question as to how TPDC ensures the systems can accurately handle the geophysical data. Consequently, this led to high chances of making errors when the systems operate under the unskilled personnel.

The performance audit on Management of Process of Awarding Explorations and Development Contracts and Licences for Natural Gas revealed that needs assessments and analysis process were not conducted in a proper way by both TPDC and MEM. For example, procurement planning did not start at design stage as required. In addition, a procuring entity (MEM or TPDC) was unable to forecast their requirements for services and works which were already programmed in the annual work plan and annual estimates.

3.6 Existence of Complete Framework for Monitoring and Evaluation

Ministries and agencies responsible for overseeing and implementing oil and gas operations are expected to apply methods for monitoring and evaluation that demonstrate the ability of the processes to achieve planned results and when planned results are not achieved; corrective actions ought to be taken, as appropriate. However, M&E noted to have some weaknesses in the conducted performance audits in oil and gas sector as explained hereunder:

3.6.1 Inadequate Plans for Monitoring and Evaluations

According to the National Natural Gas Policy (2013) the Natural Gas Policy Monitoring and Evaluation Plan shall be developed through a consultative process as part of the Policy Implementation Strategy, and outline milestones and key performance indicators. Specifically, the Plan shall be a tool to manage the process of monitoring, evaluating and reporting progress towards the objectives.

Performance audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations as Regards to Petroleum Exploration Activities in Tanzania revealed that VPO lacked comprehensive plan for monitoring the performance of NEMC on the issues of enforcement of

environmental compliance as required by EMA 2004. The audit also found out that the ministry, despite being the overseer of implementation of environmental enforcement compliance, has not developed monitoring system which could have been used for monitoring the performance of NEMC specifically in the petroleum sector. Equally, there was no documented statement in the Ministry's Strategic Plan detailing the overall objectives, strategies and priorities for monitoring NEMC's operations.

Lack of monitoring plans has various impacts to government. For example, lack of monitoring plans hindered the VPO from having reliable information for guiding NEMC and ensuring enforcement of laws and regulations which would have brought about IOCs' compliance to environmental legislations and standards.

On the other hand, performance audit on Implementation of Local content provisions and Verification of recoverable cost in the Production sharing agreements revealed absence of established M&E framework by TPDC for reviewing their activity of following up the implementation of IOCs in respect to local content requirements.

In the performance audit on Management of Human Capital Development in Oil and Natural Gas Industry in Tanzania, it was noted that, MEM did not develop Monitoring and Evaluation guidelines for human capital development. This guideline could help to plan on how to carry-out monitoring, evaluation and reporting performance of human capital development in oil and gas. As result, Human Capital Development is managed and operated without a firm mechanism for monitoring and tracing the progress.

Likewise, performance audit on Management of Process of Awarding Explorations and Development Contracts and Licenses for Natural Gas found that, there were no guidelines for planning, conducting and reporting on results of Monitoring and Evaluation (M&E) on the area of awarding contracts and licenses for natural gas. Also, officials who were trained to do that lacked specific procurement guidelines for awarding natural gas licenses. As a result, TPDC's goal of procuring oil companies while attaining value for money could not be attained.

3.6.2 Lack and Limited Scope of Performance Indicators

Performance indicators are key components in M&E framework since they act as a benchmark for measuring targets or objectives set. However, all seven performance audits indicated weaknesses in performance indicators for measuring performance of various activities in oil and gas sector.

Performance audit on Geophysical and geological data revealed that there were no effective Performance indicators to monitor status of Geophysical and Geological Data management activities. Findings show that MEM did not effectively use performance indicators in their monitoring activities.

Similarly, in the performance audit on Compliance Monitoring and Enforcement of Environmental Policies, it was noted that VPO had a primary role of monitoring and evaluating the performance of NEMC's activities⁶. However, review of the VPO's Medium Term Strategic Plan of 2011-2016 (MTSP) and Monitoring and Evaluation Plans as indicated in the MTSP showed that VPO did not set out the key performance indicators for assessing NEMC's enforcement activities.

In performance audit on Local content it was noted that MEM formulated M&E strategy which covers year 2011/12 to 2015/16. However, it was noted that the performance indicators in the strategy did not include issues related to local content. Also, it did not mention how the local content issues were to be monitored and evaluated by the MEM.

The audit of TRA capacity to assess and collect tax revenue noted that the target set by TRA was not comprehensive. Performance targets gives less weight to non-cash generating revenue. For instance the target set in tax revenue collection is based on collection of taxes and ignore taxes which cannot make TRA to earn revenue at the moment. Corporate taxes are one among these types of taxes which does not generate tax revenue to TRA from oil and gas sector because most companies are still in exploration and development stage. These companies reporting losses from their business operation which hinders TRA in obtaining cash collection.

There were no Key performance indicators for assessing performance of tax audit and other assessment in ensuring the potential future tax is not eroded by unrealistic losses which might be declared by these companies. Lack of target which measures the extent of loss assessed and approved lowers the efforts of tax auditors in scrutinize the components due to little incentive it has. This might reduce the concentration of tax auditors in ensuring the right amount of tax is declared. In addition the audit noted that TRA Lack of time-based performance indicators in collection of arrears. This is against the TRA Corporate Strategic Plan, which requires TRA to improve the operational efficiency in collection by reducing cost and arrears.

⁶Environmental Management Act, 2004

CHAPTER FOUR

EXECUTION OF GOVERNMENT INTERVENTIONS IN THE OIL AND GAS SECTOR

4.1 Introduction

Implementation of plans of different activities in the sector of oil and gas was identified as being one of the challenges hindering the effectiveness of the sector. In so doing, the government should prepare and periodically review policies, strategies, acts and regulations as well as administer their implementation⁷.

This chapter presents the performance of the government⁸ in the implementation of planned interventions for oil and natural gas sector as reported in the seven performance audit conducted. It focuses on assessing whether the strategies and plans are effectively implemented by various key stakeholders. This is to ensure maximization of the benefits from the sector and the transformation and diversification of the Tanzanian economy.

Therefore, the findings presented in this chapter cover five elements, namely, adherence to the set plans, organization and implementation of the set interventions. It also presents the extent of achievement of set-out goals and targets and the coordination among different responsible actors.

4.2 Adherence to Set Plans and Strategies in oil and natural gas

The government has developed various interventions for oil and natural gas sector whereby responsible government entities were supposed to implement them according to the set targets and plans. Two performance audit reports have reported that, government entities did not implement the activities in accordance to the set plans and strategies as presented below:

Implementation of Unplanned Human Capacity Development Programmes

A performance audit on Human Capital Development noted that the Ministry of Energy and Minerals managed to identify skills which needed immediate intervention. However, the identified skills in human capital development programme in oil and natural gas sub-sector were not prioritized during the implementation. Instead, other skills which were not in the plan were implemented. As a result some of the needed professionals in the industry such as reservoir⁹ and utility engineers were marginalised.

⁷ The National Natural Gas Policy, 2013

⁸ Ministry of Energy and Mineral and Tanzania Petroleum Development Corporation

⁹ Is a Petroleum engineering that concerning with drainage systems in development and production of oil and gas reservoir to obtain high economic recovery.

The reasons for these were change of priorities within the Ministry of Energy and Minerals and Tanzania Petroleum Development Corporation (TPDC) and inadequate skills gap analysis previously conducted by Ministry of Energy and Mineral which failed to capture the actual needs for oil and natural gas industry.

Furthermore, the Energy Sector Capacity Building Project was not implemented as per plan. The beneficiaries of the project attended courses which were not identified in their needs assessments. **Table 4.1** shows set targets in each implementing agency and implementation level for the first year of the project (i.e. 2014/15).

Table 4.1: Analysis of targets and implementation of the ESCBP for the 2014/15

Institution	Targeted number of officials to be trained	Actual number of officials trained	Deviation
MEM	5	45	40
TPDC	0	16	16
NEMC	0	2	2
OSHA	10	6	4
EWURA	12	0	12
VETA	0	4	4

Source: Auditors' analysis and ESCBP Implementation Quarterly Report of June, 2014

Table 4.1 shows that the Ministry did not adhere to its set plan. It also shows that the Ministry focused more on officials at the central government who are mainly managers and policy makers than officials from Vocational level i.e. VETA who are highly needed by the oil and natural gas industry based on the nature of the industry.

The reasons for non-adherence to the plan were lack of coordination between Ministry of Energy and Minerals (MEM) and key stakeholders, lack of assessment on the implementation of the project and failure to prepare budget for the implementation of energy sector capacity building projects.

The second weakness pointed out in the performance audit on human capital was, that the Ministry of Energy and Minerals focused much on short-term course trainings whereby they went beyond the plan for about 165 percent.

Implementation of Unplanned Procurement Activity

Similarly, performance audit on Management of Process of Awarding Exploration and Development Contracts and Licenses for Natural Gas in Tanzania revealed that the tender of procurement in the 4th licensing round in 2013/14 was implemented without being included in the Annual Procurement Plan. This is contrary to Regulation 69 (7) of Procurement Regulations 2013 which requires the procuring entity to draw-up procurement plans for those requirements for which sufficient funds have been included in the approved budget in the current financial year.

4.3 Implementation and Achievement of Set-out Goals and Targets

Good results of any government intervention in the oil and gas sector are associated with proper organization of its implementation. Seven performance audit reports indicated that the implementation of planned activities was not adequately done to meet the set out goals and targets. The weaknesses are detailed below:

4.3.1 Unsatisfactory Organization of Activities

The issue of unsatisfactory organization of activities in oil and gas was featured in two performance audits. For instance, performance audit on management of process of awarding exploration and development contracts and licenses for natural gas noted that procuring process of the Tanzania Petroleum Development Corporation (TPDC) and Ministry of Energy and Minerals (MEM) were not properly organized. Thus, the goal of procurement was not met.

