



# Mozambique

mobilizing extractive  
resources for development



## Mozambique: Extractives for Prosperity, Volume II

Capstone Report: Columbia University's School of International and Public Affairs

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# Abbreviations

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ADIA	Abu Dhabi Investment Authority
AICD	Africa Infrastructure Country Diagnostic
ANE	Administração Nacional de Estradas
ARTC	Australian Rail Track Corporation
ASM	Artisanal and Small-scale Mining
AT	Administrative Tribunal
BAGC	Beira Agricultural Growth Corridor
BBOP	Biodiversity and Business Offset Program
BSEE	Bureau of Safety and Environment Enforcement
BTU (MMBtu)	British Thermal Unit (Million BTUs)
CCEP	Central Public Ethics Commission
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CEP	Central Ethics Commission
CESUL	Projeto Regional de Transporte de Energia Centro-Sul
CFM	Caminhos de Ferro de Moçambique
CLIN	Corredor Logístico Integrado do Norte
CoM	Council of Ministers
CONDES	National Council for Sustainable Development
CRC	Convention of the Rights of the Child
CRVP	Commission for Receipt and Verification
DMP	Government of Western Australia Department of Mines and Petroleum
DNAC	National Directorate for Conservation Areas
DNM	The National Director of Mines
DOI	Department of Interior
EDM	Electricidade de Moçambique
EFC	Estrada de Ferro Carajás
EFVM	Estrada de Ferro Vitória a Minas
EIA	Environmental Impact Assessments
EITI	Extractive Industry Transparency Initiative
EMIS	Environmental Management and Information Systems
ENH	Empresa Nacional de Hidrocarbonetos (National Hydrocarbon Company)
EPCC	Exploration and Production Concession Contract
ESI	Estimated Sustainable Income
eSISTAFE	electronic State Financial Administration System
EU	European Union
FDI	Foreign Direct Investment
FPSO	Floating Production Storage and Offloading Vessels
FUNAE	Fundo de Energia
GAP	The World Bank's Gender Action Plan
GAPP	Generally Accepted Principals and Practices
GCCC	Central Office for Combating Corruption
GCPV	Central Victim Protection Office
GDP	Gross Domestic Product
GGFR	Global Gas Flaring Reduction partnership
GTL	Gas-to-Liquids
G 19	Group of 19 Partners for Program Aid
HCB	Hidroeletrica de Cahora Bassa
HDI	Human Development Index

HVCC	Hunter Valley Coal Chain
ICCPR	International Covenant on Civil and Political Rights
ICSID	International Centre for the Settlement of Investment Disputes
ICT	Information and Communication Technology
IEA	International Energy Agency
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IGF	Inspector-General of Finance
IIED	The International Institute for Environment and Development
ILO	International Labor Organization
IMF	International Monetary Fund
INP	Instituto Nacional de Petroleo (National Petroleum Institute)
IOC	International Oil Company
IPEC	International Programme on the Elimination of Child Labour
IRR	Internal Rate of Return
IUCN	International Union for the Conservation of Nature
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MCE	Maputaland Centre of Endemism
MDGs	Millennium Development Goals
MICOA	Ministry of Coordination of Environmental Affairs of Mozambique
MINAG	Ministry of Agriculture
MIREM	Ministry of Mineral Resources of Mozambique
MML	Minas Moatize Limitada
Model EPCC	Model Exploration and Production Concession Contract
MoF	Ministry of Finance
MP	Members of Parliament or National Assembly Deputies
Mtpa	Million-tons-per-annum
NBSAP	National Biodiversity Strategies and Action Plans
NEMP	National Environmental Management Plan
ODAMOZ	Overseas Development Assistance (Database) for Mozambique
ODI	Overseas Development Institute
OECD	Organization for Economic Cooperation and Development
OHCHR	UN Office of the High Commissioner for Human Rights
PAH	Polycyclic, aromatic and hydrocarbons
PARP	Republic of Mozambique Poverty Reduction Action Plan 2011-2014
PCI	Pulverized Coal Injection
PFCC	Petroleum Fund Consultative Council
POM	President of the Republic of Mozambique
PSSA	Particular Sensitive Sea Areas
PSC	Production Sharing Contract
SASOL	South Africa Synthetic Oil Liquid
SAIEA	Southern African Institute for Environmental Assessment
SEA	Strategic Environment Assessment
SIDA	Swedish International Development Cooperation Agency
SME	Small-and-Medium-sized Enterprise
SOE	State-Owned Enterprise
SPA	Sales and Purchase Agreement
SWF	Sovereign Wealth Fund
Tcf	Trillion cubic feet
UNCLOS	United Nations Convention On the Law of the Sea
WHO	The World Health Organization
WWF	World Wildlife Fund

# Executive Summary

The development of Mozambique's significant mineral and hydrocarbon reserves has the potential to generate substantial wealth and prosperity for the country. The magnitude of possible benefits for Mozambique has powerful implications for one of the poorest nations in the world. It is up to the Government, and the people of Mozambique, to decide when, where, and, most importantly, how to utilize their reserves over the next few decades. Fundamentally, Mozambique is confronted with several challenges to transform its abundant extractive resource wealth – residing primarily in the country's inland coal deposits and its deep-water natural gas basins – into sustained, long-term economic development. This is a task of significant but not insurmountable complexity, encompassing a range of political, economic, and social dimensions. It will require collaborative and coordinated efforts by a variety of different stakeholders, some with conflicting objectives and priorities. It is thus incumbent upon Mozambique's leadership to manage this transition with purpose and develop and implement an industrial strategy that mobilizes the country's extractive resource development in a manner that achieves a prosperous outcome for its people.

Expectations of stakeholders are high, and this will not be an easy undertaking for the Government and people of Mozambique. Over the last five decades, numerous countries across the developing world have failed to benefit from their natural resource wealth. In fact, pervasive evidence suggests that resource-rich developing states tend to have lower economic growth rates and poorer development outcomes compared to states lacking such resources. Due to these paradoxical trends, collectively referred to as the resource curse, there is a renewed international focus on resource-rich, low-income countries like Mozambique.

This report provides a comprehensive review of the critical economic, political, legal, social, and environmental variables that will affect and be affected by the rapid development of Mozambique's extractive resources. Each section proposes methodical and practical recommendations for the country's policymakers, which – if implemented – will enhance the current institutional framework governing the activities of the extractive sector. Ultimately, this report attempts to provide the Government of Mozambique with a policy framework that promotes the sustainable development of the country's economy, society, and environment, and aims to help the country avoid the perils of the resource curse. These issues are described in greater detail in the summaries of each section of the report that follow.

## *Economic and Commercial*

Mozambique stands to gain significant revenue from exploiting the economic and commercial potential of its natural gas and coal reserves. The country's offshore natural gas discoveries are among the largest finds in the world in over a decade, while its coal reserves are beginning to be exported to international markets. If it is able to successfully commercialize its extractive resources, Mozambique will become a highly competitive player on the global energy scene.

In addition to promoting economic growth, the Government's overall economic objective is to reduce persistently high rates of poverty. Currently eight out of ten Mozambicans continue to live on less than \$2 per day. In the years ahead, natural resource revenues will comprise an increasing share of the country's GDP, a trend that exposes Mozambique to several challenges in maintaining financial and social stability. Despite ongoing reforms, the country's overall capacity to absorb windfall revenues from the development of extractive resources remains

limited. Yet, with sound fiscal management, these hurdles can be overcome. There are a number of measures the Government can take to better prepare itself for the windfall. Prior to exploring such measures, however, it is first important to understand key implications of the resource curse and how it threatens Mozambique.

Generally, there are two underlying features of the resource curse that afflict countries: “Dutch Disease” and revenue volatility. Dutch Disease refers to the destabilizing impact of increased foreign exchange that inevitably follows a sharp rise in natural resource exports. A huge increase in natural resource revenues typically causes the real exchange rate to appreciate. The change in real exchange rate results in economic destabilization by reducing the international competitiveness of a country’s non-extractive resource exports (e.g. agricultural and manufacturing) and may also reduce employment in these sectors. These economic outcomes tend to adversely affect the labor force of a developing country, where undereducated workers often struggle to transition from traditionally low-skilled sectors of the economy to more knowledge-based and service-oriented industries.

Revenue volatility is another important facet of the resource curse. The disruptive effects of revenue volatility in a resource-based economy predominantly arise from fluctuations in global commodity prices. This volatility can be detrimental to growing economies and frequently results in imprudent fiscal policies. Often, governments borrow against the value of their newfound resources and spend windfalls on immediate consumption, at the expense of long-term investments that can hinder future growth opportunities for the country.

The resource curse commonly takes hold in developing nations that lack the institutional capacity necessary to manage huge resource revenues. To minimize the impacts of Dutch Disease and revenue volatility, a state must have sound institutions in place. Institutions are also necessary to manage complex public-private revenue-sharing partnerships that are typical of extractive industries. A sovereign wealth fund is one option that states can utilize to manage large inflows of resource revenue, stabilize pressures on the exchange rate, and reduce the influences of price and revenue volatility. The implementation of this fund (explained further below) is one of the central recommendations of this report. Above all, a sovereign wealth fund allows Mozambique to invest in infrastructure and socioeconomic development over the long-term, thus ensuring that the country will still see benefits of its extractive resources long after the reserves have been depleted.

### ***Linkages and Local Content***

Mozambique’s national resource wealth is not limited to revenue generation for the state but can and must flow to benefit local Mozambicans. Conventional understanding about how the local population benefits from extractive resources is typically limited to the industry’s provision of employment and a few philanthropic projects. However, extractive industries tend to have a minimal impact on the labor market. The capital intense nature of extractive industries stems from industry demand for fewer, more highly skilled workers compared to the labor-intensive, low-skilled workforce sectors – such as agriculture or manufacturing. Low prevalence of human capital in Mozambique further limits employment opportunities for Mozambicans in the extractive sector – leading to unfulfilled expectations in communities and promotes social unrest. This section provides examples and recommendations of how the Government, extractive companies, and stakeholders can increase employment opportunities for Mozambicans in the extractives sector and economic linkages between the extractive industries and Mozambique’s local businesses, especially in regions of extractive operations.

Prosperity driven by the growing extractive industry can be translated to communities in Mozambique through cultivating local content – including local recruitment, training, and purchasing local goods and services. Though not a “silver bullet” to prosperity, local content can contribute to the fulfillment of expectations that mineral and hydrocarbon production will help improve the lives of Mozambicans. Local content is also critical to the extractive industry’s operational sustainability by generating a social license to operate within a given community. Smooth, sustainable operations also benefit the state by supporting steady revenue flows and general social stability.

Given local human capital and the capacity of Mozambique’s private sector are currently very limited, it is critical that both the government and extractive companies initiate early and consistent engagement with communities and the local private sector in regard to both the type of employment and business opportunities that will be available. Additional management of expectations through transparent communication of the expected timeline of these opportunities is also necessary. To achieve optimal local content goals, the government must also invest deliberately in the provision of poverty-reducing public goods, including quality education, literacy, and healthcare, which in turn serve to improve human capital in the long-run. These efforts require significant strategic social investment by stakeholders to build the capacity of local communities and enable individuals and businesses to compete and access income-generating opportunities in the newly established extractive industry value chain. Without investment in the development of Mozambique’s human capital and building capacity of the local business sector, Mozambique’s ability to fully access and realize the potential benefits of its vast natural resource wealth will remain retarded. Finally, this section also discusses the need to develop and implement a strategic plan that mitigates inward migration, local food price inflation, and constraints on community resources affecting areas impacted by extractive industry operations in Mozambique that could be source of social instability.

### **Infrastructure**

Marked rates of underdevelopment in Mozambique are closely tied to the country’s shortage of infrastructure, which has largely failed to respond to social and economic development needs. Although recent public, private, and donor investment in developing Mozambique’s infrastructure has focused much more on facilitating the trade derived from megaprojects, it might also represent an unparalleled opportunity to build a system that fosters inclusive social development. The Government has the option to take advantage of the international community’s willingness to invest and orient economic resources to address infrastructure-related impediments of development.

Ensuring inclusiveness, through both connection and universal access to roads, railways, and electricity, must be at the heart of this endeavor. Railways in particular must be guaranteed that access to these vital regional lifelines are not limited to mining companies but also available for general freight and passengers. With respect to Mozambique’s roads, an upgrade and a significant extension of the network would decrease transportation costs for all parties that would help mitigate the country’s high rates of poverty and inequality, permitting both the mining provinces and the rest of the country to benefit from extractive industry operations. Special attention must be paid to use of roads as connectors between impoverished yet potentially productive areas as well as the Beira, Nacala and future Macuse corridors. Finally, despite the current efforts of the Government to bring the grid to every district, only a small percentage of Mozambicans have reliable access to electricity.

### *Environment*

Protecting the country's ecology is critical to Mozambique's vitality and will require investment and attention to environmental governance that keeps pace with resource extraction. First, to mitigate environmental risks inherent in resource development, research into fisheries and terrestrial ecosystems is necessary to create a baseline for conservation priorities, since much of Mozambique's ecology is not well researched. The existing Environmental Impact Assessment review period is also too short for the increasing volume of assessments and the current limited capacity of the Government and civil society. Such assessments for large extraction projects and their corresponding infrastructure development should be made available to the public with a longer, more adequate review period than the current 45 days. In line with the country's existing environmental law, specific requirements and guidance on biodiversity offsets must be drafted and enforced to ensure that all small and large-scale extractive resource projects account for environmental impacts from the beginning of the project.

Mozambique's current environmental legislation should be reinforced with more detailed guidance. Exemplary laws from other countries, such as Norway, can be utilized for legal reference until a robust new set of laws can be established. With ongoing active exploration of the natural gas, Mozambique should dictate when and where seismic surveys are conducted in order to protect the delicate biodiversity surrounding the nation's corals and fisheries. In addition, the government must create an environmental emergency plan so that, should accidents occur, the various government ministries have an aligned mitigation strategy that facilitates rapid response. Additional funding, training, and resources allocated to environmental ministries are also necessary to expand their capacity to study the nation's ecology, properly implement protective legislation, and adequately monitor mining and natural gas exploration and production. Additionally, the growing artisanal mining sector needs strategic Government support to organize associations, as well as train, guide, and monitor expansion to ensure the safety and prosperity of Mozambicans. In this way, small-scale mining could become a means to reduce poverty as opposed to creating conflict and environmental degradation. All of these governance strategies will need to be implemented quickly and should utilize revenues from the extractive industry to guarantee that Mozambique's dynamic ecology continues to be a source of pride and the pillar of a growing tourism industry.

### *Resettlement*

Resource exploration, mineral concessions, and infrastructure development have all exponentially increased the resettlement of communities in Mozambique, especially in remote areas. Although the country has the extraordinary opportunity to strategically translate its mineral assets into long-term sustainable development, extractive operations can only be fully successful if the investments are embedded in stable and prosperous communities. One of the country's top objectives should be to leverage the recent boom in extracting natural resources to improve the living conditions of Mozambicans and to ensure a prosperous environment in which companies can diligently operate.

If Mozambique follows five basic resettlement principles, the rights of Mozambicans and compliance with the international conventions and agreements that the nation has pledged to support will be ensured. First, projects that require resettlement must conduct early, inclusive and transparent consultations to give communities the opportunity to make decisions on issues directly affecting their lives. Early consultation also helps build critical buy-in from impacted populations. Second, it is key to provide communities with the tools and information to diligently participate in negotiations that reach fair agreements. Third, compensation, that

includes improved livelihoods and standard of living is key to translating resource extraction into prosperity for individuals affected by resettlement. Fourth, resettlement processes entail negative environmental impacts that must be diligently addressed as they highly impact the health conditions and access to other resources (water, soil, etc.) of the surrounding communities. Lastly, an inclusive and legitimate post-resettlement committee must oversee agreement compliance, progress, and accountability. Such a committee also recognizes that communities are dynamic and future agreements will have an established channel for discussion. A well-structured and well-managed resettlement process, jointly agreed upon by communities and companies, can help to ensure that extractive operations and other projects that require resettlement enjoy greater community buy-in and promote sustainable development.

Mozambique must also ensure that women are not left out of opportunities to participate in and benefit from the country's development through the extractive industries. The Government bears a duty to ensure women's equal access to socio-economic opportunities, reduce disruptions to their standards of living and improve livelihoods. In the context of mining operations, Mozambique can meet these challenges by implementing its existing laws and Constitutional provisions which guarantee the equal rights of men and women, along with amending existing mining legislation to address issues on resettlement, consultation and compensation.

Such arrangements also stand to benefit from local resources (including human capital), thereby reducing the likelihood of conflict. The resettlement process in Mozambique is ongoing, and there are a number of ways that the Government can promote mutually beneficial resettlement agreements leaving all parties affected better off and fairly attended.

#### **Legal Framework**

From a legal perspective, Mozambique must aim to reform and update the legislative, institutional, and contractual frameworks associated with extractive industries in order to maximize the gains from and minimize the costs of extractive resource development. In this context, Mozambique is currently reviewing its legal and fiscal frameworks for oil and gas exploration and production, to take into account developments in the industry and new gas discoveries. Recent drafts of the petroleum legislation contain several important additions that address infrastructure, revenue sharing, oversight, and environmental protection. However, the law needs further strengthening to ensure that new and existing projects are carried out in a safe, fair, and efficient manner. Vague references to "good industry practice" should be replaced with clear and transparent obligations. Deals should be standardized and their key terms should be set in legislation to improve transparency and competitiveness. Companies must be assured fair and open access to facilities to promote competition and increase efficiency. Penalties must be clear and significant to deter bad behavior. Environmental protections should take into account that companies are often in the best position to monitor, prevent, and mitigate environmental and health risks. The Government must also preserve its ability to reform and improve its legislation over time - especially in relation to the environmental, social, and health impacts of extractives.

The fiscal regime should draw on a range of different tools to generate a fair share of revenue for Mozambique. While opinions may differ on what is "fair", Government revenue should amount to at least one third of the profits for mining and 65% of the profits for oil and gas over the lifetime of a project. As the industry becomes more established, and business conditions improve, this share should increase substantially for future projects. The regime needs to balance up-front income with long-term objectives - taking into account the legitimate interests

of investors, the capacity of public agencies to administer the regime, and the interests of future generations of Mozambicans.

There is also a critical need for existing mining legislation to be examined and amended, in order to better reflect the growth of the sector and to protect the interests of the Mozambican people, particularly with respect to environmental, health, social, fiscal and contract transparency considerations. Accordingly, provisions of the current Mining Law of 2002 should be amended in these distinct areas, giving mining activities a modern and adequate regulatory basis to ensure greater competitiveness, guaranteeing the protection of rights and defining the duties and obligations of holders of mining titles. While the Mining Law of 2002 is undergoing revisions and is expected to be passed by Parliament in the coming months, this section sets forth policy recommendations which illustrate some of the gaps and challenges present in Mozambique's mining legislation. Reforms in the mining laws offer an important opportunity for the country to further develop its economy, and importantly, to promote equity, reduce poverty, and meet its development goals through a forward-looking approach. The recommendations in this section are offered to strengthen, clarify and update existing mining legislation, and provide guidance on how mining activities can be conducted in a manner, which prioritizes and improves the social and economic well being of the Mozambican people.

#### **Governance**

The Government must adopt a transparent and uniform policy framework and fiscal regime to effectively administer the process of extractive industry development vis-à-vis government costs and revenues. To this end, Mozambique should create an accountable and transparent framework of governance to manage its extractive assets. There must be checks and balances built into the institutional structures of the Government. This will create accountability, separate responsibilities to minimize conflicts of interest, expand powers for specific agencies to fulfill their roles, and allow for agencies to manage extractive resource development accordingly. Mozambique must also focus on anti-corruption measures to improve its governance. Some useful tools include the anti-corruption law as well as other Information and Communication Technology platforms that can help bolster the country's systems of oversight. Above all, transparency must become a fundamental part of the extractive industry's contractual process, to ensure that all parties are getting their fair share of revenue.

#### **Sovereign Wealth Fund**

Sound revenue management is key to the sustainable development of Mozambique's economy. The financial impact of natural gas and coal exportation can have detrimental effects for the country. As mentioned above, problems arise from real exchange rate appreciation, which puts other export industries out of business, and from fluctuation in commodity prices, which is destabilizing for the domestic economy. Establishing a sovereign wealth trust fund in a traditional financial center will help Mozambique absorb the coming windfall and promote growth and development in the country in five key ways. First, it effectively shelters the domestic economy from the commodity sector, so that volatility in oil, gas or coal prices do not have such a disruptive effect on the country's budget planning from one year to the next. Second, by channeling revenues into specific development programs, the fund can help the government to focus and plan for expansion of infrastructure, education, healthcare and public services. Third, the fund can help to ensure that government revenue from extractive resources become an ongoing source of income for decades to come, and provide intergenerational equity. Fourth, and crucially, a sovereign wealth fund can insulate Mozambique's currency, helping to ensure that investment in the extractives industry does not have negative impacts on other

sectors of the economy. Finally, the trust will legally enshrine the purpose of the fund and thus insulate Mozambique's fund from sovereign debt and facilitate the country's access to international financial markets due to improved legal standards.

### *Mozambique Moving Forward*

Mozambique is embarking on potentially one of the most defining opportunities of the nation's history. Despite the impoverished state of much of the country, Mozambique is endowed with significant hydrocarbon and mineral resource wealth in an era that is experiencing innovation, awareness, and collaboration at an unprecedented rate. The nascent development of Mozambique's large-scale hydrocarbon and mineral reserves is a point of strength and opportunity for structured and deliberate leadership to shape the future of Mozambique into a prosperous regional authority with the capacity to be a source of strength and guidance beyond its borders.

There is universal familiarity with the potential outcomes that lie ahead for Mozambique. The nation's limited human capital and restricted absorption capacity of the local public and private sectors to adapt and manage the rapid changes underway exemplifies the necessity for Mozambique to engage actively, early, and transparently to realize the opportunities at hand. However the continuum that flows between a resource blessing of prosperity and a resource curse is process of significant complexity. Multi-directional relationships between the economics, social, environmental, political and legal aspects of natural resource development requires clear frameworks and implementation of transparent objective that will benefit the nation now and for future generations. The areas this report examines identifies the current and potential weakness that could derail Mozambique's intention to pursue a path of sustainable development that is supported by revenues and income generating potential of the growing explorations and production of Mozambique's natural resources. Each section also includes recommendations that address the challenges and opportunities specific to the changing environment of Mozambique's natural resource extraction.