In order to ensure that the right companies are contracted to carry out exploration activities, TPDC normally ensured that all necessary conditions are in place such as specifications, bid evaluation criteria, preparation of fiscal terms and the like before floating invitation for any licensing round. However, it was noted that TPDC and MEM did not ensure that preparation of other necessary requirements such as preparation of the statement of requirements, bid evaluation criteria, preparation of fiscal terms as well as bidding documents were all in place before the commencement of licensing round.

It was also reported that the procurement activities were not well organized. The same audit report shows that, procurement was conducted in absence of the respective annual procurement plan e.g. the 4th licensing round. The plans on anti-corruption mechanisms were organized with consideration of only one stage (negotiation stage) without including other stages within the procurement process.

Further, the procurement roles were found more unstructured to address impending risks of delays and costs. Besides planning, execution was also

found to be inadequate. The Tanzania Petroleum Development Corporation (TPDC) and Ministry of Energy and Minerals (MEM) could not fulfil their goal for preventing anti-corruption in procurement process which was in their strategic plan of 2011/12-2015/2016.

Furthermore, the Ministry of Energy and Minerals was supposed to conduct assessments to the entire oil and gas industry in Tanzania and establish the potential number of employment opportunities expected to be offered by the oil and gas industry in the country and establish how many Tanzanians could be absorbed by the industry as well as the number of Tanzanians who were actually employed by the industry.

Performance audit on Local content revealed that Ministry of Energy and Minerals did not properly organize the plan for the implementation of provisions for the employment to Tanzanians as per Production Sharing Agreements. Its organization was done without conducting assessments to identify opportunities of employment of Tanzanians. As a result, MEM could not establish whether all the opportunities taken by the foreigners could not be performed by among others Tanzanians.

4.3.2 Inadequate Implementation of Set Plans and Strategies

The government was supposed to ensure that plans and strategies are effectively implemented. Three performance audit reports have reported that, government entities responsible for oil and gas sector did not adequately implement set plans and strategies. The following are the reported plans and strategies that were not adequately implemented:

Inadequate Implementation of the Set Plans for Human Capital Development

Ministry of Energy and Minerals is quirked to implement human capital development plans and strategies in natural gas sub-sector; carry-out or cause to be carried out research on petroleum and gas and provide advice on appropriate technologies and methods necessary for proper functioning of the petroleum industry.

The performance audit on the Management of Human Capital Development indicated that the Ministry of Energy and Minerals failed to meet set plans and strategies for human capital development in natural gas sub-sector.

For the planned long-term courses (Degree and Masters) out of 344 planned personnel, the Ministry of Energy and Minerals managed to train 46 personnel equivalent to 13 per cent of the planned number of personnel to be trained. The ministry failed to train some professionals like reservoir and utility engineers. This means that more than 80 percent of those who were supposed to receive various long-term capacity building interventions failed to get that opportunity.

Although Educational institutions play a vital role in the development of Human Capital, the report indicated that some critical skills identified in the Human Capital Development Plan (HCDP) were not considered in the implementation. These include rig erectors, heavy duty equipment operators, port facilities (long-shore men), pipe filters and instrument mechanics. As a result, the planned targets for learning institutions were not achieved as indicated in Table 4.2.

Table 4.2: Implementation of Human Capital Development Plans by Education Institutions

Training Programme offered	Planned number of people to be trained (2012-2016)	Actual Number trained (By 2015)	Gaps	% trained
Professional Level	344	19 ¹⁰	325	6
Technical Level	948	60 ¹¹	888	6
Short Courses ¹²	78	205	127	263

Source: Auditor's analysis

Table 4.2 indicates that both programs for professional (Bachelor and Master) and technical (Certificates and Diploma) levels were achieved by 6 per cent whereby the short courses the targets exceeded to 263 percent. The report mentioned that the Ministry of Energy and Minerals did not set a sustainable implementation strategy and pays more attention to the short-term capacity building interventions. While for sustainability of the sector, Ministry of Energy and Minerals might need to also address intensive long-term capacity building interventions.

Similarly, the targets for Human capital development programme in oil and natural gas sub-sector for various stakeholders¹³ were not achieved. A total of 76 personnel were identified to attend various short-courses but none of them attended.

¹⁰Graduates from UDOM

¹¹ Graduates from VETA (Lindi & Mtwara)

¹²Short courses implemented by MEM through training programmes and ESCBP

¹³Tanzania Petroleum Development Company, National Environmental Management Council, Energy and Water Utilities Regulatory Authority , Occupational Safety and Health Authority , Tanzania Revenue Authority, Controller and Auditor General and Ministry of Finance and Planning

Furthermore, the Ministry of Energy and Minerals did not fulfil its objective of assessing the implementation of Tanzania Petroleum Development Corporation (HCDP) at least twice per year (bi-annual) as required by operating guidelines of Energy Sector Capacity Building Program (ESCBP).

This was mainly caused by lack of monitoring and evaluation guidelines regardless of the fact that the principle of the ESCBP programme calls for Monitoring and Evaluation to be conducted for the purpose of understanding areas for further improvements.

Lack of assessments led the Ministry of Energy and Minerals (MEM) to be unable to know the extent to which plans and strategies for human capital development in oil and natural gas industry have been implemented. As a result, it was unable to make improvement measures so as to meet the set targets or to adjust the same in case the existing measures were not appropriate.

The reasons for inadequate implementation of the human capital development plan include non-collaborative formulated plans and strategies, insufficient periodical monitoring and evaluation of implementation of the plans and lack of focus during implementation of plans.

As a result, the country kept on experiencing a growing skills gap in the oil and natural gas industry. Although some Tanzanians, particularly planned human capital development interventions, would provide a good workforce in the oil and natural gas industry, the Ministry of Energy and Minerals did not manage to prioritize this.

Targets on Procurement, Contracting and Awarding of Contract and License were not achieved

The performance audit on the management of process of awarding exploration and development contracts and licenses for natural gas also reported that, TPDC’s goal of procuring, contracting and awarding licenses was not successfully met due to lack of proper time frame, absence of proper policies, strategies and guidelines.

The report indicated that, the planned objectives of TPDC were partially met because of low prospective of the industry in the country, low technical and financial capacity as indicated in **Table 4.3**.

Table 4.3: Level of Implementation of TPDC Procurement Objectives and Reasons for Non-attainment

Set Objective	Level of implementation	Reasons for unsatisfactory implementation
To attract hydrocarbon Exploration in offshore areas	Partially fulfilled	Low prospectively of the Industry in the country

Set Objective	Level of implementation	Reasons for unsatisfactory implementation
To invite international oil companies to bid for exploration rights in the remaining deep-sea blocks 1-4, 6-12	Partially fulfilled	Low prospectively of the Industry in the country
Enhance sustainability of petroleum production and thus contribute to the country's economy through generating revenue to support other productive sectors of the economy.	Partially fulfilled	Low technical and financial Capacity
Attract Oil and Gas exploration in the 7 deep-sea Blocks which are sitting in ultra-deep sea of Tanzania	Partially fulfilled	MPSA 2013 was prepared when the Oil price was \$100 per barrel. The TPDC could not predict that in a few months later the price would go down by more than 50%

Source: MEM and TPDC's Strategic Plans of 2011/12- 2015/16

Another gap noted is on submission of bids for the advertised tender which was below the expectations. In the 4th licensing round, out of eight (8) blocks offered, six blocks remained untouched which is 75 percent of total blocks of the bids. Only 25 percent of blocks attracted investors. This scenario was noted in all the four licensing rounds, whereby a total of 32 blocks were offered, but managed to award contracts to only 5 blocks which is equivalent to 16 percent of all blocks as indicated in **Table 4.4**.

Table 4.4: Relationship between Number of Received and Responsive Bids

Round	Number of blocks offered	Received bids	Responsive Bids	Awarded companies
1st Round	6	1	1	1
2nd Round	11	2	1	1
3rd Round	7	3	3	3
4th Round	8	6	2	NIL
Total	32	12	7	5

Source: Analysis of the interviews with the TPDC's officials

Table 4.4 indicates that there were inadequacies in awarding contracts to IOCs. This was because the procuring goal did not meet the key success

factors like cost of running the activities and the expected revenues. Also, other factors included time it takes to complete the task or even the production time, quality and expertise of the procured firm etc.

Targets for Enforcement of Environmental Policies in Petroleum Exploration activities were not achieved: According to the requirements of Section 88(1) of Environmental Management Act (EMA) 2004 and United Nations environmental Program (UNEP)¹⁴ enforcement guidelines, the outputs from the Planning Unit of The National Environmental Management Council are to be used by the Directorate of Environmental Compliance and Enforcement in conducting environmental inspections. The inspectors were supposed to conduct inspection activities to the prioritized projects. Also, the frequency of inspection should focus on such projects which had been identified in the plans to be of high risk.

The performance audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations, as regards to Petroleum Exploration activities in Tanzania reported that the set targets for inspection and review of environmental impact statement were not achieved as explained below:

Only four Percent of the Registered Oil and Gas Projects were inspected: From 2010/11 to 2014/15, it was reported that National Environmental Management Council carried out only 3 out of 71 inspections on registered projects (which is equivalent to 4 percent). The purpose of inspection was to check whether petroleum exploration companies consistently complied with environmental requirement.

This situation was attributed by inadequate capacity in terms of oil and gas expertise as well as insufficient tools and equipment for carrying out inspections specifically in the off-shore projects. It was also contributed by lack of risk based inspection plans and inadequate human resource. As a result, there were poor enforcements; henceforth petroleum exploration companies could pollute the environment.

Only 66 percent of Environmental Impact Statements were reviewed: For the period of five years 2010-2015, National Environmental Management Council received 71 environmental impact assessment statements, and managed to review only 47 equivalents to 66 percent. Delay in submission of Environmental Impact Statement (EIS) from petroleum companies through their environmental consultants contributed to failure in achieving the targets.