Photo: Gorongosa National Park  
Mozambique  
Piotr Nasrecki

## Introduction

On the south-eastern coast of Africa, Mozambique is a country of extraordinary natural beauty and cultural diversity. While its natural riches have been known to the world for centuries, it is only recently that the discovery of extensive gas reserves and coal deposits have drawn the attention of foreign investors.

As one of the least developed countries in the world, Mozambique faces significant challenges to bring these resources safely and sustainably to market, and to manage the resulting funds. In the aftermath of independence and a devastating civil war, the country has made significant progress to build social stability and begin to lift its people out of poverty. However, much work remains – and while extractive resources offer opportunities for prosperity and growth, the influence of multinational corporations, donors and international organizations (each with different interests) has complicated an already complex environment.

This project has reviewed Mozambique's unique economic, legal, institutional, environmental, and social context to assess the potential impact of the extractive industry (both positive and negative). Through consultation, research and interviews, the team has drawn on the knowledge within Mozambique, as well as on the experiences of other countries, to formulate a number of specific and implementable recommendations that will help Mozambique to mitigate the risks and maximize the benefits of extractive industry development. Our team's particular focus has been to harness the existing strengths and potential within Mozambique civil society and government, and to prioritize key areas of reform.

The Capstone team began work in November 2012, and carried out desk research from Columbia University in New York for several months. In March 2013, eleven team members

traveled to Mozambique. While most of our time was spent in Maputo conducting interviews with stakeholders, companies, donors, NGOs and Government agencies, two team members traveled to Pemba to research the new natural gas developments in that region. We were privileged to have the assistance and insight of dozens of committed people during this period. Although our visit was brief, we were able to conduct over 40 meetings addressing the broad scope of issues covered in this report. On our return to New York, further research supplemented our interview material.

The resulting report is divided into nine sections, each with a particular focus. However, many of the issues overlap – and these themes are addressed from several angles. Key themes that emerge throughout the report are the importance of education, the need for engagement and consultation with local communities, and the opportunity for Mozambique to learn from and improve upon international experience.

Section 1 provides an overview of Mozambique’s Economic and Commercial context, and introduces some of the key considerations for the development of extractive industries. In addition to outlining the prospects for Mozambican gas on the world market, this section discusses the important issues of contracting and financing LNG production. The local and global commercial prospects of coal production are also discussed.

Next, we address the importance of creating linkages between foreign enterprises that invest in Mozambique’s extractive industry, and local companies. In particular, the section highlights that small and medium-sized enterprises need support, regulation, infrastructure, and training to improve their efficiency, and to engage in commercial relationships with international investors. By encouraging “linkages”, Mozambique can ensure that foreign companies are more integrated and more efficient, and that the benefits of extractive industry can flow directly to the communities where they operate.

Section 2 expands on this idea, exploring the benefits and practicalities of “local content” requirements. Employment of local residents, procurement from local suppliers, and other forms of local input can increase efficiency for companies and generate “social license to operate.” This section provides an overview of Mozambique’s socio-economic context and a close-up view of two regions that are greatly impacted by coal and natural gas development – Tete and Cabo Delgado, respectively. Finally, the section addresses areas of risk and strategies for mitigation, including inward migration and inflation.

Section 3 provides a snapshot of Mozambique’s infrastructure with a focus on roads, railways, and energy. It assesses the potential impact of expansion by extractives companies and presents an argument for inclusive infrastructure – infrastructure that is accessible and affordable for local people, and for other enterprises.

Section 4 highlights the multiple, complex environmental concerns that extractives development raises. Natural gas exploration and production and coal mining both present threats to the environment, to livelihoods, and to health, including marine life, water quality, air quality, land, and biodiversity. The section presents a number of recommendations for legal and institutional changes that will help to preserve Mozambique’s unique ecology and landscape, and to protect the health of its people.

Section 5 presents an analysis of the impacts of resettling communities to make way for

extractive resource projects. The section highlights the importance of an early, open, and inclusive consultation process, founded on free and informed consent. Recommendations focus on improving resettlement practices, including compensation and protecting livelihoods, and identify the particular safeguards that are needed uphold the rights of women.

Section 6 moves to the legal framework for mining in Mozambique. It outlines the current legislative provisions and licensing process, and provides detailed recommendations on how these laws can be strengthened and improved. Environment, resettlement, fiscal and transparency issues are all considered.

Section 7 assesses the existing gas and petroleum laws, and discusses options for reform in light of the most recent draft amendments. It presents an analysis of the “gaps” in the law and touches on the particular issue of foreign investment and arbitration.

Section 8 presents the case for strong and reliable institutions to govern extractives industry in Mozambique. It outlines the progress that Mozambique has already made towards transparency, and recommends general and entity-specific policy changes. Capacity building and e-governance are also discussed.

Section 9 proposes a sovereign wealth fund for Mozambique, with a structure that will help to ensure that extractive industry revenues are a blessing, and not a curse, for the country. The section outlines how a sovereign wealth fund can help to manage Dutch disease and inflation, presents options for managing and investing the resources, and identifies the various funds which could be created to direct revenues into the Government budget, stabilization, development and savings, development.

The report concludes with a summary of the Recommendations, and a Bibliography of sources.

The Appendices are intended to provide additional detail and context for interested readers. They include resources that have been collated by the authors from a range of different sources, for ease of reference. Appendix 1 sets out a number of tables with additional detail about the legal framework and contracts for mining, gas and petroleum, including some advantages and disadvantages of the different types of fiscal tools used by governments to collect revenue from extractive operations. Appendix 2 includes resources for Sovereign Wealth Fund governance, including international comparisons, details of the *Santiago Principles* and the Linaburg-Maduell Transparency Index. Finally, Appendix 3 includes relevant development indicators for Mozambique, along with comparison countries for reference. The tables incorporate economic, commercial, social and governance indicators, and serve as a “snapshot” of Mozambique’s current development.

# A Note on Priorities

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This report sets out 105 distinct recommendations for Mozambique, covering economic, infrastructure, social, legal, environmental, governance, and financial issues. The recommendations, which are summarized at the conclusion of the report, should provide guidance and provoke discussion among government, civil society, donors, and the business community. However, it is unrealistic to expect that Mozambique will be able to address all these issues immediately and simultaneously. The people of Mozambique must decide what issues are most pressing and most important for themselves.

This section is intended to give an outline of what the Capstone project team identified as the key priorities for change in the short and medium term.

## ***Get the legal framework right to ensure a balance of rights and responsibilities***

Mozambique's legal framework for oil, gas and mining needs drastic changes to address the challenges that lie ahead. It is essential that the new laws set out clear and detailed obligations for companies and for the government about responsible environmental and social practices. Where gaps remain, the laws should refer to the rules of jurisdictions with robust laws, such as Norway and Australia. The fiscal regime must also be clear, transparent, and standardized for all projects – not negotiated on a case-by-case basis. Closely related to the law is the importance of institution-building to enable implementation. Mozambique's ministries and government agencies must have the support, the training, the power, and the resources to effectively negotiate concession contracts, regulate, monitor, and enforce the legal framework.

*See: Section 6: The Need for Upgraded Mining Laws, Section 7: Gas and Petroleum Laws, Section 8: The Case for Strong and Reliable Institutions, and Section 4: Protecting Mozambique's Environment.*

## ***Carefully manage the revenues from extractive industries for the benefit of all Mozambicans***

Oil, gas and mining have immense economic potential – but that potential will only be realized if projects are taxed appropriately, and revenues are managed carefully. Once a fiscal regime is in place, the revenues from all projects should be paid into a resource fund that is designed to suit Mozambique's situation. A Sovereign Wealth Trust Fund would provide a structure that is clear and straightforward, with enough flexibility to allow for different stages of development. First, extractives revenues could contribute to initial budget funding (in lieu of donor funding), and could be used to help stabilize the economy. As the fund grows, investments in infrastructure and special development projects could follow. Ultimately, the fund could also incorporate a savings fund that generates wealth for decades to come.

*See: Section 1: The Economic and Commercial Implications of Natural Gas and Coal, and Section 9: Managing Wealth: The Sovereign Wealth Fund.*

## ***Provide economic opportunities by making infrastructure inclusive and accessible***

Infrastructure development will be an essential component for Mozambique to turn its resources into commodities. However, infrastructure that serves only large commercial enterprises can exacerbate inequality. The government must plan carefully to ensure that the money invested in infrastructure has as many flow-on benefits as possible – this means

engaging with small enterprises and with the public to ensure access to reliable transport and electricity networks.

See: *Section 3: The Need for Inclusive Infrastructure.*

***Protect and empower local populations to preserve stability***

Mozambique must immediately address the disruptive impact of current and future resettlement projects to ensure that local populations do not lose out when extractive projects take place in their region. Over time, these disruptions can violate fundamental human rights, entrench poverty, cause social unrest, and make it impossible for businesses to operate efficiently and safely. By encouraging local content and local linkages, Mozambique can help to ensure that foreign investment is more efficient and contributes to real, sustainable benefits to the community.

See: *Section 2: Translating Extractive Industry Prosperity to Mozambique’s Communities and Section 5: Ensuring Social Equity in Extractive Industries-Based Development.*

***Education is critical to sustainable growth and a better quality of life***

Although it is not a dedicated topic in this report, education and capacity-building is a common theme in our analysis. Training and education will help Mozambique’s lawmakers, officials, civil society, business people, and all citizens to make good decisions about managing extractive resources. The revenues from those resources, in turn, should be invested in improving the quality and accessibility all levels of education – from primary through to specialist tertiary education.

See: *Section 2: Translating Extractive Industry Prosperity to Mozambique’s Communities, Section 4: Protecting Mozambique’s Environment, and Section 8: The Case for Strong and Reliable Institutions.*

***Foster and protect Mozambique’s other “comparative advantages”***

Once the coal has been mined, and the gas extracted, Mozambique will need to depend on its people, its land, and its waters for continued economic growth. Among others, Mozambique has the potential to develop a vibrant agricultural sector, and a world-class tourism industry. But both of these sectors could be seriously threatened if extractive developments are not well planned or well regulated. Loss of arable land to mining, pollution or contamination of water, disruption of habitats, and the physical scars of extractive industries will directly impact this economic potential. It is possible for these industries to coexist – but only if strong and enforced laws protect the environment and the people of Mozambique.

See: *Section 4: Protecting Mozambique’s Environment, and Section 5: Ensuring Social Equity in Extractive Industries-Based Development.*

# 1 The Economic and Commercial Implications of Natural Gas and Coal

## 1.1 The Mozambican Economy

This section is an overview of several key features of Mozambique's economy. It provides a better overall understanding of the context in which extractive resource development is occurring and the potential impact it can have on the country.

Mozambique's newfound endowment of natural gas, coal, and mineral resources will undoubtedly play a dominant role in the country's economy as a source of export earnings and, to a lesser extent, infrastructure development. With significant resource-related revenues on the horizon, Mozambique must adopt a comprehensive, uniform fiscal regime, as well as a transparent policy framework, in order to effectively manage its extractive industry and reap the benefits of its resource wealth.<sup>1</sup>

Mozambique only recently discovered its abundance of natural gas and coal reserves. The country's first overseas export of coal came in 2011 from Tete Province. In 2012, four of the world's five largest natural gas discoveries that year were made in Mozambique's offshore Rovuma Basin.<sup>2</sup> Early estimates of the sheer volume of untapped natural gas reserves have since attracted a massive inflow of foreign investment. Furthermore, Mozambique's geographic location leaves it strategically positioned to serve expanding markets in Asia with exports of these resources.

### Macroeconomy

Mozambique's GDP real growth rate increased to 7.5% in 2012 due to an increase in mining production, as well as a strong performance in the financial, communication, transport, and construction sectors. A number of forecasts suggest this figure will increase to between 7.5% and 7.9% in 2013. Impressively, the country has achieved an average of 7.2% growth over the course of the last decade (**Figure 1**).<sup>3</sup>

In recent years, Mozambique's services sector has driven the country's macroeconomic growth, replacing agriculture as the largest contributor to GDP. In 2012, services accounted for 43.6% of GDP, with agriculture at 31.8% and industry at 24.6%.<sup>4</sup> However, this change is not reflected in the country's employment structure, as the overwhelming majority of the labor force (~80%) remains in agriculture.

Macroeconomic Indicators	2010	2011	2012	2013
Real GDP growth	6.8	7.2	7.5	7.9
Real GDP per capita growth	4.5	5	5.2	5.6
CPI inflation	12.7	10.8	7.2	5.6
Budget balance % GDP	-4	-3.3	-6.8	-7.4
Current account % GDP	-12.1	-25.6	-25.5	-20

Figures for 2010 are estimates; for 2011 and later are projections.

Source: African Economic Outlook, 2012

This trend poses a challenge for Mozambique, with significant implications for the country's poor, who are overly dependent on the slow-growing agricultural sector and simultaneously lack the education and skills necessary to join the fast-growing services sector.

Mozambique's macroeconomic achievements appear to be disconnected from the population, as impressive growth has not translated into job creation or reduced income inequality.<sup>5</sup> The country's depressed socioeconomic status is largely attributable to poor education levels and inadequate healthcare. With an overall poverty rate of 54.7%, Mozambique's life expectancy of 48 years is below the sub-Saharan average of 52 years, and literacy runs at 44% compared to the sub-Saharan rate of 62%.<sup>6</sup> The Republic of Mozambique Poverty Reduction Action Plan 2011-2014 ("PARP") aimed to cushion soaring unemployment by increasing agricultural production and rolling out social safety nets. Unfortunately, PARP has struggled to accomplish its goals. Eight out of ten Mozambicans still live on less than \$2 per day, and Mozambique was ranked the world's third least-developed country in 2012.<sup>7</sup> Its young and rapidly growing population (two-thirds of Mozambique's 23.5 million people are currently under the age of 25) is expected to double in size by 2050 – a trajectory that will only exacerbate the country's high rate of poverty.<sup>8</sup>

In an effort to attract foreign investment and increase access to global markets, Mozambique has taken measures to transition from a socialist to a free market economy. Despite the Government's efforts to liberalize, the formal economy in Mozambique remains small. With a labor force approaching 10 million, only 500,000 persons work in the formal sector.<sup>9</sup> As a result, a large informal labor market has developed – a common feature of nascent, low-skilled, and fast-growing economies. In recent years, a rapid influx of low-skilled labor, resulting from increased rural-to-urban migration, has further intensified this segmentation of Mozambique's labor market.

Inflation has decreased from 10.8% in 2011 to 7.2% in 2012 due to the Central Bank's prudent fiscal policies; additionally, inflation is expected to stabilize at 5.6% in 2013.<sup>10</sup> An ostensibly greater degree of control over inflationary pressures allows the Government to pursue monetary easing, targeting credit expansion and private sector growth. Despite these initiatives, many rural areas of Mozambique continue to have insufficient access to credit.<sup>11</sup> Furthermore, the country's private sector operates in a business environment that is not immune to political influence, with state-controlled pricing, problems with land-use rights, and an overall shortage of the financial agencies and institutions necessary to encourage competition (see *Section 1.4.1: Creating an Enabling Environment for SMEs*).

Mozambique's dependency on international aid remains high. In 2011 alone, a combination of foreign aid and grants accounted for nearly one-quarter of gross national income and directly funded the Government's national budget, accounting for close to half of all revenues.<sup>12</sup> The Government's main short-term challenge is the enlargement of its fiscal space while keeping its debt levels under control. These measures are necessary to accommodate the diverse needs of a booming extractive industry, an ambitious infrastructure investment plan, and the PARP's pro-poor measures. Accordingly, the overall fiscal deficit widened from 3.3% of GDP in 2011 to 6.8% in 2012, with expectations of 7.4% in 2013 (**Figure 1**).

The rapid growth of Mozambique's extractive sector, driven by coal exports and natural gas discoveries, has led to an influx of capital to support the development of megaprojects. According to the Central Bank of Mozambique, foreign direct investment ("FDI") increased 91% between 2011 and 2012, with megaprojects accounting for over 80% of this growth.<sup>13</sup> Over the same period, megaprojects also caused a 17% rise in imports, with predictable impacts on the country's current account balance.<sup>14</sup> Massive FDI

inflows to build up the extractive sector, together with the windfall revenues projected from the export of natural gas and coal, have crucial implications for Mozambique's economy. To put this into perspective, depending on how they are valued, recent offshore natural gas discoveries could potentially increase the overall share of megaprojects in GDP to around 40-50% in the coming decades – representing a fivefold increase from current levels.<sup>15</sup> This enormous influx of revenue poses staggering economic challenges. The Government's ability to manage the extractive industry's growth will determine whether or not Mozambique avoids the perils of the resource curse.

### Economics of the Resource Curse

The last quarter of the twentieth century is replete with examples of how the **resource curse**, broadly understood as the failure of resource-rich countries to benefit from their natural wealth, has had a detrimental effect on low-income countries. The underlying economics of this trend can be better understood by examining two key macroeconomic dynamics:

(1) **“Dutch Disease”**: Large inflows of foreign exchange resulting from a sharp rise in natural resource exports will typically cause an appreciation in the real exchange rate, which will subsequently reduce the international competitiveness of the country's non-resource (agricultural and manufacturing) exports and may also reduce employment in these other sectors. This will in turn have a detrimental impact on labor, because low-skilled workers have difficulty moving from one sector to another. A lack of inter-sectoral labor mobility is largely due to limited educational opportunities, leaving workers without the skills they need to transition from agricultural/manufacturing sectors into more knowledge-based/services-oriented sectors of the economy. As a result of Dutch Disease, there tends to be an adverse welfare effect on income distribution.<sup>16</sup> Mozambique should be wary of this reality, as its agriculturally intensive economy is already heavily predisposed to the conditions of Dutch Disease.

(2) **Revenue volatility**: Earnings from the extractive sector are more subject to the disruptive economic effects of world commodity price fluctuations. Volatility is transmitted to resource-based economies, where the largest share of government revenues is derived from natural resources. This volatility, which can also stem from variation over time in rates of extraction or variability in the timing of payments by corporations to states, makes it difficult for governments to pursue a prudent fiscal policy. Too often, windfalls are consumed rather than invested during export booms; indeed, overconsumption tends to go hand-in-hand with underinvestment. Governments tend to borrow against the value of an abundant resource and maintain expenditures at the same level during downturns, resulting in deficit spending and increased indebtedness.<sup>17</sup> In these so-called “boom-bust cycles,” the benefits in the good years are transitory, whereas the problems generated during the bad years endure.<sup>18</sup> A country's optimal expenditure path depends on how well it can balance the adverse macroeconomic consequences of large inflows of foreign exchange earnings with the need to invest in other sectors in order to achieve high growth rates in the long run.<sup>19</sup>

**Recommendation 1:** The Government of Mozambique must adopt a sovereign wealth/natural resource fund in order to effectively manage abundant natural resource revenues from its extractive industries and counter the ill effects of Dutch Disease and revenue volatility that are associated with the resource curse. This mechanism is discussed in greater detail in *Section 9: Managing Wealth: The Sovereign Wealth Fund*.

## 1.2 Natural Gas Exploration and Development

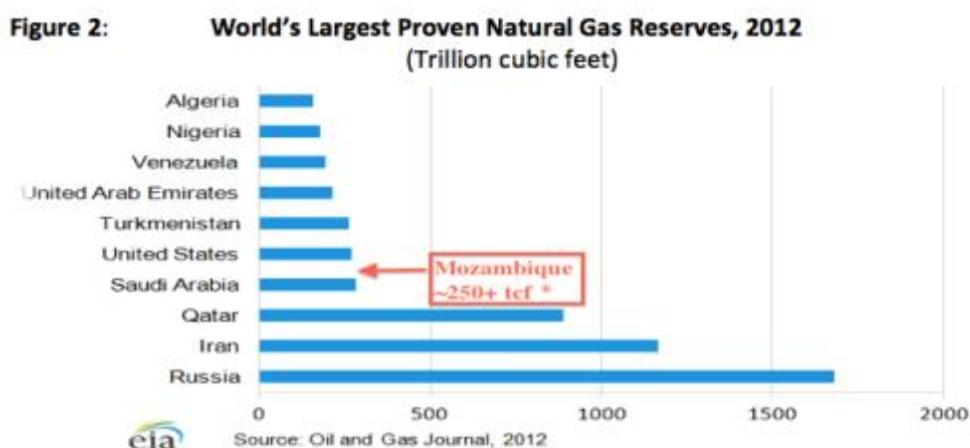
This section provides details regarding Mozambique's natural gas reserves, including its recent prolific offshore finds. As of the date of this report, offshore natural gas development is still in the early stages of exploration and appraisal drilling.

### *Onshore Reserves: Partnering with South Africa*

Mozambique initially discovered natural gas in the 1960s, but these reserves were not commercially developed until 2004. Mozambique's Empresa Nacional de Hidrocarbonetos ("ENH"), along with a consortium of other companies headed by South Africa's SASOL, facilitated the development of onshore reserves located in Inhambane province. These gas fields, Pande and Temane, have proven reserves of approximately 3.5 trillion cubic feet (Tcf).<sup>20</sup> In addition to meeting Mozambique's limited domestic needs, this gas is also currently being exported via pipeline to South Africa, where supplies are allocated under long-term contracts to buyers in the country's petrochemical industry. SASOL's role in Mozambique's energy sector is set to expand, as it also owns a number of gas exploration licenses to look for gas in the Mozambique Basin, in the offshore region of the port city of Beira. The real 'game-changing' volumes of natural gas, however, were only recently discovered in the deep waters of the Rovuma Basin, some 30-40 miles (50-65km) off the coast of Mozambique's northeastern Cabo Delgado province.

### *Offshore Reserves: Huge Discoveries in the Rovuma Basin*

In 2011-2012, exploratory drilling in Mozambique's offshore Rovuma Basin by Anadarko (a U.S. upstream oil and gas company) and ENI (Italy's energy conglomerate) uncovered the world's most significant discoveries of natural gas in over a decade. When the operators' high estimates are combined, gross volumes exceed 100 Tcf in recoverable reserves.<sup>21</sup> Geologic data indicates that there is in fact much more gas in the region. Based on industry estimating practices that infer statistics from what has already been discovered, Mozambique has close to an additional 150 Tcf of undiscovered resources, putting the total resource base of both discovered and undiscovered gas at over 250 Tcf.<sup>22</sup> To put this



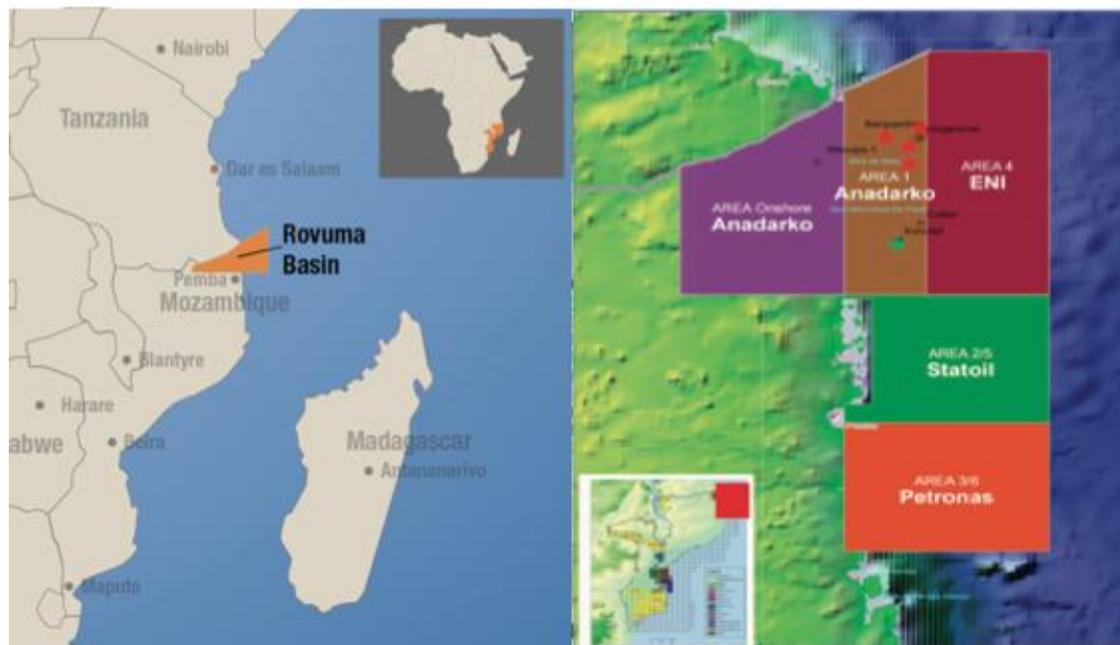
Source: EIA, Oil & Gas Journal, 2012

\*ICF International, Mozambique Natural Gas Master Plan (2012)

**Note:** The ICF figure (~250+ Tcf) is a preliminary geologic estimate of Mozambique's cumulative natural gas resource base (including undiscovered reserves), and is subject to change as exploratory drilling operations continue. Data presented in this figure does not include unconventional natural gas reserves (e.g. shale gas reserves in the United States).

number into perspective, if these estimates are confirmed, Mozambique will rank fourth in the world for natural gas reserves – behind Russia, Iran and Qatar – and would have enough gas to meet global demand for two years (Figure 2).<sup>23</sup>

**Figure 3: Natural Gas Acreage Map – Rovuma Basin, Mozambique**



**Sources:** National Petroleum Institute, Mozambique; company-specific sources/industry databases

**Concession Area:** [estimated recoverable reserves] Company, Country (% working interest)\*

**Area 1:** [30-65+Tcf] Anadarko, USA (36.5%); Mitsui, Japan (20%); ENH, Mozambique (15%)  
BPRL Ventures, India (10%); Videocon, India (10%); PTTEP, Thailand (8.5%)

**Area 4:** [80+Tcf] ENI, Italy (50%); CNPC, China (20%); Galp Energia, Portugal (10%);  
KOGAS, South Korea (10%); ENH, Mozambique (10%)

**Areas 2 & 5:** [unexplored] Statoil, Norway (40%); Inpex, Japan (25%); Tullow Oil, UK (25%)  
ENH, Mozambique (10%)

**Areas 3 & 6:** [unexplored] Petronas, Malaysia (50%); Total, France (40%); ENH,  
Mozambique (10%)

\*Estimated reserves and % working interest figures as of May 2013

Preliminary finds have attracted significant investment from international companies, who are now scrambling to secure an ownership stake in the massive offshore field. In addition to the wells drilled by Anadarko and ENI in offshore Areas 1 and 4, respectively, a number of other exploratory drilling projects are waiting to be operationalized in adjoining areas (Figure 3). As exploration activity in the region increases, more reserves will likely be uncovered; thus far, prospectors have drilled fewer than 500 wells in East Africa compared to more than 33,000 throughout the rest of the continent.<sup>24</sup> Anadarko and ENI have repeatedly modified their initial estimates, with appraisal wells continuing to reveal greater amounts of natural gas than expected. Wood Mackenzie, a leading global energy consultancy group, calls Mozambique “a very positive exploration story with an unprecedented high exploration success rate that has transformed the outlook for the region.”<sup>25</sup>

### 1.2.1 Liquefied Natural Gas

The following section offers a comprehensive review of the global liquefied natural gas industry and how Mozambique's exports will fit into this rapidly emerging market.

Like most of sub-Saharan Africa, Mozambique's domestic natural gas use is very limited as there is little demand for the commodity. Further, the capital-intensive upstream, transportation and distribution infrastructure needed to support the growth of natural gas in this region is lacking due to poor levels of development.<sup>26</sup> This is largely a byproduct of Mozambique's widespread poverty and poor electrification; four-fifths of the country's population still has no access to power.<sup>27</sup> Given that power generation is the main driver of natural gas demand, Mozambique's domestic needs are unlikely to change in the near future. Hence, commercial development of the Rovuma Basin's reserves hinges on the export of natural gas to markets overseas.

#### *Commercial LNG Exports*

The size of Mozambique's reserves alone has put the country on the global energy map. Experts claim that the quantity of gas in Mozambique can be a source of liquefied natural gas ("LNG") production for commercial export into global markets for upwards of 50 years. Expectations are that Mozambique could become the world's third largest exporter of LNG behind Qatar and Australia.<sup>28</sup> An onshore LNG facility will be constructed in Palma to process, liquefy, and export natural gas produced in the Rovuma Basin. The liquefaction plant could have an eventual capacity of about 50 million-tons-per-annum ("mtpa"), which would make it the largest terminal outside Qatar – currently the world's biggest exporter of the fuel.<sup>29</sup>

In the initial phase of the LNG project, a consortium led by Anadarko will build two 5 million-ton LNG trains (as natural gas processing and liquefaction facilities are called), each of which is expected to consume a total of 10-12 Tcf of gas over the life of the project.<sup>30</sup> The LNG plant might subsequently be extended to add more liquefaction capacity, as Mozambique's reserves can accommodate at least 10 trains, or 50 mtpa. Wood Mackenzie estimates that the entire Rovuma Basin, which also stretches into Tanzania's coastal waters, could support up to 20 trains, or 100 mtpa – a figure proportionate to production of over 200 Tcf of gas.

Anadarko's final investment decision on the LNG project will likely come in early 2014, with LNG production slated to begin in 2018. According to Standard Bank Group Ltd., Mozambique's gas industry may attract between \$30-50 billion in investment by 2020.<sup>31</sup> With each LNG train costing between \$7-10 billion, the project's total cost is expected to fall between \$15-25 billion.<sup>32</sup> Additional funding will be needed to install associated pipeline infrastructure that will connect the offshore producing gas fields to the onshore processing terminal. To reduce its massive cost burden, Anadarko has formed a contractual partnership with ENI to jointly plan, finance, and construct the LNG plant, while conducting separate, yet coordinated, offshore development activities in the Rovuma Basin.<sup>33</sup> To further alleviate the huge capital costs associated with financing the project's development, the two operators have struck multi-billion dollar deals to sell a percentage of their concession equity shares to a range of international companies interested in buying a stake in Mozambique's offshore blocks (see **Figure 3**).

#### *LNG: The Globalization of Natural Gas*

The main challenge for natural gas has historically been that it is relatively difficult and expensive to transport over long distances; consequently, natural gas has predominantly been a regional fuel, with

market activity generally limited to pipeline transportation.<sup>34</sup> The development of LNG technology fundamentally changed the industry. LNG offers much greater trade flexibility, allowing cargoes of natural gas to be delivered where the need is greatest and the monetary terms are most competitive.<sup>35</sup> As a result of technological advances and commercial maturity, LNG has become a more attractive and economical option for energy-importing countries looking to support rapid growth.<sup>36</sup> At the same time, advances in upstream extraction technology have revolutionized the global natural gas business and drastically enhanced supply outlooks. This evolving supply-demand balance has led to the rapid growth of globally traded LNG among a diverse range of market participants, operating in an increasingly competitive and dynamic price environment.

Despite the growing role of LNG in the world's energy system, a global natural gas market has yet to fully emerge, with universal price signals akin to other fuels like petroleum and coal. Hence, rather than strictly deriving its value from traditional market-based influences, the LNG industry is also driven by several additional key indicators, including:

- 1) **Gas monetization and contract structure:** gas/oil indexation; contract duration/flexibility
- 2) **Supply and demand:** global market balances
- 3) **LNG market competition:** project cost structure; geography; timing
- 4) **LNG price:** contractual price of LNG sales

These 4 key aspects of the global LNG industry are expanded upon below, with at least one of the ensuing sub-sections dedicated to each topic. The viability of Mozambique's LNG exports largely depends on these key market drivers.

### *The Economics of LNG: Natural Gas Monetization and Contract Structure*

The LNG industry is operated largely through a series of self-contained projects, which make up an interlinking chain of large-scale facilities, including terminals to liquefy the gas for export, carriers to transport LNG overseas, and terminals to receive and gasify the LNG and distribute it to markets via pipeline.<sup>37</sup> As in other capital intensive, competitive markets, the upstream and midstream capital investment decisions surrounding natural gas exploration, production, infrastructure development, and ultimately export, rely heavily on expectations about price. A degree of predictability surrounding prices and market conditions is required in order to assess the risks associated with the huge up-front expenditures necessary to develop the gas export supply chain. In the LNG business, buyers and sellers are typically bound together by a complex and long-term contract called a Sales and Purchase Agreement ("SPA"). These agreements often stretch 20 or more years in duration, as they are designed to help (1) producers offset production risks and secure a return on their considerable infrastructure investments, and (2) consumers ensure a long-term source of consistent supply at a competitive price to support economic growth.

The SPA's contractual terms are critical to the economic feasibility of exporting LNG. By negotiating a long-term contract with a buyer (or "off-taker") of LNG, suppliers secure a market for the liquid fuel they produce. The SPA typically requires buyers to purchase a predetermined volume of natural gas over the life of the project – known as a "take-or-pay" obligation. This contractually guaranteed sale of LNG significantly reduces the risk of LNG project development, increasing the confidence of potential investors. Of course, LNG's preset price also greatly impacts the economics of gas exportation.

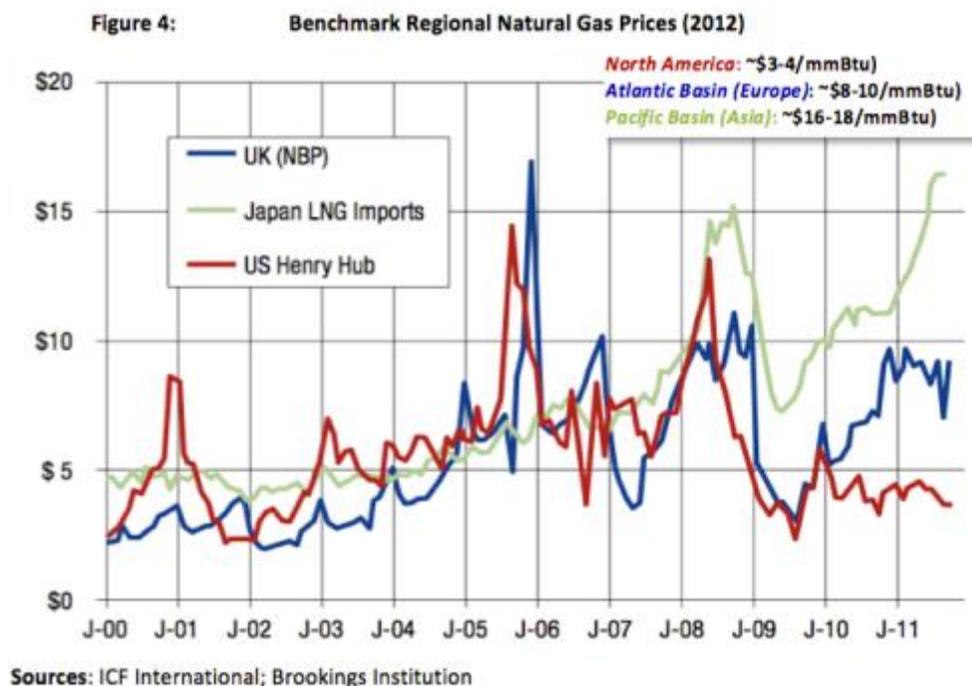
Wholesale price levels for natural gas can be established either through market-based mechanisms or price regulation. Market-based pricing mechanisms determine the price of gas in one of two ways: (1) natural gas is indexed according to spot prices reflecting the supply and demand of natural gas in a given market,<sup>38</sup> or (2) natural gas is linked to other fuel prices (such as oil, refined products, or coal) whereby the supply-demand forces in those commodity markets set the wholesale price of natural gas.<sup>39</sup> Historically, crude oil has determined the price of internationally traded gas, largely because oil and LNG projects use the same drilling rigs, engineering contractors, and labor force.<sup>40</sup> As the trade in LNG grows over the coming decades, however, the emergence of a global natural gas market is expected to loosen the tie of gas to oil prices.<sup>41</sup>

### *An Evolving Global Gas Landscape*

Until the mid-2000s, the prevailing oil-indexed structure of the natural gas business closely linked the world's three major centers of consumption – North America, the Atlantic Basin (Europe), and the Pacific Basin (Asia). Over the last five years, the wholesale price of natural gas has diverged in these three regions (**Figure 4**). As a result, there are sufficient opportunities for arbitrage in the international gas market – today's global buyers and sellers stand to make a significant profit from trading this commodity. This trend has attracted a greater number of participants to the global LNG market. Nevertheless, it is important to understand that the “law of one price” is implicit in any situation where arbitrage exists. This economic principle states that arbitrage will eventually lead to the convergence of improperly valued commodity prices towards a single “true price.” Following this logic, the International Energy Agency predicts that rising LNG supplies, increased short-term trading, and greater operational flexibility will likely lead to increased price connectivity between regions and a degree of price convergence.<sup>42</sup>

In fact, the global LNG market is already showing signs of structural change. For example, increased contractual flexibility has resulted in shorter-term offtake agreements.<sup>43</sup> Additionally, the number of available contracts is increasing, as suppliers and consumers look for counterparties that will meet their specific contractual needs.<sup>44</sup> Developments in the United States and Europe suggest that the emerging LNG market will gradually shift away from a model of fixed long-term contracts based on the price of oil towards a more short-term, commercially oriented business where the market realities of supply and demand play an important role in determining price.<sup>45</sup> Some purchasing agreements are even embracing a hybrid structure, incorporating greater flexibility with regards to volumetric offtake, and allotting a small but increasing share of contracted LNG for competitive pricing according to prevailing market conditions.

While natural gas markets continue to liberalize in Europe and North America, guided by a hub-based system with transparent price signals that steer trade and investment, prospects for a wholesale natural gas market in the Asia-Pacific region remain limited. This is largely attributed to Asian government policies that continue to emphasize energy security concerns over the need to reduce domestic energy prices.<sup>46</sup> Across the region, the need to ensure consistent sources of natural gas continues to drive Asian LNG importers towards a long-term, oil-indexed contract structure. The result, of course, is prevailing high prices (see **Figure 4**), which make Asian markets a popular destination for LNG exports.



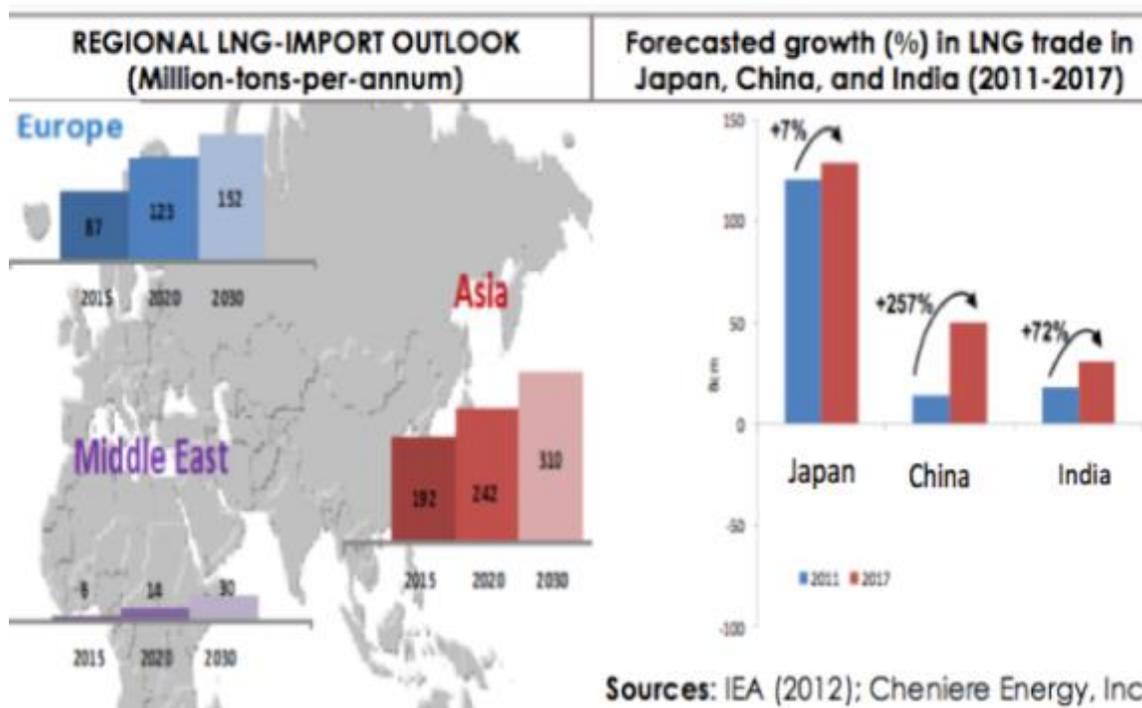
### LNG Demand

The growth in global demand for LNG drastically increases the value of Mozambique's newfound reserves. Demand for LNG has doubled over the last decade, and experts predict it will double again by 2020. The Asian market for LNG, which accounts for about two-thirds of global demand, will grow by 6% per year in the coming decade.<sup>47</sup> BG Group, an industry leader, expects China, India, Japan, and South Korea to become the world's top LNG importers by 2025.<sup>48</sup> Of this group, China will account for the largest portion of demand growth.

Driven by its rapid economic expansion, China's natural gas consumption has increased more than fivefold since 2000. Consumption is expected to continue rising at a staggering pace – about 13% annually for the next five years.<sup>49</sup> In the period through 2035, China will account for nearly 40% of the world's total expansion in the global natural gas trade.<sup>50</sup> China is building LNG import terminals quickly, with four up and running, five under construction and a dozen more at the planning stage.<sup>51</sup> By 2020, it is expected that the quantity of LNG needed to meet Chinese energy demands will more than quadruple.<sup>52</sup> **Figure 5** highlights the Asia-Pacific region's increasing demand for LNG over the next two decades.

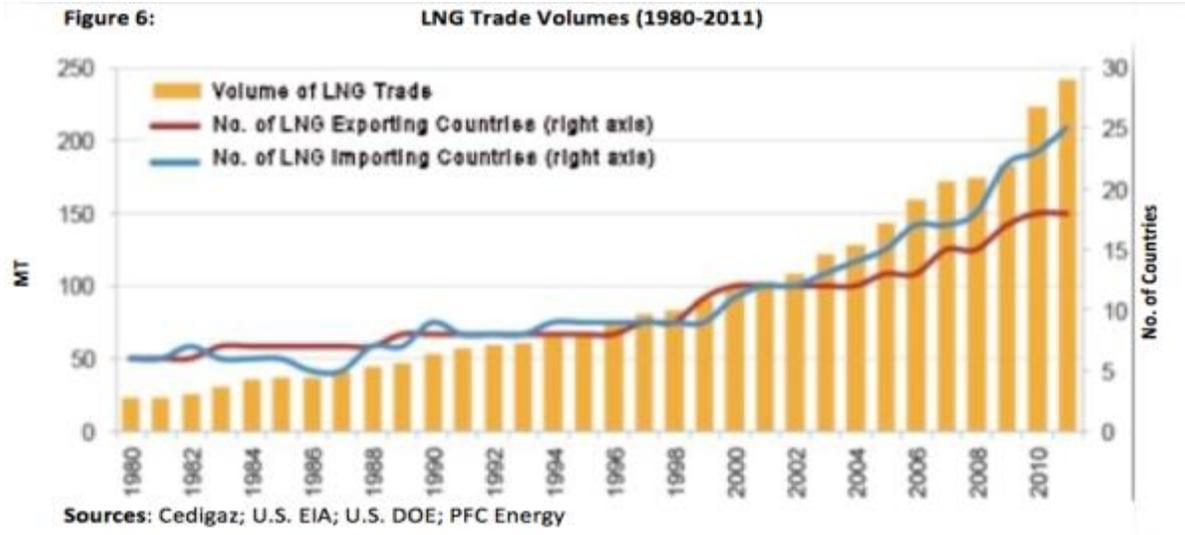
As the demand for natural gas continues to rise, regasification capacity is also growing at a rapid pace. There are currently 25 LNG-importing countries in the world, up from 17 importing countries in 2007.<sup>53</sup> PFC Energy expects the number of new gas-importing countries to double by the end of the decade.<sup>54</sup> Indeed, growing demand for natural gas has transformed LNG into one of the fastest-growing segments of the world's hydrocarbon industry.