No independent quality review conducted on tax audits carried on oil and gas sector: The audit on TRA capacity to assess and collect tax revenues revealed that the Department of Internal Audit (DIA) did not conduct quality

¹⁴United Nation Environmental Programme

independence review on oil and gas sector due to lack of capacity. The audit also noted that the work conducted by DIA in other sectors apart from oil and gas not yet identified non-compliance with requirement for information gathering for tax purpose as a risk factor. The major risk which may hinder the practice of using multisource of information in conducting tax audit include pressure of work among tax auditors and their supervisors especially in achieving revenue targets and delays or non-availability of such information from third parties.

Inadequate Implementation of Local Content Provisions

The Performance audit on the Implementation of Local Content Provisions and Verification of Recoverable Costs noted that there was inadequate implementation of provisions as per Production Sharing Agreements. The provision for employment of Tanzanians, Procurement of Local Goods and Services, Training of Local Experts and participation in Production Sharing Agreements in Oil and Gas Business were not achieved.

According to the Production Sharing Agreements (PSAs) which were signed between the Government of Tanzania (Ministry of Energy and Minerals), Tanzania Petroleum Development Corporation (TPDC) and the International Oil Companies (IOCs); MEM and TPDC has a responsibility of ensuring the local content provisions stipulated in the Production Sharing Agreements (PSAs) and in the Petroleum (Exploration and Production) Act (1980) are adequately implemented.

The goal for provision of employment for Tanzanians was not met: Lack of assessments to identify employment opportunities in the oil and gas industry and strategic plans to ensure employment of Tanzanians by the International Oil Companies and their sub-contractors contributed to inadequate employment. Another cause reported was lack of guidelines and proper procedures for employment of foreign workers.

In addition, lack of sufficient legal, regulatory and institutional framework for managing the implementation of local content provisions in the PSAs by IOCs also affected the implementation.

Inadequate participation in Provision for Oil and Gas Business: The performance audit report on local content pointed out that Tanzania Petroleum Development Corporations was supposed to participate in both SongoSongo and Mnazi Bay Projects which were the only PSAs that were in the production stage, but it participated in Mnazi Bay project only. This is as a result of inadequate planning as presented in Chapter Three.

Inadequate Implementations of Planned Activities for Enhancing Skills

The Performance audit on the produced graduates for oil and natural gas industry revealed that planned skills enhancement activities were not adequately implemented. It indicated that activities such as conducting practical training to students, conducting training evaluations, training of trainers, purchasing training materials and safety gears were not implemented by learning institutions¹⁵. Also planned quality assurance activities such as review and validation of curricula and monitoring of training institutions were not implemented by Tanzania Commission of Universities (TCU).

This was due to inadequate allocation of funds resulted from low prioritisation of skills enhancement activities. Consequently, this limited the production of competent students who are needed by the industry.

Inadequate Implementation of Activities for Improving Capacity of Learning Institutions

In the Performance audit on the produced graduates for oil and natural gas industry it was noted that Ministry of Education did not effectively implement the activities for strengthening the capacity of Learning and training Institutions. The Ministry of Education was required to improve quality of formal and non-formal education by supplying adequate trainers, teaching and learning materials and rehabilitation of training institutions physical facilities.

The audit noted that the learning institutions did not have adequate capacity for producing the skills needed by oil and gas industries. The capacity is influenced by Insufficient number of Trainers, limited competence of trainers, ineffective training strategies for trainers and insufficient training infrastructures and facilities such as laboratories, laboratories facilities and equipment , scientific equipment, reference books. The audit also noted that was a gap between the skills needed by the Oil and natural Gas industry with those captured in the learning institutions curricula.

The skill gaps in the curricula creates a risk of producing graduates with skills which are not needed by the market and hence they may remain either unemployed in the industry or cannot employ themselves since their professions may be irrelevant for the oil and natural gas sub-sector

Delay in Implementation of Planned Strategies

The performance audit on human capital development reveals that there was a delay in the implementation of Training Programs in terms of required skills in various institutions. It indicates that Ministry of Energy and Minerals (MEM) delayed implementation of training programs by 54 percent as at 2015.

¹⁵University of Dodoma, University of Dar Es Salaam, Lindi and Mtwara Vocational Training Centre

On the other hand Tanzania Petroleum Development Corporation delayed in implementation of training programme by 50 percent, whereas Ministry of Education, Science and Technology did train 300 trainers.

The main reason for varying performance among those institutions was the inadequate allocation of funds which in turn was due to the fact that Ministry of Energy and Minerals did not have clear sources of funds.

While Ministry of Energy and Minerals as the central coordinator of the program was able to allocate some funds for implementing activities under their management but it was not the case for other implementing institutions like Ministry of Education, Science and Technology.

The audit also indicates that, there was a delay in the implementation of training programs in terms of skill, whereby Ministry of Energy and Minerals and Tanzania Petroleum Development Corporations were able to cover almost one-sixth of the planned number of professional skills to be developed. Other entities such as Vocational Education Training Authority, National Environmental Management Council and Occupational Health and Safety Authority failed to cover any of the identified professional skills during the period.

The reasons for delayed implementation of training program were lack of a clear source of funds which contributed to inadequate allocation of funds for the planned activities. The other reason was absence of a coordinating unit and a person for coordinating Human Capital Development activities in Ministry of Energy and Minerals that led to insufficient coordination among key stakeholders.

It was also found that TRA is currently not achieving its set targets in overall collection of taxes as a whole. There has been a declining capacity in reaching its targets set in overall collection of tax. **Figure 3.4** shows the trend in collection efficiency at TRA based on the targets and actual collection.

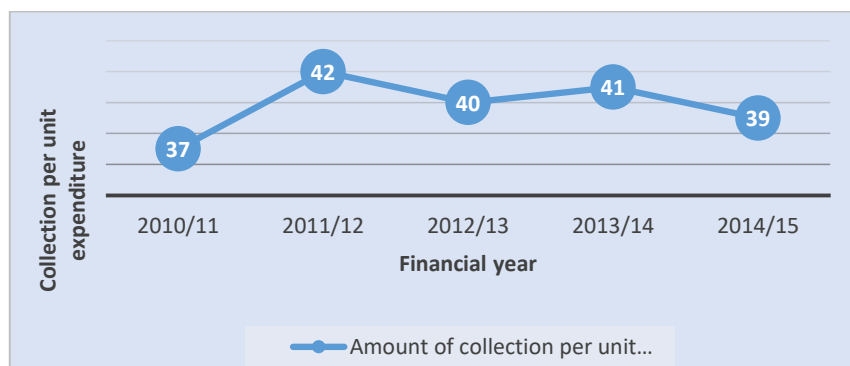
The audit noted that tax audit team does not effectively implement audit tests related to corporate tax during conducting tax audit. It was also noted that the years of income covered in the audit of corporate tax is less compared to other type of taxes such as PAYE, SDL and Withholding taxes. Corporate tax seems to be lagging behind because more previous years are recovered compared to other taxes which cover recent years.

Furthermore, in another case file the audit team noted the scope of time stated in the audit plan for covering corporate tax was reduced by two years (2011-2013) compared with other type of taxes which had a scope of five years. The types of taxes which were covered in a scope of five years (2010-2013) included VAT, Employment, Withholding and other taxes.

Among the major causes of not covering corporate tax when conducting tax audits is the complexity in its assessments. Conducting audit test related to the verification of exploration cost, cost of assets and their deductions, ascertaining the related part transaction such as transfer pricing demand sufficient information and other technical competence in data mining and analysis to reduce time spent in one audit. The time saved could be used in conduct other audits.

Based on the figures provided by the Annual Report of 2014/15, the cost of collection ratio was at an acceptable level with an average of 2.49% between financial years 2010/11 and 2014/15. The analysis of the trend of amount of revenue collection per unit of expenditure is as presented in the **figure 3.4**.

Figure 3.4: Amount of overall tax revenue collected per unit of expenditure



Source: TRA Collection Statistics 2010-2015

Figure 3.4 shows that the amount of collection per unit of expenditure at TRA has been declining in recent years. The maximum ratio was observed in a financial year 2011/12 where each unit of expenditure collected an equivalent of 42 TZS. The least ratio was observed in the year 2010/11 where each unit of expenditure collected an equivalent of 37 TZS. The recent trend observed affects the objective of TRA in costs minimisation because the unit value of expenditure increases per each shilling which is being collected. This has an impact in the whole operations of TRA in tax collection because it limits the expansion of TRA in widening the tax collection base which will usually require additional resources in terms of funds and budget as well.

4.4 Coordination among Actors in Oil and Natural Gas Industry

Natural Gas Policy 2013 requires the Ministry of Energy and Minerals to develop an effective coordination and communication strategy that provides accurate and timely information to the public on activities implemented throughout the natural gas industry as well as manage public expectation and stewardship of natural gas resources. Two performance audit reports pointed

out that there were inadequate coordination and communication between different actors in the oil and natural gas sector.

Ministry of Energy and Minerals (MEM) and Tanzania Petroleum Development Corporation (TPDC) being the lead government institutions dealing with oil and gas industry in Tanzania, were expected to formulate coordination and communication strategy which would ensure coordination and communication between themselves and other important actors in the sector. However, the audit found that there was no adequate coordination in managing this sector in the government.

The performance audit on contract and licensing, observed inadequate coordination between Ministry of Energy and Minerals (MEM) and Tanzania Petroleum Development Corporation (TPDC) as far as procurement of International Oil Companies (IOC) for natural gas in the country is concerned. There was no good flow of information from MEM to TPDC in providing the status of the 4th licensing round on Lake North Tanganyika block (RAKGAS Company). There were contradictory information from MEM and TPDC. From the evaluation of MPSA 2013 conducted on November 2015, TPDC stated that RAKGAS informed them of their intention to withdraw from signing the Lake Tanganyika North Production Sharing Agreement whereas MEM was not aware of this status, and assumed that RAKGAS was still interested on the block.

The reasons for this were: unavailability of procurement strategy and lack of common implementable procurement plans agreed upon by both TPDC and MEM. Consequently, it leads to untimely decision making and to a large extent contributing to delays in completing the tendering process, in proceeding with exploration and development of natural gas in various parts of the country discovered to have natural gas deposits.

This in turn has denied Tanzanians employment and other economic opportunities which are always accompanied by the implementation of the related extraction activities. It also contributes to the risk of not achieving the intended goals such as to explore and produce petroleum, to contract, hold equity or participate in oil concessions, franchises and licenses. The goal of enhancing TPDC's role in oil concessions franchises and licenses in oil and gas exploration, development and production in the country was also affected.

The Performance audit on the produced graduates in oil and natural gas industry indicates that the coordination of stakeholders dealing with oil and gas was not adequate. This was contributed by the absence of existing coordination mechanism, that link private and government sectors in planning and assessing demands and supply of skills needed. Also the Ministry of Education does not have clear coordination mechanism for different actors.

As a result, each stakeholder works separately towards capacity building in the Oil and Natural Gas education without involving the Ministry of Education.

Coordination during execution of plans helps to timely achieve plans and ensure consistency when such plans are being implemented by the responsible actors i.e. Ministry of Education, regulatory bodies and training institutions.

CHAPTER FIVE

GOVERNMENT MEASURES IN RISK MANAGEMENT OF OIL AND GAS SECTOR PERFORMANCE

5.1 Introduction

This chapter highlights common weaknesses revealed in the management of risks. It covers public sector risk management in the oil and gas operations. It starts with the presentation of the importance of risk management and then weaknesses noted in the conducted seven performance audits.

5.2 Importance of Risk Management

Risk management is one of the crucial elements for assuring achievement of the future objective. “Understanding and managing risk is essential for any organization, public or private. In the private sector, risk management is a widely accepted practice designed to control risks that could lead to a business failure if not properly managed. In the public sector, government leaders must strive to manage risk that increases the likelihood of an agency achieving its primary mission and strategic objectives.”¹⁶

Risk management is the identification, assessment and prioritisation of risks. Involves coordinated and economical application of resources to minimise, monitor and control the likelihood of unforeseen events or maximise opportunities. According to ISO 31000, Risk Management is an essential activity for organisations of all sizes. Organisations that manage risks effectively will thrive and produce high quality services or products. Effective implementation of risk management practises guarantees achievement of organisational objectives.

5.3 Weakness Revealed on Risk Management in Oil and Gas Operations

Ministries and agencies responsible in overseeing and implementing oil and gas activities in Tanzania were expected to properly deliver their entrusted role to assure realisation of the set objectives. This includes among others revenue maximisation, employment opportunities and environmental protection. However, a review of Five (5) Performance audit reports tabled in year 2016 noted the following:

In the Performance Audit on Management of Geophysical and Geological data, risks on the reliability, quality and accuracy of Geophysical and Geological data were key variables which of the motivated undertaking of the audit.

¹⁶Treasury Board of Canada Secretariat, 2001

TPDC is not in full control of the quality, accuracy and quantity of geophysical and geological data they managed. This may lead into miss-targeting the potential of oil and gas and consequently, the loss of financial capital and time. Also, inadequately managed Geophysical and Geological data might discourage investors to bid for exploration licenses.

Similarly risk to data safety has been noted in the Geophysical and Geological audit. System to prevent Geological and Geophysical data loss is inadequately functioning. TPDC uses server-based devices for data storage. Audit noted that, personnel working with data management were aware of the need to have data management system with auto backup capability. This data management system is needed in case of any disasters that would be appropriate compared to the current practice. Absence of centralised server for data backup may result to data loss in case of emergency. Interviews held with MEM's staff indicated that, there is no centralised server system to back up the available information in case of emergency. Lack of awareness and having inadequate resources was a reason for lacking a centralised server at MEM.

Despite having restricted mechanism for data access from the servers at TPDC, there are associated risks which could emerge because of lowering the level of data safety. Inadequate measures to protect the integrity of geological and geophysical data, is attributed to the existence of Practices that could affect the integrity of data. An example of these practices includes, copying and deleting original data by individual personnel who access the data through the server system. It was found at TPDC that, there is no internal policy which prescribes management of geophysical and geological data including its integrity. This was noted during the interviews held with the senior staff from the Ministry of Energy and Minerals.

It was also noted that, there is a risk to misinterpretation and misleading results due to inadequate expertise to process geological data. TPDC has no effective mechanism of ensuring that data processing steps related to isolation, analysis and validation of geophysical data are taken care of. TPDC uses several data management software such as Petrel and SMT as per data manipulation's requirements. But officials responsible for geophysical and geological data management have limited skills to conduct proper analysis using the available software. Further, the software for data management was procured without needs and capability analysis which bring questions on the effectiveness on using the software.

Similarly, Performance Audit on Management of Processing and Awarding Exploration and Development Contracts and Licences for Natural Gas revealed weaknesses in risk management. The audit found-out that there is no formal risk management measures developed to provide reasonable assurance on the organisation's procurement and bidding objectives for the IOCs. Despite of having a fully-fledged risk management unit, TPDC did not have proper

measures to oversee the risks arising from its procurement bidding processes. According to ISO 31000, a good standard of the risks management should contain a risk management check list containing risk architecture, risk strategy, and risks protocols.

Also, the audit revealed inadequate controls to ensure that awarding process complies with the relevant legislations. This is according to Section 63(2) of the Public Procurement Act which requires that procurement be conducted in a manner that maximizes competition and achieve economy, undertaking, and value for money.

The audit found the process to be challenging as the principal legislations namely Public Procurement Act and Petroleum Act have not covered the process of allocations of blocks to International Oil Companies. For instance, the Petroleum Act of 1980 is silent on application of competitive methods that can be used to allocate Blocks to IOC through procurement procedures. This was noted through the interviews held with officials from TPDC, MEM and Public Procurement Regulatory Authority (PPRA). Even-though TPDC and MEM tried to use the procurement processes as defined in the Public Procurement Act but specific aspects and procedures of allocation of blocks have not been covered.

The audit noted that there were no formal risks management initiatives taken by TPDC in processing and awarding contracts and licenses to IOCs. The audit indicated that TPDC officials did not have adequate exposure on the existence and importance of risks management in awarding contracts and licenses to IOCs for exploration and development of natural gas. There exists a risk to procuring incapable contractors in oil and gas sector due to inadequate procedures.

The analysis of procedures used by TPDC in awarding contracts and licenses indicate that procedures are not clearly stated in the main Petroleum (Exploration and Production) Act of 1980. The Performance Audit of Management of Human Capital Development in Oil and Natural Gas Industry in Tanzania, Showed the weak identification of skills gap and inadequate program for bridging the skills gap. This may result into government running into a risk of lacking relevant skills to oversee, enforce and monitor the natural gas sub-sector in the country.

Likewise, Performance Audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations on Petroleum Exploration Activities in Tanzania, showed that, NEMC did not develop a risk-based inspection plan to conduct inspections in a Petroleum exploration. Due to complexity in petroleum exploration projects especially in off-shore projects, it was expected NEMC to have inspection plans to identify specific projects/facilities or activities based on risk factors or with high level of

pollution to the environment. This is because operations may affect habitat organisms and air pollution.

The audit noted that NEMC officials and the strategic plan and annual work plans lacked tools and equipment which contributed to weak inspections. Due to absence of planning system, the Council has failed to identify and prioritize the risky exploration sites. Ideally exploration sites require continuous inspection and enforcement for effective and continuous monitoring of explorations projects for the whole period under review.

Performance Audit of Implementation of Local Content Provisions and Verification of Recoverable Costs in the production sharing agreements was found that there is a risk of not maximising benefits accruing with discoveries of oil and gas. This is because of declining revenue to the government due to limited participation of TPDC in Oil and gas business during production phase. This is against Article 9 of the MPSA 2004 that gave TPDC the opportunity to participate in the oil and gas business. PSAs allow participation between 5% up to 20% during the production phase and beyond so long as they provide the needed capital to invest in the mentioned projects. To ensure TPDC participate in all the PSAs during production phase, TPDC was required to include this item in their strategies, plans and budgets. In the same spirit, MEM in collaboration with Ministry of Finance was supposed to provide necessary support to TPDC to raise the needed capital to engage in each PSA when the commercial production starts.

Inadequate measures to prevent overstatement of costs from unverified recoverable costs may result into losing future revenue. According to PSA, TPDC is supposed to conduct verification of recoverable costs of each PSA within two years after the closure of the year under review. However, review of documents from the selected PSAs under review showed that recoverable costs recorded by IOCs amounting to US\$ 1.5 billion were not verified. Further analysis showed that, about US\$1.5 billion were the unverified recoverable costs for the year 2011 and 2012 which were supposed to be verified by 2013 and 2014 respectively.

According to the interview with officials at TPDC, Directorate of Internal Audit did not adequately handle both function of conduct internal auditing for TPDC and verification of the costs incurred by the IOCs. TPDC confirmed that, understaffing was the main factor for non-performance. Hence, they could not fully implement the planned activities to the desired end.

The unverified costs pose a risk of revenue loss to the government. This is because government revenue is collected after adjustment of the recoverable costs as part of expenses.