Figure 5: LNG Demand Growth Dominated by Asia-Pacific

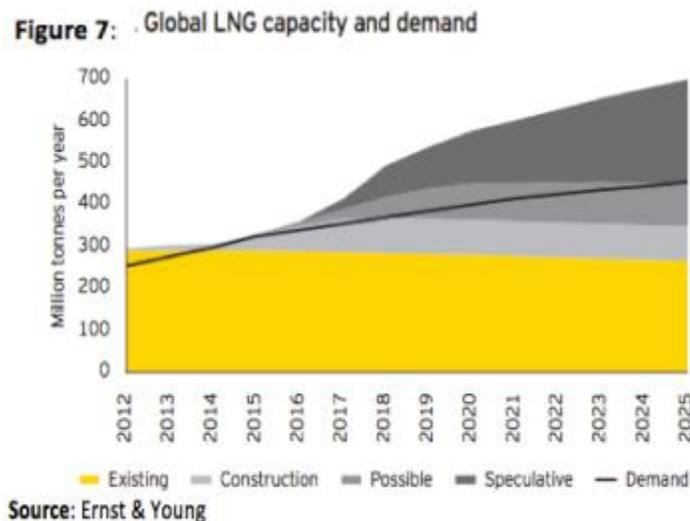


### LNG Supply

In 2012, global LNG export capacity stood at approximately 300 mtpa. According to by J.P. Morgan, if proposed additions to liquefaction capacity come to fruition, the global volume of LNG exports could reach 750 mtpa by 2020.<sup>55</sup> With global LNG production growing at an annual rate of 4.3%, the liquid fuel will account for approximately 27% of the growth in gas supply to 2030.<sup>56</sup> As supplies multiply and trade volumes increase to accommodate growing demand (Figure 6), LNG is expected to contribute close to half of the world's traded natural gas by 2035.<sup>57</sup> Global supply outlooks are becoming increasingly distorted by uncertainties surrounding the role that unconventional (shale) gas will play in feeding the global gas market in years ahead.



A large number of new LNG projects are scheduled to come online in the second half of this decade. While there were 19 LNG exporting countries in 2012, as many as 25 additional countries could provide as much as 30% of the world’s LNG capacity by 2020.<sup>58</sup> As more gas is supplied to the market, prices will invariably fall, which will in turn shrink the profit margins of the LNG business. Industry analysis suggests that there is indeed a time horizon – often referred to as an “export window” – associated with the supply-demand balance of globally traded LNG, implying that there will be an impending increase in supply-side competition after this threshold. It appears that global demand for LNG will keep up with supply until at least around 2020. Ernst & Young projects that the global LNG market will be able to accommodate every LNG project currently under construction or seen as “possible” through 2025 (Figure 7).<sup>59</sup>



### LNG Market Competition: Strategic Advantages for Mozambique

In addition to the currents of global supply and demand, Mozambique's LNG market position is also affected by cost structure, geography, and timing. When Mozambique's gas hits global markets in 2018-2019, it will compete with projects from the United States, Canada, Australia, and Africa that are due to begin exporting cargoes in the 2015-2018 time frame.<sup>60</sup> In the U.S., the shale gas revolution has created a glut in domestic supply, resulting in sustained downward pressure on the region's gas price, thus incentivizing U.S. companies to pursue more profitable LNG exports. In Canada, robust project development on the country's west coast offers a strategic advantage for liquid gas exports across the Pacific to Japan, the world's largest LNG consumer. While the geography and timing of Australia's LNG production has positioned Australia to capture an increasing share of the growing Chinese gas market, the cost structure of these projects is not as favorable. This is particularly due to the increased price of steel, which LNG projects use in large quantities. Australian workers also demand relatively high wages, which is another factor that contributes to project cost overruns.<sup>61</sup> Mozambique will also face competition from within its own continent (**Figure 8**). BP predicts that Africa as a region will overtake the Middle East as the world's largest net LNG exporter in 2028.<sup>62</sup> In spite of these developments, and even in the face of oversupply, Mozambique has some distinct advantages that set it apart from its competitors.

**Figure 8: African LNG Capacity**

Country	Project	Start*	Capacity (MT/yr)	Operator
<b>Existing/operating</b>				
Algeria	Arzew (3 trains)	1964	1.1	Sonatrach
	Skikda (4 trains)	1972	7.6	Sonatrach
	Bethioua (12 trains)	1978	16.5	Sonatrach
Egypt	Damietta (1 train)	2005	5.0	ENI
	ELNG (2 trains)	2005	7.2	BG Group
Libya	Marsa El Brega (2 trains)	1971	3.2	Sirte Oil
Nigeria	NLNG (6 trains)	1999	22.2	NNPC
Equatorial Guinea	Punta Eur (1 train)	2007	3.7	Marathon
Angola	Angola LNG (1 train)	2012	5.2	Chevron
<b>Planned/possible</b>				
Algeria	Arzew GL3Z	2013	4.7	Sonatrach
Algeria	Skikda LNG	2013	4.5	Sonatrach
Libya	Marsa El Brega T3	2016	2.6	Sirte Oil
Nigeria	Progress FLNG	2017	1.5	NNPC
Cameroon	Kribi LNG	2018	3.5	GDF Suez
Egypt	Damietta T2	2018	4.8	ENI
Equatorial Guinea	Punta Eur T2	2018	4.4	Marathon
Mozambique	Mozambique T1	2018	5.0	Anadarko
Nigeria	Brass LNG T1	2018	5.0	NNPC
Tanzania	Tanzania LNG T1	2018	6.6	BG Group
Mozambique	Mozambique T2	2019	5.0	Anadarko
Nigeria	Brass LNG T2	2019	5.0	NNPC
Nigeria	NLNG T7	2019	5.0	NNPC
Nigeria	NLNG T8	2020	8.5	NNPC
Nigeria	OK LNG	2020	12.6	NNPC
Mozambique	Mamba	2020	10.0	ENI

Source: Ernst & Young

Perhaps the most obvious upside is Mozambique's geography (**Figure 9**). The country's proximity to Asia's gas giants across the Indian Ocean drastically reduces LNG shipping costs, in comparison to North American suppliers. While the Asia-Pacific region is likely to end up offtaking the majority of Mozambique's LNG, it is worth noting that Mozambique is similarly convenient for European buyers. European gas markets will also witness a spike in demand, as their share of natural gas imports in total consumption is projected to jump from 63% today to 85% in 2035.<sup>63</sup> As the EU looks to diversify its fuel mix and lessen its dependence on gas imports from Russia, LNG is an increasingly viable alternative.

**Figure 9: Global export potential of Mozambique LNG**



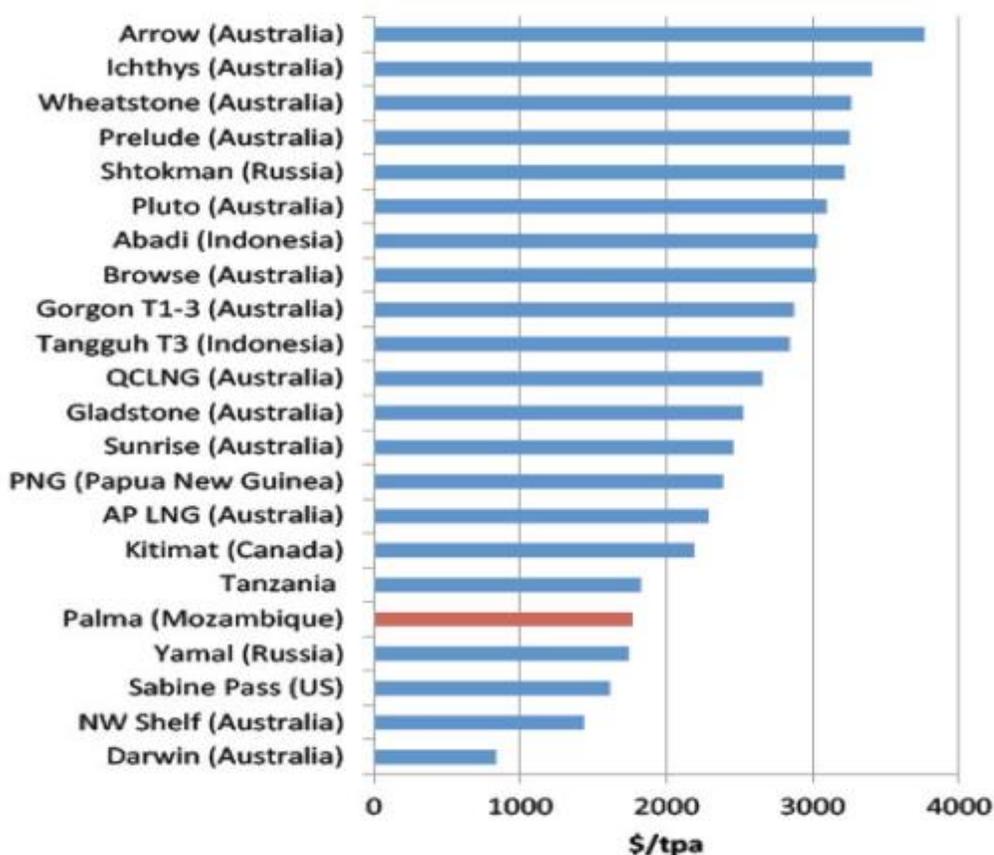
**Source: Anadarko Petroleum Corporation**

While Mozambique stands to benefit from supplying LNG to European markets, a number of considerations arise. First, Mozambican LNG may be undercut by notable offshore natural gas discoveries in the eastern Mediterranean that are in line to start production before the end of the decade. Next, a closer comparison of the economics that underpin European versus Asian LNG exports reveals a gap between each region's prevailing gas prices (see **Figure 4**) and Mozambique's LNG supply costs (liquefaction plus shipping costs). This is referred to as the "net-back margin," an important metric that clearly indicates a more favorable return from selling LNG to the Asia-Pacific region. Finally, as European gas markets continue to liberalize, long-term, oil-linked contracts with favorable take-or-pay conditions for suppliers will become less common (see *An Evolving Global Gas Landscape*). Until global natural gas prices experience a degree of convergence, the economics of LNG trade will predominantly favor exports to Asian markets.

Mozambique's natural gas sector also benefits from lower capital costs in exporting LNG, giving it an edge over other potential LNG developments around the world. For instance, consultants at Wood Mackenzie estimate that the break-even price for Mozambican gas is around US\$7 per million BTUs ("MMBtu"), in contrast to around US\$10 per MMBtu for Australian LNG.<sup>64</sup> In **Figure 10**, Credit Suisse and ICF International ranked proposed LNG projects according to their cost profile, incorporating all of the upstream capital costs associated with LNG (exploration, production, pipeline installation, gas processing, and liquefaction). The results show that the LNG produced at Mozambique's Palma facility will be in the bottom quartile of costs.<sup>65</sup> A second study done by the IEA corroborates these findings, indicating expected production costs of between \$1,500 and \$2,000 per ton for East African LNG.<sup>66</sup>

**Figure 10: Capital Costs for Potential LNG Plants across the Globe**

The cost of LNG production at Palma places Mozambique in the bottom quartile of potential global LNG projects, indicating a strong position for Mozambican LNG



Sources: Credit Suisse; ICF International: Natural Gas Master Plan for Mozambique

### LNG Price

As of the date of this report, the Government's Ministry of Mineral Resources ("MIREM") has yet to finalize the contractual terms specifying an offtake price for Mozambique's liquid gas exports. Clarifying this offtake price is essential, as it will determine the cash value of the Government's share of the gas.<sup>67</sup> Nevertheless, monetizing the Rovuma Basin's reserves to meet the specifications of a long-term SPA poses significant challenges, particularly given the uncertainties surrounding future price volatility. This process typically relies on a series of forecasts, often with significant discrepancies about commodity

price trajectories. **Figure 11** considers both high (IEA) and low (World Bank) projections of future LNG and crude oil prices, as well as an average of the two.

Figure 11: Liquefied Natural Gas & Oil Price Forecasts (2011\$)								
Commodity	Units	High Price Trajectory (IEA WEO 2011)						
		2012	2015	2020	2025	2030	2035	Average
LNG, Japanese	\$/MMBtu	13	14	15	15	16	17	15
Crude oil, avg, spot	\$/bbl	96	116	129	139	146	152	130
		Low Price Trajectory (World Bank)						
		2012	2015	2020	2025	2030	2035	Average
LNG, Japanese	\$/MMBtu	16	13	12	10	9	7	11
Crude oil, avg, spot	\$/bbl	103	97	88	80	73	67	85
		Average Price Trajectory (IEA/World Bank)						
LNG, Japanese	\$/MMBtu	15	14	14	13	13	12	13
Crude oil, avg, spot	\$/bbl	100	107	109	110	110	110	107

**Source:** ICF International: Natural Gas Master Plan for Mozambique

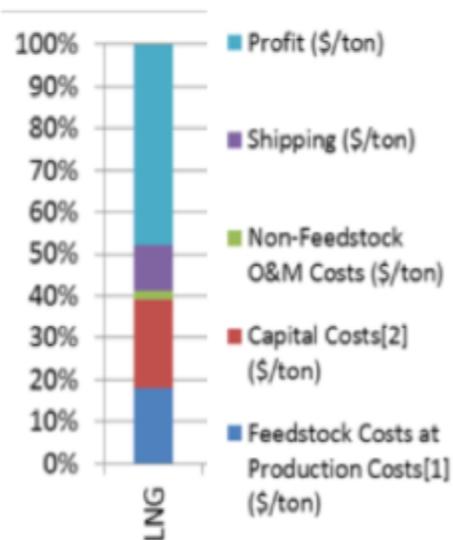
A few key observations from this table are evident. First, the two commodity prices in these outlooks are highly correlated, a result of Japanese LNG prices being indexed to oil. It is worth reiterating that as the global trade of LNG increases and the market matures, oil indexation in LNG contracts will gradually become obsolete, giving way to a hub-based system that reflects spot prices for gas.

Next, while supply-demand attributes play a role in explaining the divergence in average crude oil prices between these two scenarios, the split is largely due to differing opinions regarding the effect of policy intervention on underlying market conditions.<sup>68</sup> For example, in the World Bank's assessment, the adoption of a carbon price might reduce the demand for (and therefore the price of) oil, and spur widespread electrification of the transport sector or increase the market share of competing transport fuels (e.g. biofuels). Irrespective of any policy intervention, industry experts widely acknowledge that crude oil prices will remain high in the decades to come.

Finally, looking at the 20-year average for LNG prices in the two forecasts, estimated to be approximately \$15 (IEA) and \$11 (WB) on an MMBtu basis, analysis of these price streams vis-à-vis Mozambique's LNG production and shipping costs reveals a profitable net-back value of \$9 and \$5, respectively.<sup>69</sup> In sum, even if we assume a significant drop-off in LNG prices over the next two decades, Mozambique's natural gas exports will still be profitable (**Figure 12**).

While Mozambique appears well positioned to compete in the emerging global LNG industry, its biggest challenge remains its lack of existing infrastructure. Indeed, it is imperative that the Government secures billions of dollars of investment in order to complete the Palma facility in a timely and cost-effective manner. Additionally, the Government of Mozambique has to consider an even more important stakeholder – the people of Mozambique. The Government's ability to ensure that natural gas export revenues provide long-term benefits for Mozambique hinges upon a fragile contractual framework outlining the country's financing obligations.

**Figure 12:**  
Levelized costs and profit of LNG production at Palma



**Source:**

ICF International: Natural Gas Master Plan for Mozambique

**Recommendation 2:** The Government of Mozambique must work with Anadarko, ENI and other operators in the Rovuma Basin to confirm that long-term, oil-indexed natural gas purchase agreements with built-in take-or-pay obligations are signed with offtakers in the high-demand markets of the Asia-Pacific region.



### Mozambique LNG: A Favorable Market Outlook

As of the date of this report, Anadarko is in talks with 20 companies across 10 countries shopping for offtakers of Mozambique's LNG. Given the current global LNG price environment, Mozambique stands to benefit substantially from exporting its natural gas resources to Asian markets in the Pacific Basin. Japan, the world's largest LNG importer, has expressed considerable interest in buying Mozambique's gas.

Anadarko is pursuing long-term, predominantly oil-linked LNG Sales and Purchase Agreements, with "take-or-pay" obligations built in. This contract structure will secure stable cash flows for 20+ years, which will in turn help operators in the Rovuma Basin recuperate exploration and development costs and mitigate production risks. At the same time, a contract ensuring future sales will also attract much-needed lenders and sponsors, whose investments will finance the costly construction of Palma's LNG facility and gas export supply chain. While supply-side competition appears imminent in the global LNG market after 2020, forecasts predict that robust demand growth, particularly from Asia-Pacific, will ensure the cost-effectiveness of LNG export projects until about 2025. While this "export window" is difficult to predict, Mozambique's two-train (10 mtpa) project, due to begin production in 2018-2019, fits well within this time frame. In sum, Mozambique's LNG benefits from (1) an abundant and nearly unmatched volume of recoverable reserves; (2) a strategic geographic location that allows exports to reach markets all over the world, including fast-growing economies in Asia; finally, (3) among all competing LNG projects, Mozambique's cost structure remains one of the lowest, allowing for a profitable net-back margin.

### The Potential Impacts of Natural Gas for Mozambique

If Mozambique's natural gas discoveries are confirmed and it harnesses all of its export capacity...

- Mozambique will become a **regional energy hub** in southeastern Africa
- Mozambique's will rank **fourth in the world** in conventional natural gas reserves
- Mozambique will be the **world's third largest exporter** of liquefied natural gas
- Mozambique's liquefaction plant in Palma will be the **second largest facility** of its kind

## 1.2.2 Financing Liquefied Natural Gas Development

This final segment on natural gas explores the details surrounding the contractual and financial obligations that exist between counterparties in an LNG partnership. An understanding of how these natural gas contracts are structured is essential, particularly with regard to the “government take” metric.

Monetizing the immense economic potential of Mozambique’s natural gas reserves is an extremely difficult task. It involves making assumptions and estimates that stretch far into the future and across a highly complex and dynamic set of interrelated global energy systems. On the high end of the spectrum, the Rovuma Basin’s cumulative natural gas resource base is valued at \$800 billion, over 30 times larger than Mozambique’s current GDP.<sup>70</sup> Rather than analyzing the entire sedimentary basin, however, a more factually sound assessment is limited to the 100 trillion-cubic-feet of discovered gas that Mozambique will ultimately process into LNG exports. According to this more limited valuation, Mozambique’s gas is worth between \$350-400 billion over the lifetime of the reserves.<sup>71</sup> Assuming a reserve life of four decades, a \$400 billion valuation could conceivably result in Mozambique exporting nearly \$10 billion of gas per annum.<sup>72</sup> In turn, Mozambique’s Gas Master Plan predicts the Government’s share of revenues, including taxes, royalties, and profit gas – collectively referred to as “government take” – to comprise about half of the export proceeds, reaching as high as \$6-8 billion per year.<sup>73</sup> Mozambique’s ability to optimize government take depends on the configuration of its fiscal regime vis-à-vis its gas contracts with foreign companies operating in its coastal waters.

### *Mozambique’s Contractual Arrangements*

The complex nature of contracts and revenue streams linked to hydrocarbon development make it difficult to determine the Government’s actual “take” from a given project; moreover, there tends to be a lack of transparency surrounding the details of these contractual arrangements.<sup>74</sup> Clearly, Mozambique’s Government plays a critical role in the process of negotiating fair contracts that ensure long-term streams of revenue.

To this end, Mozambique’s Government is currently working to align its fiscal regime with the terms and conditions of production sharing contracts (“PSCs”) it has organized with a number of international oil companies (“IOCs”), including Anadarko and ENI. A PSC is a legal arrangement that allocates the costs and benefits associated with extractive resource exploration and production. A typical natural gas PSC has the following key conditions:<sup>75</sup>

- 1) **Title & Ownership:** The state owns and has legal title to the natural gas reserves.
- 2) **Exploration & Production:** The IOC provides the capital investment for exploration, drilling and infrastructure construction, and bears all of the risk.<sup>76</sup>
- 3) **Royalties, Taxes, and Production Sharing:** Once commercial gas production begins:
  - a) The IOC can recover its investment costs up to a pre-specified percentage of production, known as a “cost recovery limit.”<sup>77</sup>
  - b) The IOC must pay a royalty charged on gross production and a tax on production profits (total income less eligible expenses) to the Government.
  - c) Profit gas – the amount of gas remaining after royalties are paid and “cost gas”<sup>78</sup> is

allocated – is split between the Government and the IOC according to an agreed percentage of production sharing.

In total, the IOC is entitled to cost gas plus a share of profit gas, while government take includes proceeds from royalties, taxes, and a share of profit gas. Given these criteria, it is important to understand how Mozambique and its partners in the Rovuma Basin fit into this contractual framework.

### ***Title & Ownership***

Mozambique's gas contracts are framed around the legislative guidelines of its Petroleum Law, which stipulates that all underground and offshore natural resources remain the property of the state (see *Section 7: Gas and Petroleum Laws*).<sup>79</sup>

### ***Exploration & Production***

In the mid-to-late 2000s, Anadarko, ENI, Statoil, and Petronas each entered into a partnership with the Mozambican Government, securing an exploration and production concession contract ("EPCC") in order to look for oil and gas. While Anadarko and ENI have spearheaded exploration in their offshore concession areas, Statoil and Petronas have yet to commence drilling activities. Meanwhile, as **Figure 3** displays, Rovuma's operators continue to sell shares in their blocks to companies interested in owning a stake of the reserves. Subsequent phases of gas development, production, and particularly liquefaction are likely to attract super-majors to the region. France's Total has already bought a 40% working interest from Petronas in Areas 3 and 6, while Shell is keen to bring its unmatched LNG processing capabilities to Mozambique.