CHAPTER SIX

GOVERNMENT MEASURES IN MONITORING AND EVALUATION OF OIL AND GAS SECTOR PERFORMANCE

6.1 Introduction

This chapter highlights common weaknesses noted in implementation of monitoring and evaluation plans by the Ministry of Energy and Minerals (MEM) and agencies which play a role in oil and gas sector. These weaknesses were extracted and analysed from seven performance audits conducted. Weaknesses noted covered three key issues namely conducting, reporting monitoring and evaluation activities as well as tools and resources for supporting monitoring and evaluation activities.

6.2 Importance of Monitoring and Evaluating Oil and Gas Operations

In ensuring effective government performance in any sector monitoring and evaluation are crucial elements in managing the process to achieve the set targets. Monitoring and evaluation can help organizations to extract relevant information from past and on-going activities that can be used as the basis for programmatic fine-tuning, re orientation and future planning.

Without effective monitoring and evaluation, it would be impossible to judge if work is going in the right direction, whether progress and success can be claimed, and how future efforts might be improved¹⁷. Effective implementation of monitoring and evaluation activities in oil and gas sector, provide assurance to the government on the progress made towards achieving the goals set. The implementation status of M&E activities from the seven conducted audits reveals various implementation weaknesses as discussed below.

6.3 Weaknesses in Conducting of M&E activities

One of the critical elements of monitoring and evaluation framework is implementation of M&E activities according to the plan. The implementation status of M&E activities from the seven conducted audits revealed that the planned M&E activities were not conducted as planned by various government institutions involved in managing the oil and gas sector.

For instance, the performance audit on Human Capital Development noted that MEM did not conduct M&E for the implementation of Human Capital Development programme as required by National Natural Gas Policy (2013).

¹⁷United Nations Development Programme Hand book on planning, monitoring and evaluating for development results 2009

The policy also requires MEM to develop Monitoring and Evaluation Plan through a consultative process as part of the Policy Implementation Strategy, and outline milestones and key performance indicators. However, the audit noted that MEM conducted one out of three steering committee meetings. These meetings are very important in discussing the various issues including M&E reports so as to assess the progress made in the sector and take appropriate actions.

In the performance audit on Compliance Monitoring and Enforcement of Environmental Policies it was noted that NEMC's Strategic Plan (2010 - 2014) requires the Central Planning Unit (CPU) to conduct monitoring and evaluation of their performance. The plan requires at the end of each year, NEMC is supposed to examine what they had set out to achieve in their annual work plan, how much has been achieved, reasons for non-achievement and prepare monitoring reports. However, interviews with CPU Officials reveals that NEMC has not conducted monitoring and evaluation exercise to assess the performance of inspection and enforcement activities in the petroleum sector.

Furthermore, the audit indicated that no monitoring and evaluation was carried out to assess NEMC's performance in environmental enforcement in petroleum sector. It was also noted that failure to monitor performance of enforcement activities against the set enforcement targets denied NEMC an opportunity to establish whether they are performing well or lagging behind the established specific objectives and to act accordingly.

In the performance audit on Local content, the audit noted that MEM as the overseer of upstream activities in the oil and gas sector did not conduct M&E on issues of local content and verification of recoverable cost. This is because MEM as the regulator of oil and gas industry in Tanzania did not established specific units or functions in their internal structures that could make close follow up to the IOCs and their sub-contractors to ensure adequate implementation of local content provisions in the PSAs.

Further, the audit found that TPDC did not conduct internal monitoring and evaluation of the activity of verification of recoverable cost. Interviews with TPDC officials showed that there is no M&E framework at TPDC that ensures the activities performed in this area by them will be monitored and evaluated by upper authority such as MEM.

In capacity to assess and collect tax revenue audit it was noted that supervisors were not effectively checking and adding value to the tax audit plans submitted to them. There were no comments which were provided by supervisors in the planning process especially in the information gathering plan. This has affected the tax audits conducted especially in planning and use of various sources of information in establishing tax liability and overall compliance with tax laws.

From the Performance audit on the produced graduates in oil and natural gas industry, the audit noted that the Ministry of Education did not conduct adequate monitoring and evaluation of activities for producing needed skills as stated by its Medium Term Strategic Plan (2012/13-2015/16) and National Skills Development Strategy, 2013). This strategic plan requires the Ministry of Education to monitor and evaluate implementation of education and training strategy and ensure adherence to the set standards of performance. The audit noted that, the Ministry did not conduct monitoring regularly. For the past three years the Ministry did not conduct monitoring on the issues related to oil and gas skills development. Furthermore, Tanzania Commission for Universities and National Council for Technical Education did not conduct sufficient monitoring and evaluation activities.

The same audit found that Tanzania Commission for Universities and National Council for Technical Education did not conduct sufficient monitoring and evaluation activities. Inadequate funds and lack of monitoring guidelines were the reasons for not conducting monitoring and evaluation of oil and gas skills enhancement activities. Inadequate monitoring leads to challenges such as established universities offering programs without capacity in terms of resources. Hence tempering with the quality of graduates produced is likely to occur.

6.4 Inadequate Reporting of M&E Performed Activities

The preparation of M&E reports is very important because it assists the government to obtain feedback on the results of conducted activities in M&E. However, the audit found that the reporting of M&E results was not adequate because some government institutions do not prepare the M&E reports at all and some prepare partial reports which do not include key issues.

For instance, the audit on management of process for awarding exploration and development contracts and licences for natural gas noted that MEM and TPDC did not prepare performance reports to highlight periodical progress made on the area of procurement of IOCs for the exploration and development of natural gas. The main reason for non-production of the performance reports on the activities carried-out during the process for awarding contracts and licenses to IOCs for exploration and development of natural gas is the failure to periodically conduct Monitoring and Evaluation of those activities.

In the performance audit on Compliance Monitoring and Enforcement of Environmental Policies the audit noted that there were no bi-annual or annual monitoring reports prepared during period under review. This is attributed to absence of monitoring and evaluation manual. However, during the audit the preparation of a monitoring and evaluation manual was in progress.

The audit also noted non submission of enforcement reports by NEMC to VPO. NEMC is required to prepare and submit to the Minister responsible for

Environment within six months after the close of each financial year annual reports¹⁸ which include progress report, bi-annual implementation report and annual performance report regarding the status of implementation of the enforcement of environmental control systems in petroleum explorations.

This makes it difficult for the VPO to underscore the performance of NEMC and NEMC itself has failed to establish whether its own performance meets its own objectives as set out in its Strategic Plan. Thus, for this reasons, environmental compliance level of petroleum explorations facilities have not been reported so far.

In the audit of Local content, it was noted that the monitoring activities which were conducted were not comprehensive because the issues of local content were not covered. Furthermore, the Directorate of Upstream at TPDC was responsible to monitor implementation of the PSAs as the license holder; however, they only concentrate on monitoring the work programmes and budgets of the IOCs alone and leave out the monitoring of implementation of local content provisions during their normal monitoring exercises of the PSAs.

The performance audit on the produced graduates for oil and gas industry reveals that the Ministry did not report its performance in the implementation of the planned strategic activities for oil and gas skills development activities.

The failure to conduct monitoring and report the performance of the implemented oil and natural gas activities as required makes it difficult for the Ministry to know the extent to which the national skills development strategy, based on the objectives and set targets, has been achieved. It is also difficult for the Ministry to understand whether the government has capacity of producing the quality and number of skills needed by the Oil and Natural Gas industry. This shortcoming limits participation of Tanzanians in the Oil and Natural Gas value chain.

It was further noted that the MEM activity was to consolidate information coming from all the institutions under the ministry (including TPDC) and forward them to the President's Office - Planning Commission. TPDC, in particular, submitted to MEM quarterly, semi-annual and annual reports. However, the reports did not include the information about local content issues, and MEM did not take any other initiative to bridge the gap.

In the performance audit of Human Capital Development it was noted that MEM did not prepare substantial progress report on implementation of Human Capital Development Programme due to lack of good performance indicators for reporting.

From the performance audit on the produced graduates in oil and natural gas industry it was noted that the Ministry Education did not report its

¹⁸EMA 2004 Section 17(2)

performance in the implementation of the planned strategic activities for oil and gas skills development activities. Failure to monitor and report on the performance of the implemented oil and gas activities as required disallow the Ministry to know the extent to which the national skills development strategy, based on the objectives and set targets, has been achieved. It is also difficult for the Ministry to understand whether the government has the capacity to produce skills needed by the Oil and Natural Gas industry. This shortcoming limits participation of Tanzanians in the Oil and Natural Gas value chain.

6.5 Limited Tools and Resources to Support M&E Implementation

In analyzing conducted performance audit it was observed that there were gaps in working tools and resources for supporting smooth implementation of monitoring and evaluation system.

In the performance audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations in Petroleum Exploration Activities it was found that one of the reasons for failure to conduct such monitoring for NEMC's activities was lack of well documented monitoring guidelines or manuals which is tailored specifically for petroleum activities.

On that note, NEMC was found to lack a comprehensive database for all the Petroleum Explorations Companies operating in the country. This was caused by inadequate allocation of human resources and financial resources to accomplish the task. As such there is no specific staff and budget set aside for monitoring activities in petroleum industry. It was further noted that the absence of a complete and clear database of regulated entities had made it more difficult for NEMC to plan for inspection

Further, the audit noted NEMC did not have adequate record management processes and system to ensure that information from inspections is captured, processed and used to monitor the compliance with environment requirements in the petroleum sector. The absence of inspection reports was mainly attributed to the fact that there were inadequate inspections carried out, consequently there were few enforcements imposed on environmental requirements in the petroleum sector.

Furthermore it was noted that the reasons for VPO not monitoring NEMC's environmental enforcement performance is lack of well analysed information to enable them to take proper actions or decision. VPO was also not able to assess the systems for actual performance of NEMC based on actual input of resources injected in the environmental enforcement activities against the actual output resulting from NEMC's enforcement activities.

The issue of resources and tools for supporting M&E system was also featured in the performance audit on geophysical and geological data. It was noted that MEM is operating with inadequate number of required personnel. This was caused by the rapidly growing Oil and Gas industry in Tanzania. Inadequate

personnel at the Ministry level caused the Monitoring and Evaluation (M&E) function to be ineffective.

Inadequate number of staff may have resulted in TPDC's ineffectively conducting its activities related to Geophysical and Geological Data management, which also might result into deviation from the intended objective(s). Apart from inadequate staff, the interviews held with MEM's staff indicated that there was no centralized server system to back up the available information in case of emergency. The reason for not having a server at MEM is low level of awareness and absence of adequate resources.

The audit on TRA capacity to assess and collect taxes found that TRA has no procedures which require the tax auditors to test the reliability and validity of sources of information. Since the practice of using third parties information in collaborating evidence was not seen in the audit files reviewed, focus was then on the methodologies in place to check whether TRA has the procedures. The formulation of tax audit team does not have a proper mix of set skills such as experts in the field of oil and gas to assist the effective design of audit test which is then linked to relevant sources of information.

In addition to that, audit noted that TRA has not yet designed the comprehensive information system which supports the conducting of tax audits. It was further revealed that the institution has not designed the information system which supports tax auditors in using the local data to support audits. Furthermore, TRA does not have a database of recording and reporting the amount of loss carried forward by oil and gas companies. Apart from availability of various government institutions which maintain similar data which might be relevant to the audit of different categories of taxes TRA has not conducted a study to see how best they can utilize these potential sources of data in assessment. Available information system is limited to supporting cross border transactions which include the transfer pricing audits. This support function is provided by ITU under LTD.

Also Human Capital Development audit revealed that MEM did not have monitoring and evaluation guidelines regardless of the principle (v) of the ESCBP programme that calls for M&E to be conducted for the purpose of understanding areas for further improvements in the implementation of Human Capital Development Programme.

6.6 Inadequate Action taken to Correct Gaps Identified in M&E Reports

The reasons for reporting the results of M&E activities in oil and gas sector is to enable the government to analyze the issues reported and take corrective action to rescue whatever gaps noted in M&E reports. This include making close follow up on critical issues addressed in the plan. However, the audit noted that the government institutions involved in M& E activities have made less effort in analyzing the M&E reports received from other entities. Normally

there is no feedback provided, no action plan is developed, and little follow up on the critical issues is done.

For instance the audit of local content noted TPDC submitted quarterly reports covering issues of verification of recoverable costs to MEM which were compiled and submitted to the planning commission. However, MEM did not give feedback to TPDC regarding the reports. It was also noted that MEM as the regulator of oil and gas industry in Tanzania did not established specific units or functions in their internal structures that could make close follow up to the IOCs and their sub-contractors to ensure adequate implementation of local content provisions in the PSAs.

It was further reported that, MEM did not have any unit or function for following up activities performed by TPDC regarding monitoring of implementation of local content provisions in the PSAs by the IOCs. In addition, MEM did not make routine follow up on performance of IOCs and their sub-contractors in implementing local content issues. MEM did not develop and issue any guideline and procedures for TPDC to use for planning of monitoring of implementation of local content provisions in PSAs.

In the audit on management of process for awarding exploration and development contracts and licence for natural gas, it was found that MEM did not provide feedback to TPDC on the on assessment made on the evaluation reports submitted to MEM. For example the TPDC's performance review report for FY 2013/14 showed only the launching of the 4th licensing round but did not give feedback in details on the successes and failures of the project.

Human Capital Development audit noted that MEM was unable to make improvement measures so as to meet the set targets. This was due to weakness noted in monitoring and evaluation activities in implementing plans and strategies for human capital development in the oil and natural gas sector.

CHAPTER SEVEN

CONCLUSION

7.1 Introduction

This Chapter presents conclusions drawn after a review and analysis of findings from seven Performance Audit Reports discussed in this report.

7.2 General Conclusion

In general, the audits recognized government's efforts in developing and managing the oil and gas sector in the country through the Ministry of Energy and Minerals which is the parent organ accountable for the success of the entire sector. The weaknesses are mainly found in planning, execution, monitoring and evaluation (M&E) and management of risks associated with this sector.

7.3 Specific Conclusions

7.3.1 Planning of Interventions in Oil and Gas Sector

The challenges related to planning which have been revealed during the audit mostly centred on government failing to set up exhaustive policy, legal, regulatory and institutional frameworks, developing guidelines for managing the oil and gas industry, preparing strategies and plans as well as identifying needs to measure the conditions and needs of the oil and natural gas sector.

Major causes of these weaknesses are limited tools in place for providing guidance to responsible institutions and officers could come up with desired policy and institutional frameworks. MEM does not have clear division of responsibilities which are engaged in discharging planning issues. The framework is not set in a way that planning is harmonised between MEM, agencies and other stakeholders.

MEM and TPDC have not yet prepared sufficient guidelines to guide planning authorities to have a common planning system which will help to capture all necessary aspects in the oil and gas value chain.

MEM in collaboration with TPDC does not have clear and comprehensive strategies and plans for management of oil and gas industry. MEM does not incorporate matters of oil and gas in their respective strategies and plans. As a result, issues related to compliance with environmental standards, development of human capital, awarding of natural gas contracts, local content and recoverable costs as well as management of physiological and geological data in oil and gas industry remain uncovered.

In addition, MEM does not adequately conduct needs assessment when planning for various interventions in the oil and gas industry. For instance, there were no needs assessments conducted to identify needs for human capital, local content needs, areas to be monitored, procurement needs as well as software for management of oil and gas data in the oil and gas industry as a whole. As a result MEM and TPDC do not maintain accurate statistics or data in respect of oil and gas operations.

7.3.2 Execution of Interventions in the Oil and Gas Sector

MEM, TPDC and other stakeholders such as NEMC and VPO do not adequately execute planned interventions in oil and gas sector. For instance, NEMC does not enforce and monitor compliance to environmental standards by IOCs. NEMC and VPO did not adequately conducted inspections. Reporting of environmental threats and levels of compliances are not adequately conducted. Moreover VPO via Directorate of Environment failed to monitor NEMC's performance although it is required to do so by EMA 2004. The government lacks enforcement strategies for effective implementation of environmental control systems in the Petroleum sector.

Likewise, MEM does not adequately enforce local content provisions in the PSAs. MEM failed to administer the number of employees that are employed by IOCs in the entire oil and gas value chain. At the same time TPDC has not established the necessary organizational capacity, routines and guidelines for handling verification of recoverable cost and follow-up of local content provisions of the PSAs. When these activities are not handled properly, it may lead to great economic losses for Tanzania and public outcry.

In addition, MEM does not adequately implement the set plans and strategies for human capital development. There is also weak coordination among government institutions with the responsibility of ensuring that there is a sufficient and well trained workforce in the country.

On the other hand, MEM does not adequately execute its functions related to procuring, awarding and licensing of IOCs in oil and gas industry. TPDC achieved only 25 percent of set goal of procuring, contracting and awarding licenses due to lack of proper time frame, absence of proper policies, strategies and guidelines. This is because of low technical and sector in the country, low technical and financial capacity.

The major reasons associated to these anomalies are mixture combination of weaknesses in management functions. However, the key issue which was specifically pointed out was inadequate commitment in terms of resource allocation in adhering to time frame set by government in implementation of its projects. This contributed to inadequate enforcement including none or less punitive measures taken to officers causing deliberate delays or shortage of output against the target set out. Also, weakness in organization and coordination is another factor. In most cases the roles, responsibilities and

accountability frameworks are not effective especially when undertakings involve multiple stakeholders.

A limited number of Tanzanians will benefit from the available opportunities emanated from Oil and natural Gas industry activities regardless of the existing policies that call for education system to be responsive to the ever changing needs of people, government, industry, market and surrounding environment. The Ministry of Education, Science and Technology is the one responsible for ensuring that an effective system is in place that produces competent and enough graduates to meet the needs of oil and gas sector. However, there is a gap between the skills offered by higher learning institutions and the skills needed by the oil and natural gas sector.

The reasons for the mentioned gap was Ineffective Mechanism for Managing production of Needed Skills in oil and natural gas sector, Existing Curricula in Universities and Colleges in Tanzania do not meet the Demand of the Industry and Limited Recourses provided to Universities and Colleges.

7.2.3 Managing Risks, Monitoring and Evaluation of Oil and Gas Sector Performance

The audit recognizes great efforts made by the Government in establishing risk framework in public sector. However, the application of risk approach still needs to be improved due to lack of risk based inspections, monitoring and evaluation of IOCs' operations. Furthermore, there is little correlation between trainings provided and its relation to risk factors.

Among the factors that contributed to this problem is lack of risk management framework for managing oil and gas sector. For instance, due to absence of planning system and identification of risks, NEMC has failed to identify and prioritize the risky exploration sites which require continuous inspection and enforcement for effective monitoring of explorations. In other areas, the audit found that there is no formal risk management specifically developed to provide reasonable assurance regarding the organization's procurement and bidding objectives for the IOCs.

It can also be concluded that there is no adequate skills, knowledge and understanding of existing risks and how to manage them in order to avoid the future impacts of the current weaknesses in oil and gas activities. The few measures undertaken by the government are not well coordinated and the risk control measures available are not well implemented to guarantee the achievement of intended benefits for the government.

Furthermore, monitoring and evaluation was not effectively carried out by MEM especially in assessing performance of various activities as well as the performance of institutions under MEM.

Quality control mechanism to ensure M&E system is not effective. This is due to several factors such as non-provision of feedback during M&E, Absence of pre-defined procedures at the Ministry which could guide for what should be done with received reports from agencies such as TPDC and inadequate skill development.