### ***Royalties, Taxes, and Production Sharing***

According to data recently published in a report by the *Center for Public Integrity of Mozambique*, once Mozambique's commercial gas production begins:<sup>80</sup>

- The cost recovery limits for Anadarko and ENI are 65% and 75%, respectively. Anadarko's 65% limit is commensurate with the average fiscal terms of gas contracts, while ENI's figure is slightly higher.
- Royalties and taxes in Mozambique's gas sector are quantified as follows:
  - Royalty rates that will be charged to Anadarko and ENI stand at 2%. Since the signing of these initial EPCCs in 2006, however, the Government has raised the royalty rate for gas production to 6%.<sup>81</sup>
  - The corporate income tax rate on income derived from hydrocarbon operations in Mozambique is currently 32%; however, as with the aforementioned royalties, this figure was lower when the EPCCs were initially signed. Prior to 2007, the Government reduced the rate by one quarter (down to 24%) in order to incentivize development. These fiscal benefits will remain in effect for the first eight years of production.
  - Finally, a new Mozambican law implemented a 32% capital gains tax, slated to begin in 2013. This legislation reflects an effort to capture revenue from gains realized by international companies making overseas transactions that involve assets based within Mozambique.<sup>82</sup>

- The Government of Mozambique will split profit gas with each respective company according to a sliding scale that will be determined by the profitability of LNG exports. Thus, government take will gradually increase as cumulative project income increases and expenses are paid off according to cost recovery provisions. Mozambique's national oil company, ENH, has a working interest in each offshore block from which it will receive a certain percentage of future production. Its largest share comes from Anadarko's offshore Concession Area 1, where it owns a 15% stake (see **Figure 3**).

### LNG Financing

These fiscal terms have drastic implications for Mozambique. Overall, the relatively high cost recovery ceilings built into these contracts make them “front-end-loaded.” In other words, it will take several years of production for Mozambique to see its share of economic profits from the project increase. Additionally, Mozambique's working interest in these concessions is contingent upon its ability to meet certain key financial obligations going forward. Under most LNG financing arrangements, IOCs “fully carry” all of the costs for the host country through the exploration and production phases of LNG project development. In Mozambique, however, the Government and the IOCs have agreed to a “partial carry” model, whereby the IOCs front all of the costs and bear all of the risks related to exploration. When exploration yields commercial discoveries, such as those in the Rovuma Basin, the Government – along with every company that has a stake in the concession – must pay its respective share of exploration costs. If it cannot pay those costs, its share in the project will be diluted over time.

As an example, Anadarko estimates exploration costs at \$700 million through the end of 2012; hence, in order to take ownership of its 15% working interest in Anadarko's Offshore Area 1, the Mozambican Government will have to come up with well over \$100 million to reimburse the company when production begins.<sup>83</sup> This financial hurdle is magnified by the next phase of gas export development – construction. On the low end of projections the LNG plant in Palma will cost upwards of \$15 billion, translating into a \$2.25 billion bill for the Government.<sup>84</sup> Cost overruns could mean hundreds of millions of dollars more in expenditures. Unlike the cost recovery mechanism that is built into the gas contract for operators, the Government will have to come up with all of this money at once. This will likely create pressure for the Government to raise money from other activities – e.g. by agreeing to additional concession contracts that generate a “signing bonus.”

If the Government of Mozambique wants to maintain its equity share in the Rovuma gas fields, its contractual obligations under the current LNG development framework will clearly pose a significant financial burden for the country. Clearly, the country would have benefitted more from a “full carry” financing structure. While reducing or even entirely abandoning its equity share is an option, the state-owned ENH believes production sharing is a necessary step toward becoming a fully operational petroleum company.<sup>85</sup> If the Government is unable to raise money in a timely manner, it could lead to delays in LNG construction and project development.

Long term financing is typical of projects that have high up-front capital costs – like the construction of an LNG export terminal. Mozambique should consider turning to project finance for help. Project finance is a long-term method of financing used to sponsor large industrial infrastructure projects, such as the construction of an LNG plant. Rather than focusing on the finances and creditworthiness of borrowers, lenders look primarily to the revenues expected to come from the project for interest and debt repayments and to the assets of the project as collateral. Project finance structures usually rely on sponsorship from a range of equity investors as well as a syndicate of banks that provide loans to support the project. In other words, if the Government of Mozambique were to use such a nonrecourse

financing mechanism, debt repayments would almost exclusively rely on the financial performance of LNG exports.<sup>86</sup> Under a project finance model, although the Mozambican Government would need to be willing to take a smaller profit from the project in the long term, it would no longer need to locate huge internal funds to repay its portions of exploration, production and LNG development costs. Finally, the long-term nature of project finance would also correlate well with the long-term offtake contracts that Mozambique's gas operators are looking to sign with Asian buyers.

**Recommendation 3:** To optimize the value of natural gas production and export from the Rovuma Basin, the Government of Mozambique must negotiate with Anadarko, ENI, and other gas operators to ensure that the terms of the PSC will be equitable and allow for maximum government take.

### Evaluating the Fiscal Terms of Mozambique's Gas Contracts

Mozambique's fiscal regime should seek to address the following key issues:<sup>87</sup>

- 1) **Minimize cost gas:** In negotiating cost recovery limits, the Government should minimize the percentage of gas revenues allocated to the recovery of IOC costs ("cost gas") in order to maximize its share of profit gas in the early phases of the LNG project. Under the current arrangement, between 65-75% of post-royalty gas will go directly towards paying back IOCs in the initial years of production, which means that it will likely be several years before the Government of Mozambique starts to see substantial revenue from LNG production and export.
- 2) **Enforce cost recovery limits:** The Government must also ensure that the EPCC explicitly stipulates which costs are recoverable and which costs are not. In turn, active monitoring and effective oversight of project costs will be necessary to ensure that the Government in fact receives all of its due revenue.
- 3) **Include windfall provisions:** In order to maximize the potential of profit gas, the EPCC should include provisions that allow the Government of Mozambique to profit more from an increase in the price of LNG.
- 4) **Guarantee timely and recurring income:** A minimum government take requirement would assure a certain share of stable, recurring cash flows in each accounting period. Steady income from royalties will help the Government with budgeting and also serve to guard against commodity price volatility, which can negatively impact the Government's stream of tax revenue.
- 5) **Look to project finance as a source of LNG financing:** As noted above, project finance can be a useful tool for Mozambique's Government as it looks to come up with funds to sponsor its working interest in offshore gas development.
- 6) **Improve internal management capacity:** The Government should seek to gradually increase its degree of control over its resources, with a long-term goal of taking over operations in order to fully maximize revenues. This is no small undertaking, however, as such a transition will take a very long time to complete and will require significant investment. To achieve this, the Government must retain its equity share in the offshore gas fields and use its ownership of production to build the capacity of its national oil company ("ENH"). Above all, policies should seek to promote knowledge and technology transfers from the IOCs to ENH.

## 1.3 Coal

The following section assesses Mozambique's coal reserves and the corresponding coal market outlook. Key hurdles remain in developing Mozambique's export infrastructure capacity.

### 1.3.1 Coal Development in Tete Province

Mozambique's burgeoning coal industry further enhances the magnitude of its recent gas discoveries. In the last few years, over 30 international mining companies have flocked to Mozambique's inland Tete province, where the Moatize Basin hosts one of the world's largest-known coal reserves. Altogether, Mozambique's total coal reserves are estimated to be approximately 25 billion tons.<sup>88</sup> Brazil's Vale and British-Australian Rio Tinto are the two most prominent coal companies stationed in Mozambique, with extraction from Vale's Moatize mine and Rio Tinto's Benga and Zambezi mines making up the majority of the country's exports. According to the International Monetary Fund, Mozambique's coal industry boosted output to about 5 million tons in 2012,<sup>89</sup> up from nearly 1 million tons in 2011.<sup>90</sup> If investments in the industry keep up, Mozambique could be exporting 40 mtpa in the next five years and up to 100 mtpa in a decade.<sup>91</sup>

Mozambique's coal output capacity, however, will largely depend on the development of the country's weak transport infrastructure. For now, Vale and Rio Tinto use the Sena railway to move their coal from Tete to the port of Beira; however, delayed upgrades to this rail line and a lack of capacity at Beira's coal terminal have hampered export operations. In order to reduce export bottlenecks and accommodate the increasing volume of coal coming from Tete, industry experts believe that about \$20 billion is needed to revive Mozambique's railways and ports.<sup>92</sup> In response, mining companies have been working with the Government to improve existing infrastructure and develop alternatives. Vale, for example, is heavily invested in developing the Nacala Corridor, a new export route that will ultimately cross through Malawi to Mozambique's northeast coast. This megaproject includes a deep-water seaport at Nacala, upgrades to nearly 700km of rail line and 230km of new track.<sup>93</sup> For further discussion of Mozambique's infrastructure needs and projects, see *Section 3: The Need for Inclusive Infrastructure*.

Assuming Mozambique can meet its infrastructure challenge, profitability of coal exports is expected to be high, due to low-cost, open-cast methods of extraction and abundant deposits.<sup>94</sup> Additionally, Mozambique's coal is superior in quality, with a 70% concentration of high-grade metallurgical coking coal.<sup>95</sup> Various mining forecasts speculate that the country could be producing nearly one-quarter of the world's coking coal by 2025.<sup>96</sup> Over just the next 3-5 years, presumably when its infrastructure will be able to support high-volume exports, Mozambique is expected to add about 10 million tons of coking coal to the global market.<sup>97</sup> Unlike thermal coal, which is used in power generation, coking/metallurgical coal is a key raw material in steel production. Thus, the construction boom in Asia, which will inevitably accompany that region's economic and industrial growth, will also drive demand for this type of coal.

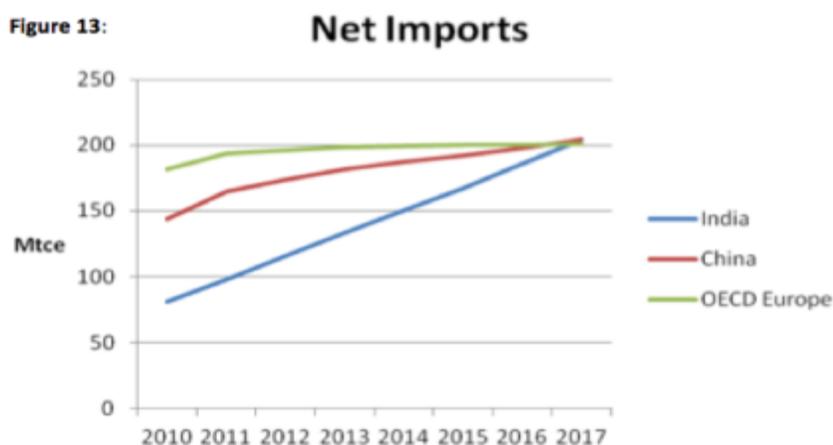
### 1.3.2 Global Coal Market Development

Over the coming decades, policies targeting coal-related greenhouse gas emissions will strongly impact international coal markets and prices. The global trade of coking coal, however, is far less affected by policy, as it cannot be so easily replaced by other less carbon-intensive inputs.<sup>98</sup> While doubts about policy will remain an important facet of the global coal business, price volatility and supply-side

competition will also contribute to market uncertainty. Although these dynamics will largely determine Mozambique's position in the global coal market, demand for coal is still very strong, particularly among Asia's giant consumers. Much like its potential LNG exports, Mozambique's proximity to the Asia-Pacific region will give the country a competitive advantage.

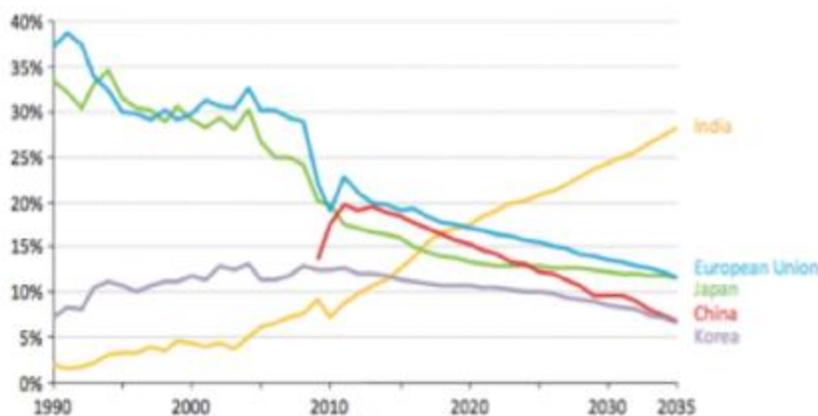
### Coal Demand

Coal still provides close to one-third of global primary energy needs and about 40% of the world's electricity. China is the world's largest producer and consumer of coal, and now burns nearly as much coal as the rest of the world combined. Moreover, China and India together will account for nearly 75% of non-OECD growth in coal use through 2035, with much of this growth expected over the next five years (see **Figure 13**).<sup>99</sup> While Chinese demand is estimated to slowly level off after 2020, the same is not the case for India, where net imports are projected to surge more than five-fold by 2035 compared to 2010, making it the world's largest coal importer by 2020 (**Figure 14**).<sup>100</sup>



Source: IEA Medium-term Coal Market Report 2012

**Figure 14: Share of major hard coal importers in global inter-regional trade in the New Policies Scenario**



Note: China became a major coal net importer in 2009.

Source: IEA World Energy Outlook 2012

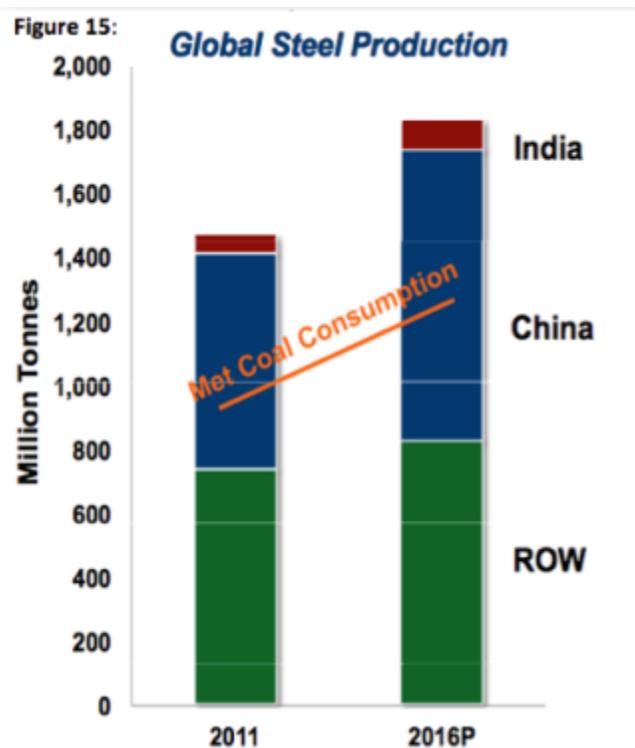
While Mozambique stands to benefit from both thermal and coking coal exports, the majority of the coal in the Moatize Basin fits into the latter category. Asian markets will dominate global demand growth for coking coal, as this high-quality coal is closely tied to the demand for steel, which is expected to increase in both China and India roughly in proportion with each country’s GDP growth. Peabody Energy, the world’s largest private-sector coal company, anticipates global steel production to grow 25% by 2016 (Figure 15).

**Coal Supply**

While China and India have huge domestic supplies of both kinds of coal, demand is growing faster than supply, implying a greater need for imports. The sheer abundance of coal worldwide means that large quantities are available at similar cost levels, reflected in a relatively flat long-run supply curve (Figure 16).<sup>101</sup> Wood Mackenzie forecasts that the seaborne supply of coking coal will increase by 60% over the next two decades.<sup>102</sup> Analogous to its LNG exports, Mozambique will be in stiff competition with Australia – the world’s largest supplier of coking coal. Above all, Australia’s advantage lies in very low shipping costs, due to its proximity to China’s thriving market. While Mozambique’s short distance across the Indian Ocean also suggests low shipping costs, China will have access to even cheaper coking coal reserves in neighboring Mongolia. Finally, Mozambique even faces competition from within its region, as South Africa is also a well-established supply source.

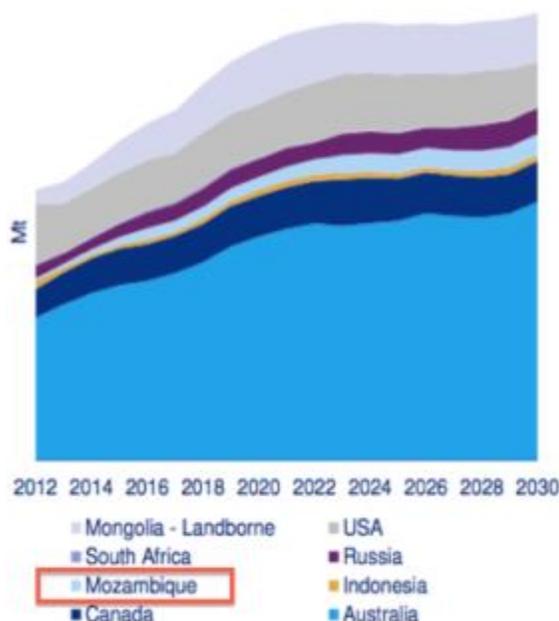
**Coal Price**

Despite optimistic predictions, increasing supplies are currently exerting downward pressure on global coal prices. While this may indeed change as Asian demand increases, experts in the coal business are worried that energy policies around the world that target

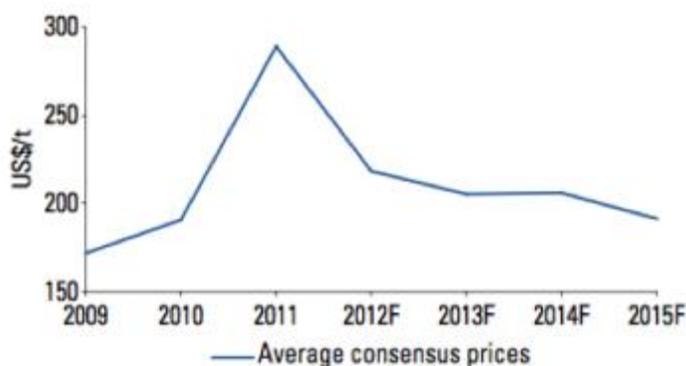


Source: Peabody Energy

Figure 16: Global metallurgical coal supply



Source: Wood Mackenzie

**Figure 17: Met coal prices (2009–15F)**

Sources: KPMG; Bureau of Resources and Energy Economics

inconsistent market conditions. For instance, the recent peak in coking coal prices coincided with an increase in mineral exploration in Mozambique.<sup>103</sup> In turn, the subsequent decline of coal prices has forced companies to scale back their operations in the Moatize Basin. This is particularly true for Rio Tinto, who posted losses of over \$3 billion in 2012, following a downward review of its reserves in Tete. Rio Tinto cited two factors for this devaluation: first, that the coal available was of lesser quality and quantity than it had initially projected; second, that it had been unable to efficiently move coal to port for export.<sup>104</sup>

Much like any commodity, the future price outlook for coal depends on a range of factors and is highly uncertain. Moreover, unlike the long-term recurring cash flows associated with an LNG offtake contract, coal is purchased according to prevailing spot price signals. The extent to which buyers in Asia-Pacific make switches in their domestic energy sectors (e.g. substituting natural gas for coal in power generation), infuse carbon-free alternatives such as nuclear and renewables into their fuel mix, and reduce their demand through improvements in energy efficiency and conservation, will collectively drive global coal market dynamics. Policy developments in China and India will likely have the biggest impact on global prices, given the potential for large swings in each country's coal imports according to their domestic supply-demand balance.<sup>105</sup> Lately, Japan also increased its presence in the international coal scene. The country is increasingly turning to cheaper coal to offset high oil and LNG import costs, with a return to nuclear power proving unlikely in the wake of the 2011 Fukushima crisis.<sup>106</sup>

Today, the price of coking coal is nearing an all-time low. Growing speculation suggests that if prices don't recover, a number of mining operations could become "sub-economic" – that is, the global coking coal price could fall below marginal coal production costs.<sup>107</sup> Wood Mackenzie, however, remains optimistic that metallurgic coal prices will rebound, driven by China's shift towards more efficient blast furnaces, which utilize Pulverized Coal Injection ("PCI") technology and require higher quality coking coals.

**Recommendation 4:** The Government of Mozambique must work with Vale, Rio Tinto and other coal operators in the Moatize Basin to guarantee that buyers in China, India, and elsewhere in the Asia-Pacific region are obtained for the offtake of Mozambique's thermal and coking coal. More importantly, the Government must work with coal project developers to secure investment for the infrastructure development that is necessary for expanded coal exports.

### Mozambican Coal Exports: An Uncertain Market Outlook

Thus far, the 2012-2013 period has witnessed enormous coal demand growth in both China and India, with India's imports growing 35% and Chinese imports up 29%.<sup>108</sup> Mozambique must secure the offtake of its coal to both of these markets.

In order to meet this objective, however, Mozambique must drastically upgrade its rail and deep-water port capacity to accommodate increasing export volumes (discussed further in *Section 3: The Need for Inclusive Infrastructure*). The timeliness of these infrastructure upgrades is essential, as they will in turn impact three other important market variables:

- 1) **Price:** Most of Mozambique's coal reserves are of the high-grade coking coal variety – a valuable steel-making input. Competing sources of supply, however, have sustained downward pressure on the current price of this type of coal. While some in the industry speculate that this price depression will continue through the end of the decade, other analysts predict a rebound in prices, driven by the higher quality coking coal needed to operate increasingly efficient blast furnaces. Mozambique's low shipping costs to Asian markets and its low-cost, open-cast extraction operations in the Moatize Basin will increase exports, slightly offsetting commodity price risk.
- 2) **China:** Despite its proximity to China, which by itself accounts for half of the world's demand for coking coal, cheap seaborne imports from Australia and increasingly abundant supplies from bordering Mongolia will likely undercut Mozambican supplies. Furthermore, China's growth spurt in steel output may level off by the time Mozambique is able to develop its export infrastructure. Nonetheless, there will likely be sufficient demand for Mozambique's coal exports to China in the decades ahead.
- 3) **India:** While some commentators foresee Chinese growth tapering off sometime by the middle of the 21<sup>st</sup> century, the same is not true for India, where domestic energy demand will continue to increase beyond 2050. To this end, Mozambique's short-term plan should be to secure export offtake for its coal reserves in India. It has already achieved this to an extent, as India's Tata Steel has a 35% working interest in Rio Tinto's Benga mine, which is already delivering both thermal and coking coal to India. As of March 2013, Coal India, the country's state-run mining company, set aside \$6.5 billion to invest in overseas mining assets.<sup>109</sup> While Mozambique remains on the company's radar, its infrastructure constraints remain an ongoing issue, as evidenced by Rio Tinto's recent \$3 billion write-down.