Generally, the monitoring and evaluation system in place for ensuring the performance of oil and gas sector is not adequate. MEM as overall overseer of the sector has not adequately played its role in guiding other stakeholders in developing a comprehensive monitoring framework. This has resulted into other government institutions such as TPDC not adequately monitoring and evaluating activities related to verification of recoverable costs and performance of OICs in implementing local contents.

The revealed weaknesses indicate that the overall M&E system was not effective. These include lack of M&E plans in some areas, inadequate implantation of M&E plans, limited or non-availability of performance indicators as well as limited data in the area. The major causes which contributed to this gap is lack of skill in designing the comprehensive M&E system to cover the whole sector, poor information management system to support data collection and analysis, lack of guiding tools and inadequate initiatives of MEM in ensuring the M&E system is effective. Therefore, it is high time for the government to conduct a thorough study to establish what need to strengthen the M&E system is and draw the action plan for implementing it according to priorities set out.

CHAPTER EIGHT

RECOMMENDATIONS

8.1 Introduction

The findings and conclusions from the analysis made from seven performance audit reports, indicated weaknesses in the planning, implementation, risk assessment and monitoring of oil and natural gas interventions.

This chapter therefore provides recommendations to the Prime Minister's Office based on the conclusion in respect of what should be done in order to address the identified weaknesses and improve the planning, implementation, risk assessment and monitoring of oil and natural gas interventions in the country.

8.2 Improving Planning for oil and natural Gas Interventions

The Prime Minister's Office should ensure that Ministry of Energy and Minerals, Ministry of Education, Science and Technology, Petroleum Upstream Regulatory Authority, Tanzania Petroleum Development Corporations and National Environmental Management Council:

- 8.2.1 carry-out intensive skills gap analysis and employment opportunities for Tanzanians in oil and Gas Industry in collaboration with key stakeholders which would reflect real needs of Human Capital as well as the opportunities for employment in the oil and natural gas sector;
- 8.2.2 prepare a specific and comprehensive Human Capital Development Plans and Strategies which would address all professions/disciplines needed at each level of oil and natural gas value chain and ensure that the plans are followed and the results of their implementations are regularly communicated to all identified stakeholders in the public and private sector;
- 8.2.3 formulate data management policy that will act as a road-map towards effective and efficient geophysical and geological data management; and
- 8.2.4 prepare specific and comprehensive plans that govern activities of geophysical and geological data and ensure that they are followed and the results of its implementation are regularly reported to the Ministry of Energy and Minerals.

8.3 Improving Implementation of oil and natural Gas Interventions

The Prime Minister's Office should ensure that Ministry of Energy and Minerals, Ministry of Education, Science and Technology and Vice President's Office - Directorate of Environment:

- 8.3.1 in collaboration with the Ministry of Finance and Planning should set strategic measures to raise capital for the Tanzania Petroleum Development Corporation (TPDC) to participate in the oil and gas business in the commercial production stage.
- 8.3.2 develop an effective coordination mechanism that will ensure that the Ministry of Energy and Minerals is effectively coordinating with all key stakeholders in the oil and natural gas sector by involving them in identification of needs and challenges, developing plans and strategies for interventions, implementing approved plans and strategies and provide them with timely feedback regarding the implementation of those plans and strategies through performance reporting;
- 8.3.3 environmental enforcement activities which are carried out by NEMC, Sector Ministries and LGAs are properly coordinated, harmonized and that all stakeholders establish a firm reporting line of environmental matters; and
- 8.3.4 general environmental status report on petroleum sector in the country is prepared annually. An annual compilation of reports on environmental enforcement roles in the petroleum sector as carried out by other government departments are made available and used for assessing enforcement of performance annually and constitute the basis for further improvements.

8.4 Improving Risk Assessment in Procedures for Oil and Natural Gas Interventions

The Prime Minister's Office should ensure that the National Environmental Management Council:

- 8.4.1 establishes performance standards or parameters for enforcement activities including carrying out risk assessment, developing enforcement manuals, guidelines, and setting timeframes for each enforcement activity in the petroleum sector.

8.5 Improving Monitoring and Follow Up of Oil and Natural Gas Interventions

The Prime Minister's Office should ensure that Ministry of Energy and Minerals, Tanzania Petroleum Development Corporations and National Environmental Management Council:

- 8.5.1 develop a system that will allow tracking of progress of the Ministry and entities in implementing oil and natural gas activities in the country; and
- 8.5.2 develop a monitoring system for assessing completeness and accuracy of geophysical and geological data once received from International Oil Companies as well as ensuring that geophysical and geological data are adequately protected against manipulation, theft and loss;
- 8.5.3 establish inspection performance information system of which most of its data will be sourced from NEMC's petroleum environmental database (Central Environmental Information System); and
- 8.5.4 develop comprehensive action plans for monitoring and evaluating the implementation of approved plans and strategies in the oil and natural gas sector and ensure that monitoring and evaluation on their implementations are done periodically.

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APPENDICES

Appendix 1: Summary of Key Issues Noted in Each Report Relating to Planning

SN	Name of the Reports	Legal and institutional arrangement	Plans and Strategic Plans	Guideline	Needs assessment	Existence of Framework for Monitoring and Evaluation
1.	<i>Performance Audit on the Management of Geophysical Data for Oil and Natural Gas in Tanzania</i>		TPDC did not prepare plans specifically for management of geophysical and geological data for oil and natural gas.	TPDC has no guidelines to govern management of geophysical and geological data	TPDC did not adequately conduct needs assessment	
2.	<i>Performance audit on the Implementation of Local Content Provisions and Verification of Recoverable Cost in the Production Sharing Agreements</i>	<ul style="list-style-type: none"> • Inadequate legal framework for local content in Tanzania. • MEM has no local content policy to guide the local content issues in oil and gas industry in the country 	Ministry of Energy and Minerals did not have adequate strategies to ensure employment of Tanzanians in oil and natural gas industry	<ul style="list-style-type: none"> • TPDC did not develop any guidelines for the IOCs in implementation of local content provisions in the PSAs. • MEM and TPDC did not establish guidelines and procedures to guide the process of issuing and extension of work permits of the foreign workers in the oil and gas industry 	MEM and TPDC did not take necessary actions which would ensure implementation of local content requirements to the fullest	Absence of established M&E framework by TPDC for reviewing their activity of following up the implementation of local content requirements by IOCs.
3.	<i>Performance Audit on the Management of Process of Awarding Exploration and Development Contracts and Licenses for Natural Gas in Tanzania</i>	Legislations and its regulations did not cover key aspects related to contracting and licensing processes for exploration and development of natural gas by International Oil Companies.	The annual procurement plan did not cover the 4 th licensing round	Legislations and its regulations did not provide guidance on contracting and licensing processes for exploration and development of natural gas by International Oil Companies (IOCs).		There were no guidelines for planning, conducting and reporting on results of Monitoring and Evaluation (M&E) on the area of awarding contracts and licenses for natural gas

4.	<i>Performance Audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations as regards to Petroleum Exploration activities in Tanzania</i>		NEMC did not develop risk-based inspection plans for conducting inspections in petroleum explorations activities	There was no clearly defined procedure or mechanism of conducting enforcement specifically in the petroleum sector.		MEM has not developed monitoring system which could have been used for monitoring the performance of NEMC specifically in the petroleum sector
5.	<i>Performance Audit on the Management of Human Capital Development in Oil and Natural Gas Industry in Tanzania</i>		<ul style="list-style-type: none"> • Capacity Building Marshal Plan did not address some crucial professions required in the natural gas value chain. • MEM has plans and strategies are not effective for sustainability of the human capital • There was no strategy for managing the whole contracting and licensing process for exploration and development of natural gas in the country 		<ul style="list-style-type: none"> • need assessment was found to be inadequately addressed in relation to human capital development • The MEM plans on human capital development did not reflect needs of the government in engaging for exploration and development of oil and natural gas industry. 	MEM did not develop Monitoring and Evaluation guidelines for human capital development

Appendix 2: Summary of key issues noted in each report relating to implementation of Planned Interventions in Oil and Natural Gas Industry

SN	Name of the Performance Audit Report	Adherence to Set Plans and Strategies in oil and natural gas	Implementation and Achievement of Set-out Goals and Targets	Coordination among Actors in Oil and Natural Gas Industry
1.	<i>Performance Audit on the Management of Human Capital Development in Oil and Natural Gas Industry in Tanzania</i>	Implementation of unplanned human capacity development programmes	<ul style="list-style-type: none"> • Inadequate Implementation of the Set Plans for Human Capital Development • Delay in Implementation of Planned Strategiessuch as training programs in terms of required skills in various institutions due to lack of clear source of funds 	Insufficient coordination among key stakeholders due to absence of coordinating unit/person for coordinating human capacity development activities.
2.	<i>Performance Audit on the Management of Geophysical Data for Oil and Natural Gas in Tanzania</i>	TPDC's storage rooms that physical storage of geological samples was not adhered to	<ul style="list-style-type: none"> • MEM did not adequately ensure that resources are provided for Geophysical and Geological Data management • MEM did not effectively use performance indicators to monitor status and effectiveness of Geophysical and Geological Data management activities 	MEM failed to adequately oversee TPDC's management and ownership of geophysical and geological data
3.	<i>Performance Audit on the Management of Process of Awarding Exploration and Development Contracts and Licenses for Natural Gas in Tanzania</i>	Implementations of unplanned procurement activity e.g. 4 th Licensing Round	<ul style="list-style-type: none"> • Procurement process was not organized properly leading to failure to achieve the procurement goal. • Targets on Procurement, Contracting and Awarding of Contract and License Targets were not achieved 	Inadequate coordination between MEM and TPDC in procurement of IOCs for natural gas in the country due to unavailability of procurement strategy

4.	<i>Performance Audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations as regards to Petroleum Exploration activities in Tanzania</i>	Only 3 out of 71 registered oil and gas projects were inspected for the year 2010/11 to 2014/15	<ul style="list-style-type: none"> • Targets for Enforcement of Environmental Policies in Petroleum Exploration activities were not achieved • Only four Percent of the Registered Oil and Gas Projects were Inspected • Only 66 percent of Environmental Impact Statements were reviewed 	MEM did not have Coordination mechanism of reporting and Feedback among Key Stakeholders
5.	<i>Performance audit on the Implementation of Local Content Provisions and Verification of Recoverable Cost in the Production Sharing Agreements</i>	TPDC and MEM did not put in place concrete measures to ensure that IOCs adequately implement the Local Content provisions in the PSAs.	<ul style="list-style-type: none"> • Inadequate Implementations of Local Content Provisions • The goal for provision of employment for Tanzanians was not met • Inadequate participation in provision for oil and gas business 	Lack of coordination and communication strategy between MEM, TPDC and other stakeholders on Local Content issues in oil and gas industry
6.	<i>Performance audit on the Produced Graduates in Oil and Natural Gas Industry</i>	<ul style="list-style-type: none"> • Plans for activity of producing skills needed were not effective • Failure to conduct adequate skills need analysis 	Inadequate implementations of planned activities for enhancing skills and for strengthening the capacity of Learning Institutions	<ul style="list-style-type: none"> • Non-involvement of key stakeholders during planning • Weak Coordination of Oil and natural Gas Industry Stakeholders

Appendix 3: Risks Management Map in Oil and Gas Sector in Tanzania

SN	Conducted Audit	Major Risks identified	Control Weaknesses
1	<i>Performance audit on the Implementation of Local Content Provisions and Verification of Recoverable Cost in the Production Sharing Agreements</i>	<ul style="list-style-type: none"> • Inflated recoverable costs by Oil and Gas companies • Collecting revenue below the anticipated level • Declining government stake in oil and gas production 	<ul style="list-style-type: none"> • Audits of recoverable costs not done in time. • No initiatives by TPDC to raise the required capital • Delays in verification of recoverable costs
2	<i>Performance Audit on the Management of Geophysical Data for Oil and Natural Gas in Tanzania</i>	<ul style="list-style-type: none"> • Loss of Geophysical and Geological data • Loss of data Integrity • Data mis-interpretation and misleading results 	<ul style="list-style-type: none"> • Absence of data management policy • No framework for geophysical and geological data management • Inadequate data processing and analysis skills • No trainings to data management teams • Lack of centralised server system for managing data
3	<i>Performance Audit on the Management of Process of Awarding Exploration and Development Contracts and Licenses for Natural Gas in Tanzania</i>	<ul style="list-style-type: none"> • Risks of procuring incompetent contractors for oil and gas activities • Delayed realisation of intended benefits to the nation 	<ul style="list-style-type: none"> • Lack of multi-professional team to undertake procurement process • Public Procurement Act has no provisions for oil and gas procurement process • Inadequate exposure for risk management in awarding contracts
4	<i>Performance Audit on Compliance Monitoring and Enforcement of Environmental Policies, Laws and Regulations as regards to Petroleum Exploration activities in Tanzania</i>	<ul style="list-style-type: none"> • Procurement processes not compliant with relevant legislations • Companies implement Oil and Gas projects that harm the environment 	<ul style="list-style-type: none"> • No risk-based inspections for environmental compliance • Inadequate inspections for environmental compliance • Lack of tools and equipment's for conducting inspections
5	<i>Performance audit on the Capacity of TRA in Assessing and Collecting Tax Revenues from oil and gas sector</i>	<ul style="list-style-type: none"> • Increasing Tax Avoidance by IOC's • Increase in Tax Objections and disputes • Under assessment of taxable income • Declining tax collection in Oil and Gas 	<ul style="list-style-type: none"> • Limited use of information from other sources in tax audits • Limited skills in effectively assessing tax from oil and gas operations • Limited Law technocrats for defending court cases • Inadequate use of ITU resources for tax audits in oil and gas. • Ineffective performance of i-Tax system
6	<i>Performance audit on the Produced Graduates in Oil and Natural Gas Industry</i>	<ul style="list-style-type: none"> • Deficiency of graduates with skills in oil and gas • Producing graduates with more theoretical than practical skills • Producing graduates with unneeded skills 	<ul style="list-style-type: none"> • Curricula do not cover issues of oil and gas • No skills need analysis for trainings in oil and gas • Absence of practical training facilities

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Appendix 4: Summary of key issues noted in each report relating to monitoring and evaluation in oil and gas sector

SN	Name of the Reports	Weaknesses in conducting of M&E activities	Inadequate reporting of M&E performed activities	Limited tools and resources to support M&E implementation	Inadequate action taken to correct gaps identified in M&E reports
1.	<i>Performance audit on the Implementation of Local Content Provisions and Verification of Recoverable Cost in the Production Sharing Agreements</i>	<ul style="list-style-type: none"> MEM did not conduct M&E on issues of local content and verification of recoverable cost. MEM did not establish specific units or functions in their internal structures that could make close follow up on implementation of local content provisions in the PSAs. TPDC did not conduct internal monitoring and evaluation on verification of recoverable cost. 	<ul style="list-style-type: none"> M&E reports were not comprehensive because the issues of local content were not covered in M&E conducted by TPDC. 	<ul style="list-style-type: none"> No tools for capturing data which facilitate the M&E of local content and recoverable cost 	<ul style="list-style-type: none"> MEM did not give feedback to TPDC regarding the reports on recoverable cost. MEM did not establish specific units or functions in their internal structures that could make close follow up to the IOCs in implementation of local content provisions in the PSAs.
2.	<i>Performance Audit on the Management of Process of Awarding Exploration and Development Contracts and Licenses for Natural Gas in Tanzania</i>		<ul style="list-style-type: none"> MEM and TPDC did not prepare performance reports to highlight periodical progress made on the procurement of IOCs 	<ul style="list-style-type: none"> No evaluation criteria to guide the evaluation process 	<ul style="list-style-type: none"> MEM did not provide feedback to TPDC on the assessment made on evaluation reports submitted to MEM.
3.	<i>Performance Audit on Compliance Monitoring</i>	<ul style="list-style-type: none"> NEMC has not conducted monitoring 	<ul style="list-style-type: none"> NEMC did not prepare and submit bi- 	<ul style="list-style-type: none"> NEMC lack well documented monitoring 	

	<p><i>and Enforcement of Environmental Policies, Laws and Regulations as regards to Petroleum Exploration activities in Tanzania</i></p>	<p>and evaluation exercise to assess the performance of inspection and enforcement activities in the petroleum sector.</p> <ul style="list-style-type: none"> • No monitoring and evaluation was carried out to assess NEMC's performance in environmental enforcement in petroleum sector by VPO. 	<p>annual or annual monitoring reports to VPO</p> <ul style="list-style-type: none"> • NEMC did not have adequate record management processes and system for inspections conducted in the petroleum sector. 	<p>guidelines specifically for environmental issues in gas and oil activities.</p> <ul style="list-style-type: none"> • NEMC lack comprehensive database for all the Petroleum Explorations Companies operating in the country • Absence of complete and clear database of regulated entities resulting into difficulties for NEMC to plan for inspection • VPO was not able to assess the systems for actual performance of NEMC based on actual input of resources injected and output in the environmental enforcement activities • VPO lack of well analysed information tool to enable them to take proper actions or decision. 	
4.	<p><i>Performance Audit on the Management of Human Capital Development in Oil and Natural Gas Industry in Tanzania</i></p>	<ul style="list-style-type: none"> • MEM did not conduct M&E for the implementation of Human Capital Development programme as required by National Natural Gas Policy (2013). • MEM conducted one out of 	<p>MEM did not prepare substantial progress report on implementation of HCDP due to lack of good performance indicators that could allow reporting substance</p>	<p>MEM did not have monitoring and evaluation guidelines regardless the fact that principle (v) of the ESCBP programme</p>	

		three steering committee meetings required			
5	<i>Performance Audit on the Management of Geophysical Data for Oil and Natural Gas in Tanzania</i>			<ul style="list-style-type: none"> • MEM is operating with inadequate number of required personnel which affect the M&E activities in oil and gas. • Inadequate number of staff in TPDC for conducting its activities related to Geophysical and Geological Data management • TPDC had no centralized server system to back up the available information in case of emergency 	•
6.	Performance audit on Capacity of TRA in Assessing and Collecting Tax Revenues from oil and gas sector	<ul style="list-style-type: none"> • Supervisors were not effectively checking and adding value to the tax audit plans developed and conducted 		<ul style="list-style-type: none"> • Absence of designed comprehensive information system to support tax audits including testing reliability of submitted information from other sources • Absence of database of recording and reporting the amount of loss carried forward by oil and gas companies • TRA has not conducted study to see how best they can utilize potential 	

				sources of data in assessment.	
7.	<i>Performance audit on the Produced Graduates in Oil and Natural Gas Industry</i>	<ul style="list-style-type: none"> Ministry of Education did not conduct adequate monitoring and evaluation of activities for producing needed skills as stated by its Medium Term Strategic Plan (2012/13-2015/16) and National Skills Development Strategy, 2013). Tanzania Commission for Universities and National Council for Technical Education did not conduct sufficient monitoring and evaluation activities. 	Ministry Education did not report its performance in the implementation of the planned strategic activities for oil and gas skills development activities.	<ul style="list-style-type: none"> Tanzania Commission for Universities and National Council for Technical Education did not conduct sufficient monitoring and evaluation activities due to inadequate funds, lack of monitoring guidelines 	<ul style="list-style-type: none"> MEM was not was unable to make improvement measures so as to meet the set targets or to adjust the same in case the existing measures were not appropriate due to weak M&E mechanism