## 1.4 Creating Economic Linkages

Increasing FDI inflows in the extractive sectors provide Mozambique with a valuable opportunity to improve its traditionally poor economic performance and take measurable action to reduce extreme poverty. However, increases in FDI do not necessarily lead to better development outcomes for host countries. It is the quality, not only the quantity of FDI that matters. The establishment of megaprojects in the developing world tends to raise unrealistic expectations with respect to employment creation; in reality, megaprojects have proven to have little impact on the labor market of host countries (see *Section 2.2: Local Content*). Extractive megaprojects tend to require fewer, more highly skilled workers

compared to the labor-intensive, low-skilled workforce that comprises traditional sectors in a developing country's economy (e.g. agriculture or manufacturing). Therefore, in order to maximize the social benefits of foreign investment inflows on a national level, it is crucial for policymakers to create an environment that is conducive to the development of powerful economic linkages.

In order to support linkages between extractive industries and the local economy, national policies should aim to improve the trade balance, increase the scope of comparative advantages, and enhance the competitiveness of local production.<sup>110</sup> Creating a favorable environment in which small and medium-sized enterprises ("SMEs") can grow and thrive would drastically improve linkages between megaprojects and local suppliers. Extractive resource development requires a long list of goods and services to support megaproject activities; in turn, increasing the capacity of SMEs makes it conducive for megaproject developers to source these needs locally, rather than having to import them. Local sourcing in megaprojects adds tremendous value to host countries by promoting local job growth and increasing the transfer of knowledge and skills. Before Mozambique reaches the point at which it can cultivate its human capital to support megaprojects, the country needs to invest heavily in improving the quality of its education. Having a skilled labor force would decrease the need for project developers to import foreign specialized labor, while also serving to sustain long-term growth. Indeed, given that extractive resources are nonrenewable, Mozambique must expand its private sector and develop its domestic capacity to ensure that economic growth and development continue even after resources run out.

#### 1.4.1 Creating an Enabling Environment for SMEs

Mozambique holds tremendous potential for SME development, particularly in areas surrounding its railway corridors. The economies of regions tied to extractive infrastructure development could significantly improve if SMEs are provided with crucial production inputs, such as adequate access to the transport infrastructure system, reliable electricity, and affordable credit. Given the growing willingness of donors and private organizations to invest in Mozambique, the Government has the opportunity to increase the economic presence of SMEs. For example, in Tete – where most of the country's coal and mineral extraction is currently taking place – the World Bank has identified a number of districts with the capacity to support megaprojects, including Cahora Bassa and Magoé (service industries) and Chiuta (agricultural inputs). Likewise, Nampula's districts around the Nacala Corridor present good possibilities for the development of industries in Nacala, Muecate, and Mecante, for agriculture in Erati-Namapa, Ribaué and Monapo, and for tourism in Memba, Mola and Malema. Finally, districts in the provinces of Sofala and Manica surrounding the Sena rail line of the Beira Corridor also display great agricultural potential.<sup>111</sup> Private investors like Rio Tinto are currently considering the possibility of partnering with nonprofits and farmers around these corridors to increase food production.

**Recommendation 5:** The Government needs to undertake careful studies to determine the potential for SMEs to develop in the extractive regions of Tete and Cabo Delgado and in the neighboring provinces – especially Niassa, Nampula, Zambezia and Sofala – and to link this SME development to both the needs of extractive industries and other infrastructure projects such as railway corridors.

#### *Shortfalls of SME Development*

While many of the abovementioned opportunities for SME development exist in Mozambique, there are a number of factors that inhibit megaproject linkages within the country. One of the biggest problems is

that there is a huge lack of local demand for natural gas and coal within Mozambique, largely due to an overall deficit of electrification throughout rural areas of the country. Furthermore, the remoteness and underdevelopment of provinces where megaprojects are located poses logistical and technical challenges for economic linkages. For example, Anadarko and ENI's Rovuma offshore discoveries are closest to Palma, the far northeastern corner of Cabo Delgado, located hundreds of kilometers away from the towns where potential gas use exists.<sup>112</sup> Thus, it is important for the Government and its national oil company, ENH, to work with foreign developers to find alternative domestic markets for the natural gas outside of power generation. Proposals for domestic industries include gas-to-liquids ("GTL"), liquefied petroleum gas ("LPG"), methanol, fertilizer, cement, iron and steel manufacturing.<sup>113</sup> However, Mozambique's unskilled and uneducated workforce will make the development of such industries a challenge. The country presently limits the employment of expatriate workers to a maximum 5%-10% of a company's total workforce, yet skilled labor required for such industrial megaproject development remains largely unavailable within Mozambique.<sup>114</sup>

**Recommendation 6:** The Government of Mozambique needs to work with IOCs operating in the Rovuma Basin to isolate possible synergies between offshore natural gas development and the country's domestic industrial base. Since electricity generation is the primary source of offtake for natural gas, the Government of Mozambique should direct investment towards building up electricity transmission infrastructure. Further, the Government should look to develop alternative industrial uses for natural gas, including the use of gas in heating and liquid gas in transportation, as well as the development of manufacturing hubs for methanol, fertilizer, cement, iron and steel production.

There is also a significant disconnect between Mozambique's need to attract sufficient foreign investment and its poor rankings in a range of "doing business" indices (see Appendix 3: Development Indicators). The private sector in Mozambique faces an unfavorable business environment that considerably limits its capacity to provide economic linkages. Private developers in Mozambique face an extensive bureaucratic process to formally register their businesses. It is also particularly costly and burdensome to deal with construction permits, employ workers, register property, trade across borders, and enforce contracts.<sup>115</sup> In addition to these regulatory constraints, state-controlled pricing and skewed tax incentives further inhibit market-based competition within Mozambique – megaprojects are largely exempted from taxation, while SMEs are not.<sup>116</sup> Furthermore, all land in Mozambique remains in the hands of the state and cannot be owned on a private basis; access to land in Mozambique is unequal and not transparent.<sup>117</sup> The cost of and access to capital is also an ongoing issue, as there is an overall shortage of financial agencies and institutions to provide sufficient credit to private businesses. These problems are accentuated by the fact that the country does not have a credit-rating agency for banks to use in the provision of loans.

**Recommendation 7:** In order to create powerful economic linkages between Mozambique's extractive industries and its domestic small-and-medium-enterprises, the Government of Mozambique must institute legislative reforms to improve its private-sector business environment. More specifically, reforms should encourage market-driven competition by reducing bureaucratic and regulatory constraints, eliminating the influence of state-controlled pricing and unequal taxation policies, addressing issues related to land-use rights, and increasing access to capital through the development of key financial agencies and institutions.

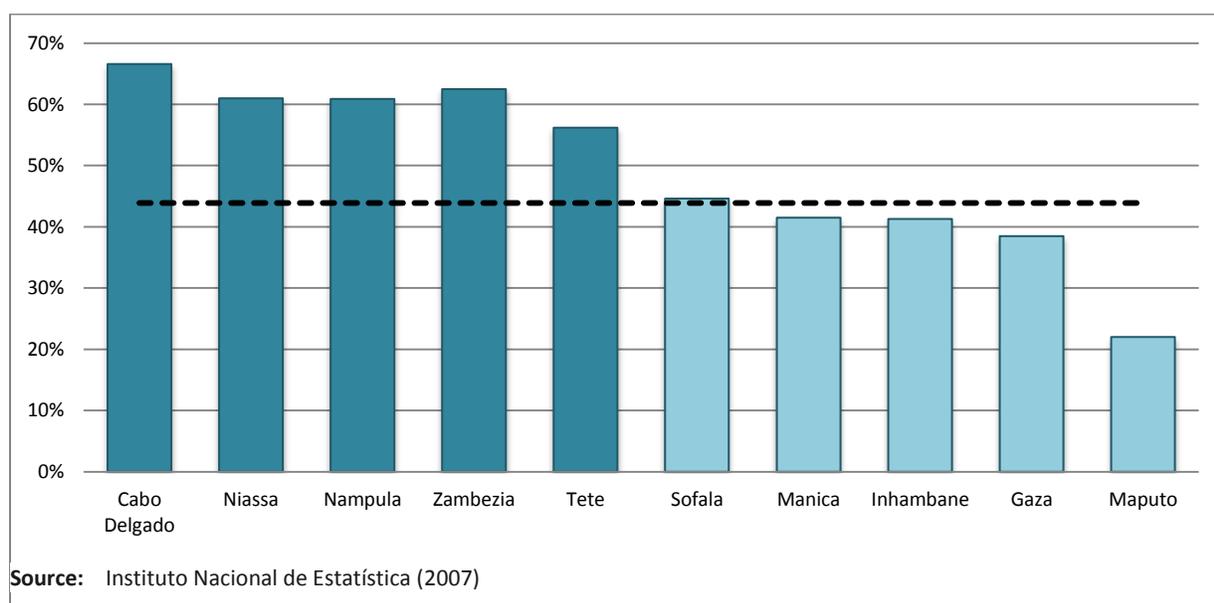
## 1.4.2 Infrastructure

Even when incentives are provided for private sector and SME development, firms often face the problem of scarce or unreliable infrastructure. As will be shown in the infrastructure section of this report, most provinces in Mozambique remain disconnected from each other, hampering the development of linkages between local businesses and foreign investors (see *Sections 3.1, 3.2, and 3.3*). Furthermore, unreliable or unavailable electricity in the few places where the grid exists prevents many people from starting businesses (see *Section 3.4*). Moreover, some Mozambican firms have reported producing at only half of their capacity due to insufficient electricity supply.<sup>118</sup>

## 1.4.3 Education

One of the most important factors hindering the creation of linkages in Mozambique is the lack of an adequately educated workforce, with the capacity to establish businesses and work in the country's emerging industries. Policies have usually failed to prioritize *vocational technical education* that is responsive to the needs of the country's production sectors.<sup>119</sup> Currently, concerns focus on the unavailability of both low-skilled and skilled labor to work in the growing extractive industries. Specifically, as shown in **Figure 18** below, the worst rates of literacy in the country are found in the regions where extraction activities are taking place – Cabo Delgado and Tete, as well as their neighboring provinces of Niassa, Nampula and Zambézia. All present illiteracy rates in these provinces are above the national average. This is particularly worrisome, because even if the social strategies of extractive companies involve hiring local personnel, this might not become a reality given the low education levels of the local workforce.

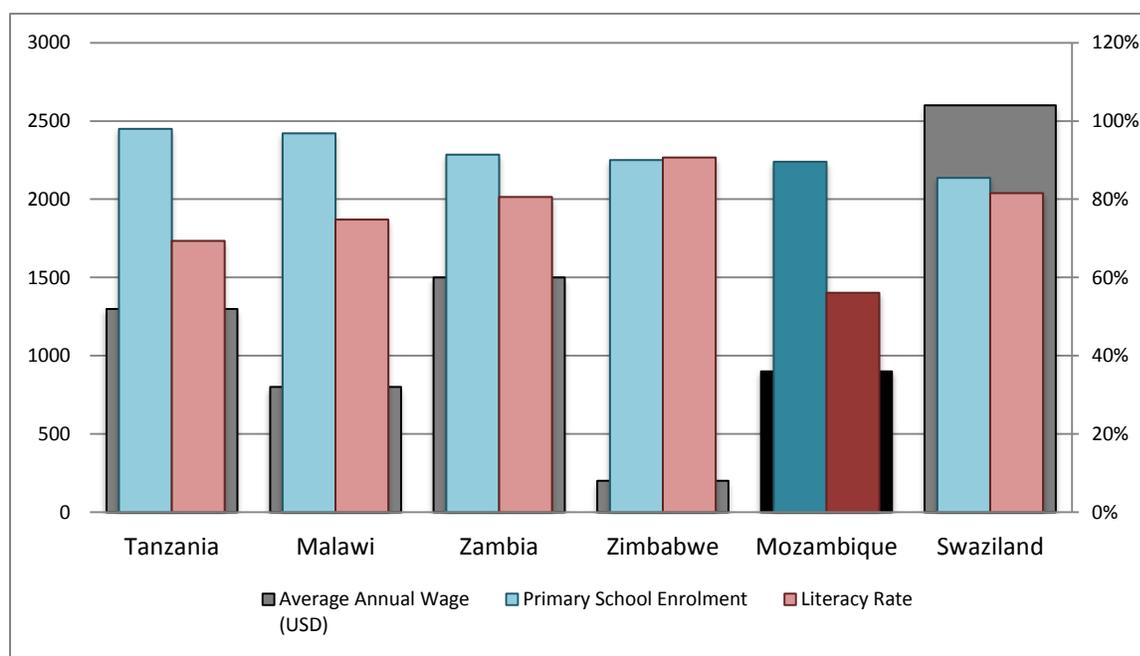
Figure 18: Illiteracy Rates per Provinces<sup>120</sup>



**Recommendation 8:** The Government must invest heavily in improving primary education on a national scale to tackle the country's poor literacy rate and to increase the competitiveness of its labor force in the long run. The Government should also consider working with IOCs to develop targeted vocational training in regions where extractive industries are active in order to facilitate local hiring by project developers in these areas.

The abundance of Mozambique's low-skilled labor force arguably represents a *competitive advantage* for industries requiring *intensive labor*.<sup>121</sup> However, extractive industries are typically not labor-intensive, and Mozambique's low-skilled workforce is not necessarily the most attractive in Southeastern Africa. As shown in **Figure 19** below, Mozambican labor is not the cheapest option in the region. Specifically, the average wages, and rates of literacy and primary education enrollment in Malawi and Zimbabwe are greater compared to Mozambique. Literacy rates serve to assess current human capital,<sup>122</sup> while primary education enrollment is used as a proxy of future labor productivity.<sup>123</sup> Mozambique must improve access to and opportunities in education in order to strengthen the quality of its human capital, otherwise foreign investors may resort to hiring better-educated workers from neighboring regions at lower costs. Furthermore, with more Mozambicans enrolled in primary school, the educated low-skilled labor force has a greater chance of becoming more competitive in the medium to long term in both the extractive industries and in emerging local SMEs.

**Figure 19: Regional Wages, Literacy and Primary Education**<sup>124</sup>

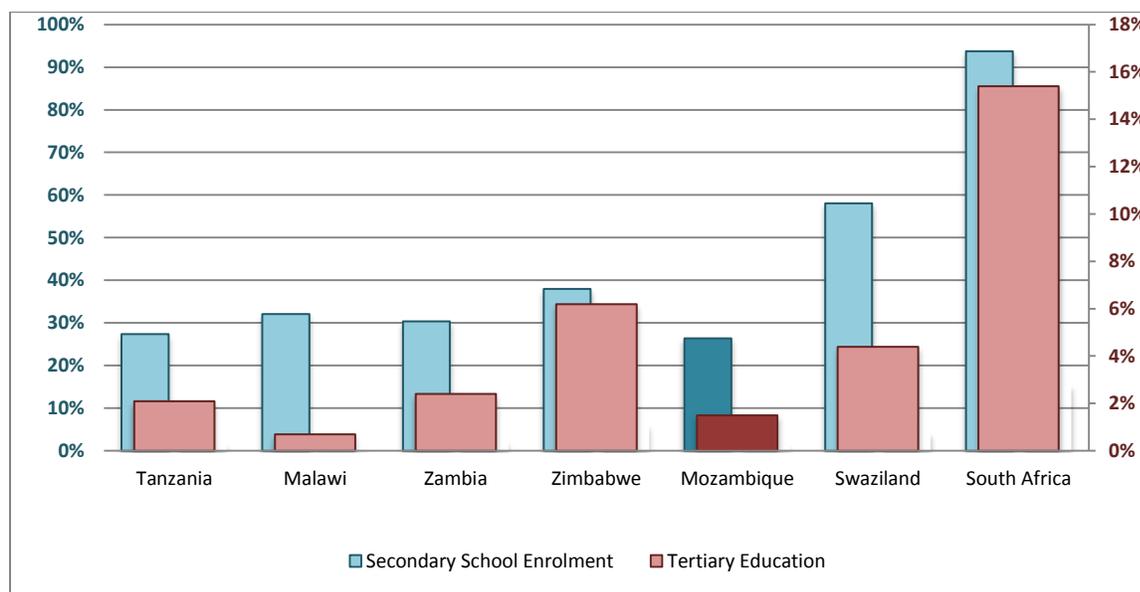


**Source:** WEF (education enrolment rates, 2012), Average Salary Survey (annual average salaries, 2012), Worldvision (annual average salary of Swaziland, 2013), and CIA's World Factbook (literacy rates, 2012).

From the perspective of higher technical educational levels, the Mozambican labor force once again does not hold up well against its neighbors. Much like primary education, secondary education can help assess the future availability of local technical, managerial and directive staff in the short to medium term. In this respect, the Government needs to undertake greater efforts to increase secondary education enrollment – a rate that is currently the lowest in the region (see **Figure 20** below). Moreover,

Mozambique’s strikingly low rate of university-level education (currently less than 2%) underscores the urgent need for the country to aggressively invest in its secondary and tertiary education in order to ensure that Mozambicans can fill managerial and director positions in the extractive and services industries.

Figure 20: Regional Secondary Enrolment and Higher Education<sup>125</sup>



Source: WEF (education enrolment rates, 2012).

**Recommendation 9:** Mozambique urgently needs to invest in improving the quality of its primary, secondary, and tertiary education in order to cultivate its domestic human capital in both the immediate term and the long run.

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## 2 Translating Extractive Industry Prosperity to Mozambique's Communities

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The development of Mozambique's large mineral and hydrocarbon reserves has the potential to generate substantial wealth and prosperity for the country (see *Section 1.1: The Mozambican Economy*). This national wealth creation is not limited to revenue generation for the state but can, and must flow to benefit local Mozambicans – particularly those living in impacted communities or in close proximity to extractive industry operations. One key avenue of translating prosperity to these communities is through *local content*. Though not a “silver bullet” to prosperity, local content can contribute to the fulfillment of expectations that mineral and hydrocarbon production will help improve the lives of Mozambicans. Local content is also critical to the extractive industry's operational sustainability and efficiency by generating a *social license to operate*. At the same time, smooth, sustainable operations also benefit the state by generating steady revenue and supporting general social stability. However, as outlined in the Republic of Mozambique Poverty Reduction Action Plan 2011-2014 (“PARP”), local *human capital* and the capacity of the private sector in Mozambique are limited. Thus, in order to effectively manage expectations, it is critical that both the government and extractive companies initiate early and consistent engagement with communities and the local private sector in regard to both the type of employment and business opportunities that will be available, as well as the expected timeline of these opportunities. To achieve optimal local content targets requires significant *strategic social investment* by stakeholders to build the capacity of local communities and enable individuals and businesses to compete and access income-generating opportunities in the newly established *extractive industry value chain*. This section will discuss the significance, challenges, and opportunities of developing local content and implementing strategic social investment in Mozambique's coal and natural gas industry project areas.

### Key Concepts for this Section

**Local content** refers to the set of actions— local recruitment, training, purchases of local goods and services — that are designed to develop the industrial infrastructure and skills of the people in countries that host extractive industry projects. It is generally measured as a percentage of investment, hours worked, the equipment manufactured or the number of jobs created. Developing local content can support the sustainability of the project and potentially spur economic and social growth.

**Social license to operate** is the ongoing approval within the local community, other stakeholders and/or broad social acceptance of a project. It is rooted in the beliefs, perceptions, and opinions held by the local population and other stakeholders about the project and thus is granted by the community. It is also intangible (and non-permanent), unless effort is made to measure these beliefs, opinions and perceptions as new information is acquired. Hence the *social license* has to be earned and then maintained.

**Human capital** is the stock of competencies and knowledge that enable an individual to perform labor so as to produce economic value.

**Strategic social investment** is financial and non-financial organizational resources invested in a community or social concern. The primary motivation is to lay the foundation for developing present markets and creating the preconditions for future market expansion. Medium to longer-term economic returns are expected (though not in the short-term).

## 2.1 Introduction

Significant and increasing inflows of extractive industry foreign direct investment (“FDI”) into Mozambique bring equally high expectations for improved livelihoods and prosperity amongst Mozambicans. Well-structured development of Mozambique’s extractive industries and simultaneous investment in cultivating national human capital can support the realization of these expectations and propel Mozambique from the bottom echelon of the development indicators to a position of regional leadership (see Appendix 3: Development Indicators). These strongly anticipated results are particularly prevalent in regions directly impacted and/or in close proximity to extractive industry projects – where poverty rates are often higher, FDI is more visible, and negative impacts of the extractive industries are more likely to occur. Consequently, while the macroeconomic impacts of Mozambique’s extractive industries are undisputed, the beneficial microeconomic impacts on local communities are much more uncertain.

Extractive industries, because they are more capital intensive, often produce fewer job opportunities than expected (see *Section 1.4: Creating Economic Linkages*). The potential for social unrest or conflict is much greater where expectations of reaping benefits from nearby extractive operations are not actively managed. Social unrest can cause delays or closure of operations, revenue volatility, negative impacts on investor climate, and other short and long-term undesirable externalities. Thus, given the medium to long-term time horizon of an extractive industry investment, a strong social license to operate is beneficial for all stakeholders. Early, consistent, and transparent communications between the government, private sector, and community members is a vital component to maintaining social harmony. Local content is fundamental to translating the potential benefits of an extractive industry project to the local community and national economy.

Local content is vital to providing access to employment, increased income generation, and improved livelihood opportunities to members of Mozambique’s local and national communities. Local content strategies that target and incorporate the *local local* and *local national* populations into the employment, training, and procurement opportunities available in the extractive industries value chain are essential to securing a strong social license to operate. Implementing an inclusive, holistic local content strategy, however, presents several challenges in Mozambique.

**Local local** population refers to individuals who lived in the community impacted by the extractive industry project prior to the entry of the extractive company.

**Local national** population refers to Mozambicans who are not from the impacted community.

Mozambique’s legislation includes local content requirements. Nevertheless, significant strategic social investment by stakeholders is required to build the capacity of individuals and businesses to meet minimum labor and procurement conditions of local content opportunities. Limited education, adverse health challenges, and poor market linkages have inhibited the development of human capital in Mozambique and currently prohibit the majority of the local local population (and much of the local national population) from competing and accessing extractive industry employment and income generating opportunities. With forethought, planning and diligent implementation, the current barriers to Mozambique’s human capital development can be overcome.

The province capital cities of Tete and Pemba in central and north Mozambique (respectively), along with other communities with significant extractive industry projects, have been experiencing high *inward migration* of (potentially) better-qualified local national and foreign workers and companies.

Significant inward migration into a community, as is the case in Tete and Pemba, increases demand on social services and physical resources. If inward migration is not actively managed, demand on social services and resources will exceed the absorption capacity of the community. High inflation of food prices and other goods is already being experienced in these two communities (see *Section 9: Managing Wealth: The Sovereign Wealth Fund*). Negative impacts on community health in some areas, such as increasing prevalence of HIV/AIDS in Tete, have also been documented. If shortages of necessary social services continue, the development of human capital will likely be impeded. Prolonged and increased levels of stress on community and environment resources have already been a source of social unrest and will likely lead to more conflict if a timely, well-structured policy is not implemented. Given approximately 300,000 youth are expected to join the labor force in Mozambique each year – for the next several years – an increase in employment expectations and/or a *benefits gap* could exacerbate social tensions in an already fragile environment.

Therefore, thorough design, implementation, and monitoring of local content strategies and strategic social investment policies by the government and private sector are all necessary to unlocking the potential for improved livelihoods at the local level. Structured execution of extractive industry FDI must adequately and transparently establish adequate and transparent access to income generation opportunities for a variety of local stakeholders – which is a prerequisite for ensuring social stability and economic prosperity in Mozambique. Moreover, to build local local human capital and private sector capacity, all stakeholders should be required to contribute with well-coordinated strategic social investment.

**Inward migration** (in this context) is the relocation pattern of foreign and national people to extractive industry areas. Migrants are typically seeking improved livelihoods through employment opportunities (that may or may not be available), prospecting land that may come under a concession and/or other reasons.

**Benefits gap** refers to the gap between the *potential* for economic social benefit available and *actual* economic and social benefit realized.

## 2.2 Local Content

The following sections will examine the opportunities, challenges and concerns for translating social benefits to communities in extractive industry areas. It will also provide recommendations for developing local content and implementing strategic social investment in Mozambique’s coal and natural gas operation sites located in the regions of Tete and Cabo Delgado.

Local content is not a “silver bullet” for prosperity in local communities of extractive industry projects. In Tete and Cabo Delgado, Mozambicans have very high expectations of the government and coal and natural gas industries for improved livelihoods. Local content is critical to establishing and maintaining a social license to operate and supporting the socio-economic development of Mozambique’s communities being impacted by exploration and production activities. To achieve sustainable benefits in the medium to long-term requires foresight, coordination, resources and flexibility in the planning and implementation of the strategy. Objectives should also be based on a thorough understanding of the local context (see *Section 2.3.1: Socio-Economic Overview in Mozambique*). When implemented successfully, local content can improve project operational efficiency and sustainability, reduce operational costs, stabilize state revenue from operations, and have other positive socio-economic externalities that last beyond the lifetime of the project.

There are two primary arteries for delivering local content:

- 1) **Employment** (operating companies, contractors, and sub-contractors):
  - a) recruitment of skilled and unskilled labor; and
  - b) training of skilled and unskilled labor.
- 2) **Procurement** (operating companies, contractors, and sub-contractors):
  - a) acquisition of core goods and services; and
  - b) acquisition of *non-core* goods and services.

**Non-core** goods and services refers to products and labor that are not directly utilized by extractive industry operations. Examples include laundering and catering services, procurement of food, etc.

An effective local content strategy is flexible to adjust to community and environmental changes that are unique to Mozambique. Utilizing thorough baseline and periodic monitoring data to track progress, inform decisions, and communicate outcomes will also benefit government, companies, and communities.

While the extractive industry companies require goods and services “now”, the *current* limitations of Mozambique’s human capital and private sector prohibits full participation of the local local community in local content activity. Thus, it is in the state, private sector, and community’s interest to actively manage the benefits gap in order to avoid social instability that may transpire in the community. Given that extractive industry investments range from medium to long-term, there is a strong incentive to pursue a holistic approach to administering local content strategies. Though extractive operations in Tete and Cabo Delgado are at various stages of exploration and production, local content strategies that incorporate multi-dimensional time horizons that match project cycles and actively target a variety of stakeholders will help realize the full potential of local content. The following subsections will explore and provide recommendations regarding employment and procurement of coal and natural gas industries in Tete and Cabo Delgado.

### 2.2.1 Employment

The greatest shortcoming in Mozambique’s rapid economic growth has been job creation. 81.5% of the labor force is employed in agriculture and 8.1% are self-employed outside of agriculture.<sup>126</sup> Over half of the only 7.5% salaried employees work in the public sector.<sup>127</sup> FDI projects account for approximately 90% of all jobs created in Tete, Cabo Delgado, Manica, and Niassa.<sup>128</sup> Aside from agriculture, limited alternative sources of income increase the vulnerability of poor rural households to weather shocks, natural disasters, and market fluctuations. In times of scarcity they have little to buffer them from food insecurity. Thus, it is critical to Mozambicans’ livelihoods (particularly food security) to establish a foundation from which Mozambicans can access employment and diversify their income generating activities. Employment and diversified income generation is particularly acute for those living in rural areas and witnessing the development of the extractive industry, but have limited capacity to access opportunities made available by the industry.

A critical issue for Mozambique now and over the next few decades will be to generate sufficient jobs

for its young and rapidly growing population. Mozambique's working age population reached 9.5 million people in 2010 and is expected to increase to 12 million by 2020, 15.8 million by 2030 and 19.7 million by 2040.<sup>129</sup> Thus, providing stable wage and salaried job opportunities to match the rate of expansion are among the nation's most critical social and economic issues. Employment in the extractive sector offers a significant opportunity to improve income for Mozambicans since wages in this sector are typically higher compared to those in other sectors of local economies.<sup>130,131</sup>

Given the *capital-intensive* nature of extractive industries, *direct employment* is very limited. Even in high resource dependent countries, the extractive sector rarely accounts for more than 1% of employment – ranging from unskilled to very highly-skilled labor.<sup>132</sup> While indirect jobs fair slightly better, the limited supply in extractive industries for direct employment (and thus prevalent good salaries) results in a potential benefits gap in expectations among local communities (see *Section 2.3.1: Socio-Economic Overview in Mozambique*). As Dr. Don Hubert has explained:<sup>133</sup>

**Capital-intensive** refers the ratio of the financial capital required to the amount of labor. Capital-intensive projects require large amounts of money and other financial resources to produce a good or service (compared to the labor requirement).

*In Mozambique, Sasol's \$1.2 billion investment resulted in fewer than 700 long-term jobs. Vale's \$1.7 billion investment resulted in fewer than 900. In 2010, all megaprojects combined accounted for 3,800 positions. When coal production reaches full capacity in 2016, employment in the extractive sector is expected to be 7,000 or 0.01% of the total population. The oil and gas industry is even more capital intensive.*

Mozambique's current legislation sets forth requirements and preference for local employment and procurement in extractive industry projects (see *Section 6: The Need for Upgraded Mining Laws and Section 7: Gas and Petroleum Laws*). The level of vocational and academic training in Mozambique remains low. Approximately 80% of the workforce has not completed the first level of primary school, and only 13% is doing so.<sup>134</sup> In the private sector, only 31% of the workforce has completed at least the second level of primary school.<sup>135</sup> A sufficient number of engineers, geologists and metallurgists are simply not educated in Mozambique to meet the demands of the growing extractives industry. Therefore, if capable labor is not available in Mozambique, companies may seek employees elsewhere – which under the circumstances is very likely and may also enhance inward migration (see *Section 2.3.1: Socio-Economic Overview in Mozambique*).

Under these current conditions, the greatest opportunity for large-scale employment in extractive industries is in the construction phase. During the remainder (and longest portion) of the project cycle, there is a significant shortage of adequate and appropriate industrial skills in local communities to meet company needs. Thus, the shortage of human capital is one of the primary barriers to immediate implementation of a local content strategy.<sup>136</sup>

In line with PARP, Rio Tinto and Vale have financed the development of a vocational training school in Tete that focuses on geology and other relevant topics for the coal industry. Anadarko has partnered with Eduardo Mondlane University in Maputo to support the engineering and geosciences programs. These are notable and important steps aimed at training future generations to access opportunities in the extractive industry. However, these opportunities will be available to only a small percentage of Mozambicans (see *Section 1.4: Creating Economic Linkages*). Therefore, in addition to these training programs, transparent and significant levels of community engagement, combined with strategic social investment in the development of a broader human capital base, is required on the part of all

stakeholders (see *Section 2.3.1: Socio-Economic Overview in Mozambique*). Implementing a holistic strategy addressing high expectations against a limited supply of much needed and desired jobs will help mitigate the potential for social unrest.

#### **Case Study: Total's US\$4.5 billion Yemen LNG project**

Launched in August 2005, Total aims for 90% Yemenization of staff by 2015. To achieve this, Total set up an integrated strategy to recruit, train, retain and motivate a world-class Yemeni workforce via employment terms and conditions that are highly competitive within the region.

To compensate for the scarcity of local human capital in LNG operations, Yemen LNG set up training centers that offer intensive, high-calibre training programs for technical specialists, engineers, and supervisors. Total conducted an advertising campaign to attract candidates through radio, TV, and the national press. Out of 16,000 application forms submitted for technical specialist level, the company chose 200 candidates. Training consisted of an intensive three-month English program, followed by eight months of training in oil and gas techniques, and then 13 months of hands-on training. Of 7,058 applicants for the supervisory training levels, 82 engineers and supervisors ultimately joined the Yemen LNG project. Many of the supervisor trainees for this specific level had acquired skills and knowledge working abroad. Total offered competitive packages to these expatriates to attract them back home and to participate in the development and the operation of the LNG project.

The training program for the Yemeni LNG plant was a first for the country. Based on the results, Yemen LNG intends to run further programs to train technicians to fill vacant positions as the first batch of trainees move on to assume senior and supervisory roles.<sup>137</sup>

#### **Recommendation 10:**

- Active, early, and honest community engagement by government and extractive companies, and (if possible) monitored by designated civil society organizations about opportunities, expectations, challenges, and strategic solutions to employment.
- Develop the local content plan at the very early stages of resource evaluation; implement programs prior to construction to support sustainable workforce development.
- Coordinate with internal and external stakeholders, and the development of flexible, transitioning, and exit strategies for each stage of the project cycle.
- Partner with national and local government, donors, and IFIs if companies do not have adequate experience designing and implementing local content programs in a development context.

## 2.2.2 Procurement

*Procurement* includes a range of core and non-core goods and services in an extractive industries project value chain that is required by the company, its contractors, and subcontractors. Though not a direct source of employment, well-structured procurement and expanded value chains provide significant opportunity to practice more *inclusive business* practices. Thus, with foresight, planning, and capacity building, a greater number of Mozambicans may be able to benefit from the extractive industries by gaining access to income generating opportunities. This section does not assert all extractive industry goods and services can and will be sourced locally. Several private sector capacity limitations in Mozambique make procurement of some core goods and services from local suppliers uneconomical. However, in addition to enhancing social license to operate, increased use of local sources – particularly for non-core goods and services – may increase reliability of supply and cost efficiencies due to closer proximity of operations to supplier structures.

***Inclusive business*** is the explicit targeting of middle to low income communities, potentially in addition to and/or to the detriment of pursuing more profitable markets, and incorporate these communities into their value chain as suppliers, clients, customers of entrepreneurs – rather than simply as passive beneficiaries and instances.

Procurement of core goods and services, such as fully assembled rigs, heavy machinery, and sophisticated monitoring equipment, have traditionally relied heavily upon imported equipment and production inputs. Large contracts and complex technology, quality, safety, human capital limitations, and reporting requirements often exclude local small and medium enterprises (SME) from competing for these bids. Shifting the sourcing of goods and services from global to local providers in the short to medium-term has the potential to increase project costs, delay schedules, and negatively affect commercial value. Nonetheless, several extractive industry companies have successfully expanded their pools of local suppliers. While the establishment of core local goods and service suppliers will require long-term investment, companies that design local content strategies that pursue non-core goods and service procurement from local suppliers, with a preference for local local suppliers, will in effect support broader impact in the community.

There are a number of challenges in procuring from local suppliers. In addition to building general business “best practices” (such as standardization of quality of products and delivery) which will be addressed in the strategic social investment section – SMEs in Mozambique experience a lack of access to capital at manageable interest rates, (see *Section 1.4: Creating Economic Linkages*). Interviews with various institutions in Mozambique revealed that efforts made by some IFIs to introduce credit opportunities outside of Maputo have resulted in access to capital, but at a very high premium, with interest rates sometimes exceeding 150%. To counter this negative externality, extractive companies, in support of local enterprise development, can provide letters of assurance to banks in order to enable their suppliers to borrow capital at lower interest rates that can finance their operations.

Given that strong relations are established with the supplier, extractive companies can also explore flexible pay cycles of less than the 90-day payment threshold. This mechanism would reduce fiscal pressure on smaller suppliers that are not yet linked into the global supply chain and subject to debt obligations without sufficient cash flow. This payment structure allows for flexibility on a case-by-case basis, while lowering the chances of local bankruptcy and supporting the positive impacts of local procurement.

Innovation of procurement contractual arrangements can provide greater access and participation in the extractive industries value chain by the Mozambican private sector. Unbundling contracts and evaluating progress at periodic milestones, before progressing with additional projects, can produce positive impacts in the local community by providing greater access to bidding opportunities. While this process may create a different level of complexity in the supply chain or increase risk exposure and cost, companies can also develop a procurement strategy that incentivizes international contractors to engage local suppliers in a way that supports upgrading skill and enhancing competitiveness. *See Section 2.3.1: Socio-Economic Overview in Mozambique.* Measuring the success of a local supplier using the same business metrics – such as quality, consistency, and efficiency – that a company uses for any other supplier will also support a local supplier’s ability to compete in external markets.

Extractive companies can also leverage partnerships with peer companies and other institutions (both government and non-government) to scale and sustain impact – particularly with respect to capacity building. Without the critical mass and potential sustainability that a group of companies can provide, many local content programs will not be viable beyond the life of the initial contract or have lasting income-generating effects beyond the life of the extractive project.

Finally, local content and procurement strategies that are aligned with community supply strengths offer significant opportunity to deliver broad positive impact in extractive industry communities. In Tete and Cabo Delgado, agriculture is the primary source of employment and livelihood. Although production levels are low, strategic social investment and procurement incentives that targets incorporation of local farmers into procurement of goods for catering services could help establish a stable market for local farmers. It should be noted that there are several potential negative externalities that could result from a well-intended but mismanaged initiative. Low agricultural production in Tete and Pemba, combined with inward migration, has led to high levels of inflation in food prices in these isolated regions. However, as illustrated in the case of Uganda below, a well-coordinated strategic social investment could produce positive socio-economic impact in neighboring communities of extractive industry operations (see *Section 2.3.1: Socio-Economic Overview in Mozambique*).

#### **Case Study: Tullow’s procurement strategy to procure from local agriculture**

Launched in 2012, the agricultural supply chain initiative aims to provide technical assistance to farmers in Western Uganda, Tullow’s area of operations, and link local, small and medium-scale farmers with buyers. The project also cooperates with the district farmer’s associations and Uganda’s National Agricultural Advisory Services (NAADS) technicians to leverage resources and maximize impact.

Western Uganda, where hydrocarbon exploration and production is underway, has immense agricultural potential. It is located four-to-eight hours from the capital and produces much of the nation’s food. However, due to challenges of economies of scale and poor market linkages between suppliers and buyers, food is purchased at the farm, transported to the capital and then inefficiently re-sold in Western Uganda. This increased the price of food for all parties and reduces the shelf life of the produce as the products spend significant time in transit.

Central to the agricultural supply chain initiative model is improving the consistency of farmer participant’s quality and quantity of produce. Therefore, rooted in the standards required for any market, farmers can compete and supply the catering companies contracted by Tullow as well as other businesses (such as hotels, restaurants, etc.) locally and in other markets nationally. The initiative also connects farmers in the district to improve economies of scale, thereby increasing reliability and

consistency of supply to buyers. Finally, the initiative provides a business skills and agricultural handling center where farmers can engage in transactions with buyers and learn tools to improve their business skills, along with other local entrepreneurs.

This initiative has resulted in a “win-win” situation for all stakeholders. Participant farmers develop a comparative advantage over regional farmers, receive a better price for their products, and develop the opportunity to supply to a consistent market – thereby reducing the risks of market instability and fluctuations in revenue generation. Buyers, such as Tullow’s catering companies and other local and regional businesses, receive produce that is fresher, lasts longer, and is purchased at a lower price than in the capital city. Additional savings is realized in reduced mobilizations costs. The community and Tullow also experience a mutually beneficial interaction that supports a strong social license to operate.

A targeted, well-structured procurement strategy that adapts to the characteristics unique to Mozambique, will enhance the social license to operate, create positive socio-economic impacts of extractive industry operations, and support Mozambique’s PARP goals. A well-designed strategy and its implementation can encourage companies to engage in early capacity building for potential suppliers through programs targeted at upgrading capabilities to meet company needs for reliable and skilled suppliers, and help local firms compete in local and national markets. However, as discussed below, capacity of human capital and the private sector must be developed to fully realize the potential of extractive industry FDI at the local level.

**Recommendation: 11**

- Partner with key contractors to share risks.
- Leverage partnerships with peer companies and other institutions to scale up impact.
- Pursue a higher level of complexity in the supply chain.
- Practice open-book approaches that allow primary contractors to cover additional costs related to contracting local suppliers (i.e. management and supervisory costs).
- Determine whether and how suppliers have met delivery milestones, and provide feedback to suppliers on successes and shortfalls, at each *decision gate* – before contracts on subsequent project steps are awarded.

**Decision gates** are major control points in a project that are used to move from one phase of the project to the next.

## 2.3 Building human capital and business capacity as a foundation for local content

*Mozambique needs educated and healthy citizens in order to boost agricultural output and productivity and to create more jobs. Access to quality health and education services as well as to social security programs that will protect the most vulnerable members of society is indispensable for a strong and well- trained labor force.*

Mozambique's Poverty Reduction Action Plan<sup>138</sup>

Mozambique has significant human capital and SME capacity limitations. Without structured, active investment, the ability for the local community to fully access and benefit income generating opportunities in the extractive industry value chain will remain limited.

Extractive industries, by their very nature, have medium to long-term time horizons – which often exceed many if not most other sectors. The industry does not have the luxury of mobility since operations are defined by mineral and energy deposits. While extractive companies may operate offshore, underground, and in emerging markets, they function most productively (like any private firm) in stable economic and political environments, with strong, uninterrupted supply chains, and with markets for both their inputs and products. Therefore, building human capital and expanding economic opportunity in host communities, countries, and regions can reduce risk, decrease costs of production, and increase profitability for extractive companies.

Human capital is vital to a vibrant, resilient local and national economy. Mozambique has a growing abundance of human resources that can be transformed into human capital with effective inputs in education, health, nutrition, and clean water (see *Section 1.4: Creating Economic Linkages*). Strategic social investment by companies, the government, and international institutions can yield high return on investment for extractive companies and boost the capacity of the national economy for the benefit of the country. Investing in sustainable initiatives that helps diversify the local economy not only creates income and employment opportunities outside of the extractive industry, but decreases dependence on the industry as the sole provider of livelihoods. Providing funding for initiatives without creating state dependency, as well as managing community expectations about wealth-sharing, is critical to maintaining the social license to operate.

Successful, sustainable strategic social investment strategies are in line with core business objectives and Mozambique's poverty reduction strategy. Sustainable investment by companies and government leverages the key strengths of the company and community that builds the capacity of local local SMEs and human capital through business development, education, health, and other services support local content. The sections below analyze the current limitations to socio-economic development in Tete and Cabo Delgado and recommend high impact areas of investment that are in line with extractive industry core business objectives.

### 2.3.1 Socio-Economic Overview in Mozambique

Poverty rates in Mozambique's rural areas are significantly higher compared to its urban areas. More than 70% of the country's poor households live in rural areas, surviving on less than US\$1 a day, and

lacking basic services such as access to clean water, to health facilities, and schools.<sup>139</sup> Although progress has been made since 1997, the number of poor people has been stagnant since 2007.

### Health

One hundred out of every 1,000 Mozambican children will die before their first birthday. Mozambique has only three doctors and 21 nurses per 100,000 people, reflecting one of the most dire health personnel shortages in the world.<sup>140</sup> About half of Mozambique's entire public health sector infrastructure was destroyed during the civil war and most has not been rebuilt. Currently, two thirds of rural Mozambicans have to walk more 15 kilometers (or more than an hour) to reach the closest health facility. Life expectancy at birth of 48 years remains below the sub-Saharan Africa average.<sup>141</sup>

Maternal mortality rates have fallen dramatically from 890 deaths out of 100,000 live births in 1995 to 550 in 2008. The prevalence of malnutrition among children under five years of age decreased from 28.1% in 1997 to 21.2% in 2003, bringing the mortality rate of this age group down to 141.9 deaths per 1000 in 2009.<sup>142</sup> While undernourishment fell to 38% from 2005 to 2007, this level remains extremely high and still places Mozambique among 12 countries classified as having "very high" undernourishment rates by the FAO.<sup>143</sup>

The prevalence of HIV/AIDS, affecting 12% of the population aged between 14 and 59 year, and malaria are major public health concerns that have powerful detrimental consequences on the country's development and human capital formation.<sup>144</sup>

### Infrastructure

Approximately 80% of existing health centers lack water or electricity. Only 31% of Mozambicans have access to improved sanitation, resulting in one of the lowest levels of per capita water consumption in the world.<sup>145</sup>

### Population

Mozambique has a high total fertility rate of 5.2 births per woman. The overall estimate masks important differences between urban and rural areas (where the fertility rate is probably over seven) and the nearly 45% of the population which is under the age of 15 years.<sup>146</sup> This high total fertility rate exacerbates other health risks.

### Education

Mozambique is slowly rebuilding its education system after the civil war that destroyed at least half of the country's primary schools and delayed modernization of the educational system. Rural learners must travel an average of 4.5 kilometers or more to the nearest school. Female literacy rates stand at 28%, lagging far behind those of males at 60% and more than a million school-age children do not regularly attend school. The adult literacy rate is at 55% - below the sub-Saharan Africa average.<sup>147</sup> To meet the increased demand for teachers, the Ministry of Education has resorted to using unqualified teachers – their numbers have risen from 30% in 1997 to 40% in 2005. *The HIV/AIDS pandemic has had a major impact on Mozambique's teaching cadre: an estimated 2,700 teachers lost their lives to HIV/AIDS between 2002 and 2006.*<sup>148</sup>

School drop-out rates remain high and rates of primary school completion are far below the regional average. Many teachers must work double or triple shifts each day to accommodate the number of

students – degrading the quality and education. Significant disparities remain in gender equity; currently less than a third of girls complete primary education, with 54% of female students dropping out by 5<sup>th</sup> grade.<sup>149</sup>

Very few Mozambicans enroll in universities and receive university degrees each year – creating only a small pool of locals to fill key technical and management positions in the government and private sector.<sup>150</sup> Altogether, Mozambique’s poor health and education systems help explain the country’s limited available human capital. These factors have prevented the local private sector from meeting stringent standards for extractive industry procurement and contracting.

### **2.3.2 Socio-Economic Overview in Tete and Cabo Delgado**

The regions of Tete and Cabo Delgado have similar hurdles that inhibit human capital and local private sector development. Communities throughout both regions rely primarily on subsistence agriculture for livelihoods. Poor market linkages and low access to credit, technology, and improved farming practices act as disincentives to produce higher yields.

Poverty is caused by isolation, inadequate infrastructure and the consequent lack of access to goods and services – particularly social services. The road network is in very poor condition and basic services are inadequate. Alternative sources of income outside agriculture are very few, and this increases the vulnerability of the rural poor to natural disasters. In times of scarcity most rural Mozambicans have little to buffer food insecurity. Significant challenges to developing human capital in both Tete and Cabo Delgado are illustrated in the high illiteracy rates of 56.2% and 66.6% (respectively) – which far exceed the national average of 43.9% (see *Section 1.4: Creating Economic Linkages*).

### **2.3.3 Strategic Social Investment for a Brighter Future**

Mozambique has been one of the fastest-growing least developed countries (LDCs) over the past two decades. Nevertheless, Mozambique still remains one of the poorest countries in the world. Building human capital and private sector capacity is essential for long-term national economic development and poverty reduction – as outlined in PARP. Extractive companies do not function in isolation from the societies and communities in which they operate. Furthermore, whether to deliver local benefits in the communities where extractives companies operate is no longer a choice.

As illustrated above, education in Mozambique has been insufficient to create a pool of skilled workers to meet growing demand. In a 2008 survey of enterprises, the low level of education among workers was identified as a major obstacle to conducting business in Mozambique.<sup>151</sup> Approximately one quarter of foreign and export-oriented firms cited this issue as a major constraint.<sup>152</sup> See *Section 1.4: Creating Economic Linkages*. As a result, skilled foreign workers are in high demand and investors tend to negotiate ways to be able to hire foreigners above the set quotas.

Strategic social investment can provide complimentary benefits that support the development of local content. Strategic social investment benefits both the investor (i.e. government, company, and/or international organization) and community. Improved human capital may reduce operation costs in the medium-term by reducing training costs and decreasing necessary investments in healthcare because healthy workers typically require less medical assistance. In addition to supporting PARP and a company’s social license to operate, investments in education (training and traditional) allow for local

hire – which in the long-run is cheaper than importing foreign workers.

Some efforts are underway in Tete and Maputo to increase education and training of Mozambicans in extractive industry skills (as mentioned in *Section 2.2.1: Employment*). However, given the limited number of educated Mozambicans in Tete and Cabo Delgado, it is questionable whether the local content training programs planned or underway are maximizing the human capital development opportunity at hand. Anadarko has also made very modest investments in healthcare by bringing periodic visits of pediatricians to Pemba. This is a minor, non-sustainable investment made by one of many companies operating in the area. Should strategies and agendas be aligned, the potential impact of these initiatives could be magnified.

Extractive companies can have greater impact when they develop inclusive business models that integrate local SMEs into their value chains, thus creating indirect employment and fostering the development of local entrepreneurs. To support the procurement process, Rio Tinto has also opened a business center in Tete where businesses can learn more about how to bid for procurement contracts. The company has experienced some successes with this project and hopes to increase the number of firms capable of bidding for contracts.

Given that the majority of local community members derive their livelihood from agriculture, there is significant potential to support agricultural business development. By investing in agricultural activities that focus on increasing production, managing land responsibly, developing quality and consistency standards, and training improved farming techniques, investors effectively support PARP objectives and socio-economic development for the local local population. Increased local agricultural production will also mitigate inflationary pressures on food prices. Extractive companies and their catering subcontractors also have the option to act as a buyer of local produce, thereby reducing mobilization costs. Reliable markets will also produce steady streams of income for farmers and dampen volatility in seasonality of sales.

Mozambique is also located in an ideal location, at a crossroads to several regional markets. Given economies of scale can be reached amongst local producers, with logistical support of stakeholders and local partners – it is reasonable for farmers in Cabo Delgado and Tete to sell their goods to external markets.

#### **Case Study: Botswana's use of revenue from diamond industry to develop national human capital**

Upon achieving independence in 1966, Botswana was one of the poorest, most aid dependent nations in the world. After thirty years of fiscal responsibility, Botswana has risen to a middle income country and is among the highest development indicators in Africa (see **Figure 21**).

The mining sector employed only a small portion of labor force. The company, Debswana, made modest contributions per year that combined with annual revenue from the extractive industry, transitioned the country away from aid dependence and towards self-sufficiency. As illustrated in the chart below, investment of public funds in the development of *human capital* resulted in a strong, competitive workforce.<sup>153</sup>

**Figure 21: Botswana - Diamonds, Revenues and Social Development**

	1966	1990	2006
<b>Economy</b>			
GDP	\$30m	\$3,000m	\$11,000m
GDP per capita	\$85	\$2,742	\$5,920
<b>Budget</b>			
National Budget	\$3m	\$1,600m	\$4,400m
Donor % Budget	60%	14%	3%
Diamond % Budget	0%	60%	50%
<b>Social Investment</b>			
Health (% of budget)		4%	16%
Education (% of budget)	15%	17%	21%
<b>Social Development</b>			
Poverty		52%	30%
Infant Mortality	95	56	80 <sup>(HIV)</sup>
Literacy	30%	67%	89%

Source 1: Hubert, *Resources, Revenues, and Social Development: Prospects and Challenges for the Extractive Sector in Mozambique*.

#### Recommendation 12 :

- Engage with local communities very early in the project cycle to identify community needs, shortcomings, and strengths.
- Align community strengths with private sector demands – build capacity where possible (and needed).
- Pursue a higher level of complexity in the supply chain.
- Leverage/pool resources amongst stakeholders.
- Engage international organizations to leverage expertise when designing and implementing capacity building initiatives.

#### 2.3.4 Areas of Concern

Mozambique's significant natural gas and coal reserve discoveries have given rise to very high and often unrealistic expectations of development benefits. As a large number of major multinational energy and mining companies continue to make their presence felt in Mozambique, they are finding challenges to the long-term sustainability of their operations in local communities. Extractive companies are subject

to public opinion and activism driven by perceived and actual imbalances in the distribution of benefits from resource extraction. Grievances can be expressed through strikes, protests, and the occupation and destruction of property. Instances of social unrest have already been documented on several occasions in Tete regarding resettlement and compensation (see *Section 5.1: Resettlement Resulting from Extractive Activities*). Thus, limited understanding of both benefit constraints as well as disruptive impacts of the sector require structured and consistent engagement to manage expectations – particularly among local communities. The sub-sections below highlight the most likely areas of social impact that has or could result in social unrest in Tete and Cabo Delgado, aside from issues arising from resettlement.

#### *Inward Migration:*

The arrival of multinational extractive companies in Mozambique brings the promise of much-needed jobs and the perception of improved livelihoods through other income generating opportunities. Mozambique's high unemployment rate and limited human capital encourages inward migration to extractive industry projects because much of the industry demand can not be supplied by the "local local" population. While massive rates of inward migration to Tete are undisputed, there is no official monitoring of the rate of population change. In Pemba, the capital city of Cabo Delgado Province, it is widely held that the population has doubled from the beginning of 2012-2013. As coal and natural gas production ramps up, and the construction of the railroad out of Tete and the LNG plant in Palma is completed, it is very likely the populations in these regions will continue to experience continuous, significant expansion.

As migration of international foreigners and Mozambicans from the capital and regional areas increases, the local local population impacted by mining and hydrocarbon operations will increasingly experience significant social, resource, and financial stress. Demand of social services and resources already exceed the absorption capacity of the community. Should monitoring, engagement, and timely mitigation responses not be taken to manage the likely externalities listed below, negative impacts on human capital and social and financial development of the community will occur.

#### *Inflation of local food prices:*

Rapid inflation of food prices is a significant problem in both Tete and Cabo Delgado. In Pemba, 1kg of tomatoes costs approximately 160-200 meticals (USD\$5-7) in the market.<sup>154</sup> High inward migration has resulted in increasing demand that exceeds supply. Poor quality infrastructure limits market linkages, restricting regional producers and suppliers – resulting in both missed market opportunity and potential food price inflation mitigating activity. The unchecked purchasing practices of service companies that supply catering to the extractive companies has also contributed to establishing a "buyers market" which has caused an upward pressure on food prices.

*"Price stability is particularly important to poor people, for whom food is the most important component of their expenditure."<sup>155</sup>*

#### *Poverty Reduction Action Plan*

In developing countries, daily energy intake for vulnerable populations is often comprised of food baskets consisting of very few food items.<sup>156</sup> Minimal increases in staple food prices can magnify impacts on household purchasing power and overall food consumption. Lack of food has historically been closely associated with social unrest and conflict.<sup>157</sup> The price of food is a delicate issue in Mozambique and

intrinsically linked to socio-political instability. During the food price spikes in 2008, riots broke out in Mozambique and 48 countries.<sup>158</sup> In 2010, food riots left over six people dead and 400 people injured when the government tried to increase the price of bread by 30%.<sup>159</sup> The state's limited capacity to respond to more systemic, complex problems like food insecurity is apparent in rural areas that are geographically further from government purview and tend to be poorer and more dependent on agriculture for both food and livelihoods.<sup>160</sup> Thus, the growing challenges to ensuring food security creates high risks of civil unrest in Tete and Cabo Delgado.

#### *Additional human capital, environmental, infrastructural, and economic impacts:*

There are a host of potentially detrimental negative externalities that may transpire in Tete and Cabo Delgado. As common to "boom town" effects in other extractive industry sites, as populations swell and low access to health services prevail, high risk behavior and employment (such as prostitution) can increase the transmission rate of HIV/AIDS and other sexually transmitted diseases. Concern is already being voiced in Tete where prevalence is suspected to be increasing.

In Cabo Delgado rapidly increasing demand on fisheries, in addition to expected impact exploration and production operations may have on fishers, could outstrip restock rates. Given fisheries is a primary form of livelihood, as well as critical source of nutrition and protein, a reduction in sources of key livelihoods and protein will likely negatively impact human capital development. In both Cabo Delgado and Tete, inward migration, increased stress on the environment, and changes in land tenure practices may result in severe land degradation. Overall, increased and visible income disparity can have major repercussions for social relations in and between communities.

### **2.3.5 Conclusion**

When regulated and implemented as part of a structured national development strategy, extractive industry FDI can contribute to poverty reduction and prosperity at the national and local levels in developing countries. Communities are highly exposed to the positive and/or negative externalities that result from an extractive industry project. While employment and some social services are made available to a limited percentage of the community that is employed by the company or its contractors, the repercussions of extractive industry activities and externalities must be monitored, communicated, and mitigated. Therefore, extractive industry FDI that does not manage community expectations and translate positive microeconomic impacts at the local level can decrease local economic growth, increase food prices, magnify food insecurity and exacerbate the weaknesses of fragile communities.

## Notes to Section 2

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<sup>126</sup> *United Nations Conference on Trade and Development: Mozambique Investment Policy Review* (United Nations, 2012).

<sup>127</sup> *Ibid.*

<sup>128</sup> *Ibid.*

<sup>129</sup> *Ibid.*

<sup>130</sup> One example is a survey conducted by Barrick Gold from 2006-2007. Entry-level wages offered in South America is between 130% and 215%, significantly higher than the minimum wages offered in the country. See *(Increasing Local Procurement by the Mining Industry in West Africa* (World Bank, January 2012).

<sup>131</sup> *Increasing Local Procurement by the Mining Industry in West Africa* (World Bank, January 2012).

<sup>132</sup> Dr. Don Hubert, *Resources, Revenues, and Social Development: Prospects and Challenges for the Extractive Sector in Mozambique* (UNICEF Mozambique, September 2012).

<sup>133</sup> *Ibid.*

<sup>134</sup> *Republic of Mozambique Poverty Reduction Action Plan: PARP 2010-2014* (International Monetary Fund, May 3, 2011).

<sup>135</sup> *Ibid.*

<sup>136</sup> Michael Hackenbruch and Jessica Davis Pluess, *Commercial Value from Sustainable Local Benefits in the Extractive Industries: Local Content* (BSR, March 2011).

<sup>137</sup> *Local Content Strategy* (IPIECA, 2011).

<sup>138</sup> *Republic of Mozambique Poverty Reduction Action Plan: PARP 2010-2014.*

<sup>139</sup> *Enabling Poor Rural People to Overcome Poverty in Mozambique* (IFAD, February 2012).

<sup>140</sup> *Mozambique: Country Assistance Strategy 2009-2014* (USAID, 2009).

<sup>141</sup> *Enabling Poor Rural People to Overcome Poverty in Mozambique.*

<sup>142</sup> *Mozambique: Country Assistance Strategy 2009-2014.*

<sup>143</sup> *United Nations Conference on Trade and Development: Mozambique Investment Policy Review.*

<sup>144</sup> *Ibid.*

<sup>145</sup> *Ibid.*

<sup>146</sup> *Ibid.*

<sup>147</sup> *Ibid.*

<sup>148</sup> *Ibid.*

<sup>149</sup> *Mozambique: Country Assistance Strategy 2009-2014.*

<sup>150</sup> *Ibid.*

<sup>151</sup> *United Nations Conference on Trade and Development: Mozambique Investment Policy Review.*

<sup>152</sup> *Ibid.*

<sup>153</sup> Hubert, *Resources, Revenues, and Social Development: Prospects and Challenges for the Extractive Sector in Mozambique.*

<sup>154</sup> As of March 2013

<sup>155</sup> *Republic of Mozambique Poverty Reduction Action Plan: PARP 2010-2014.*

<sup>156</sup> World Food Program, "The Market Monitor: Trends and Impacts of Staple Food Prices in Vulnerable Countries" no. 16 (July 2012).

<sup>157</sup> *Food Security and Conflict* (World Bank, October 2010), available at: <http://www.indiaenvironmentportal.org.in/files/food%20security%20and%20conflict.pdf>.

<sup>158</sup> Henk-Jan Brinkman and Cullen S. Hendrix, *Food Insecurity and Violent Conflict: Causes, Consequences, and Addressing the Challenges* (World Food Program, July 2011), available at: <http://documents.wfp.org/stellent/groups/public/documents/newsroom/wfp238358.pdf>.

<sup>159</sup> "The Angry Poor," *The Economist* (September 9, 2010), available at:

<http://www.economist.com/node/16996835>.

<sup>160</sup> *Food Security and Conflict.*

### 3 The Need for Inclusive Infrastructure

Striking rates of underdevelopment in Mozambique are necessarily correlated to infrastructure. Indeed, Mozambique's 185<sup>th</sup> position in the HDI ranking might reveal neglect in implementing infrastructure that is responsive to the social and development needs of the country.<sup>161</sup> Certainly, despite the improvement of development indicators in recent years, 54% of Mozambicans still live under the income poverty threshold<sup>162</sup>. Yet many individuals living even *above* the income poverty line also lack basic infrastructure services. This is illustrated by the UNDP's multidimensional poverty index, at the 75% rate.<sup>163</sup>

UN-HABITAT has conducted extensive research on the impact that infrastructure has on poverty, and social and economic development.

INFRASTRUCTURE FOR ECONOMIC DEVELOPMENT AND POVERTY REDUCTION IN AFRICA  
UN-HABITAT The Global Urban Economic Dialogue, 2011

Infrastructure matters for social and economic development:

***At the Macro Level***

There is extensive research showing that the quantity and quality of infrastructure positively affects national income growth. The same shows that if all African countries upgraded their stocks at the levels of the continent's best performer – Mauritius – national GDPs would increase by 2.2% annually, on average.

***At the Micro Level***

Road implementation leads to decreases in poverty because it generates income by reducing access times. Indeed, rural roads connect otherwise isolated communities with schools, health facilities and economic clusters, while they link consumers, suppliers and markets, boosting the potential for agriculture production beyond subsistence. The provision of water and sanitation infrastructure is correlated with higher levels of health, which in turn reduce schooling and job absenteeism, contributing to improve the education and production levels, respectively. Likewise, having access to grid or renewable-source electricity reduces the need for burning charcoal and wood and therefore, the likelihood of contracting respiratory diseases. Besides, the availability of reliable electricity permits health centers to deliver a higher-quality healthcare, while it provides an opportunity for the local private sector to emerge and develop, and to produce efficiently<sup>164</sup>.

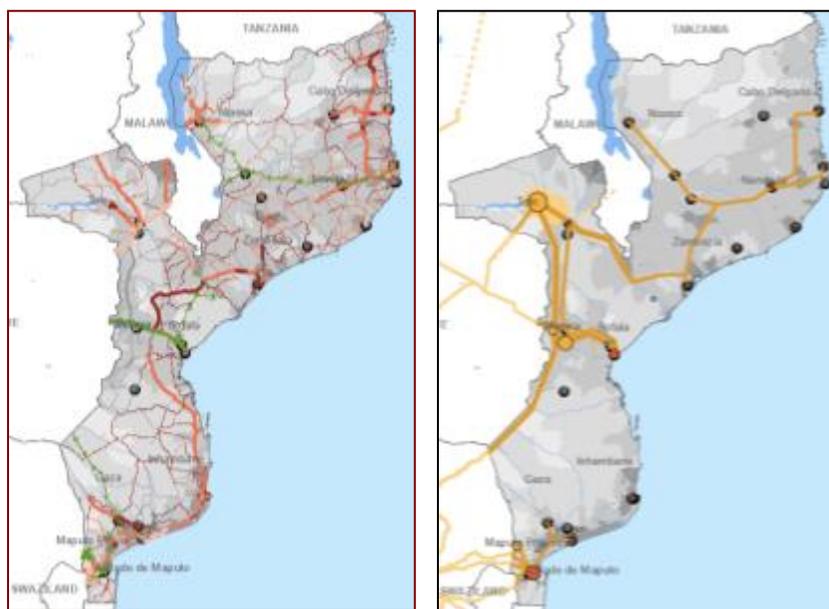
In Mozambique, recent public, private and donor investment in infrastructure has been intended to facilitate the trade derived from mega projects. These investments may represent either an extension of the status quo or an unparalleled opportunity to build an infrastructure system that fosters inclusive social development. The following discussion presents that the Government can take advantage of the international willingness to invest and orient economic resources to address infrastructure-related impellers of development. Ensuring inclusiveness, through both connection and universal access to infrastructure, must be at the heart of this endeavor.

As it aims to explore the challenges, impacts and opportunities of the extractive industries in Mozambique, this report does not directly address the lack of *social infrastructure*;<sup>165</sup> rather, it argues that the implementation of a more socially oriented *civil infrastructure* can significantly contribute to improving the current indicators of underdevelopment.

### 3.1 Infrastructure Endowment

Honored with an advantaged geographic location, Mozambique represents a natural pathway to the ocean for its six neighbors. Traversing its territory is practically the only way through for the imports and exports of the four landlocked countries bordering Mozambique – Malawi, Zimbabwe, Zambia and Swaziland. Consequently, infrastructure has been traditionally developed by linking the Indian Ocean with these nations through multimodal clusters, as illustrated in Figure 22 below. The central transport corridor connects the Port of Beira with Zimbabwe, Malawi and Zambia, whereas the Port of Maputo is linked with South Africa, Swaziland and Zimbabwe through the southern transport network.<sup>166</sup> Likewise, power infrastructure development has either concentrated in the biggest cities, followed the alignment of the transport corridors, or has been developed to serve other countries.

Figure 22 Transport (left) and Power (right) Infrastructure in Mozambique<sup>167</sup>



Source: AICD, Interactive Infrastructure Atlas for Mozambique (2011)

#### Roads

Mozambique has only 32,500 km of roads.<sup>168</sup> Compared with countries of similar shapes and land surfaces, Namibia has double this amount, and Chile has more than double. South Africa, a country one and a half times larger than Mozambique, has a road network more than 11 times greater. Yet, at only around 20%, both countries have a very low rate of paved roads in comparison to middle and higher income countries with similar geographic features. For example, Turkey, a country having the same size of Mozambique, has almost 90% of its network

paved.<sup>169</sup>

As per ownership, the entire network used to be managed by Administração Nacional de Estradas (“ANE”). It is only in recent years that the national entity has begun to award concession contracts with the objective to improve road management. The case of Tete province deserves special mention: in addition to the 700 km conceded to a private operator in 2010, ANE has recently launched the tender for another 2,000 km, also under a Public Private Partnership (“PPP”) framework. Both investments are expected to support the development around the mining industries in the northwest region.<sup>170</sup>

### Railways

Mozambique’s railway network of 4,787 km<sup>171</sup> is comprised of several lines structured around three disconnected corridors, linking Indian Ocean ports with bordering countries. The Nacala Corridor in the North comprises the port in Nacala and the railroad that connects with Malawi’s railway. In the central region, the Beira Corridor includes Beira Port, the Machipanda line to Harare, Zimbabwe, and the Sena Line to the coalfields of Moatize. In the South, Maputo’s Corridor comprises the port and four lines, Ressano Garcia to South Africa, Limpopo to Zimbabwe, and Goba to Swaziland, and Salamanga branch.<sup>172</sup>

A political bulletin released in February 2013 summarized the current and future projects to extend Mozambique’s railway network, and the international extractive companies linked to those projects.

MOZAMBIQUE POLITICAL PROCESS BULLETIN  
Joseph Hanlon, Thomas Selemane, February 15<sup>th</sup> 2013

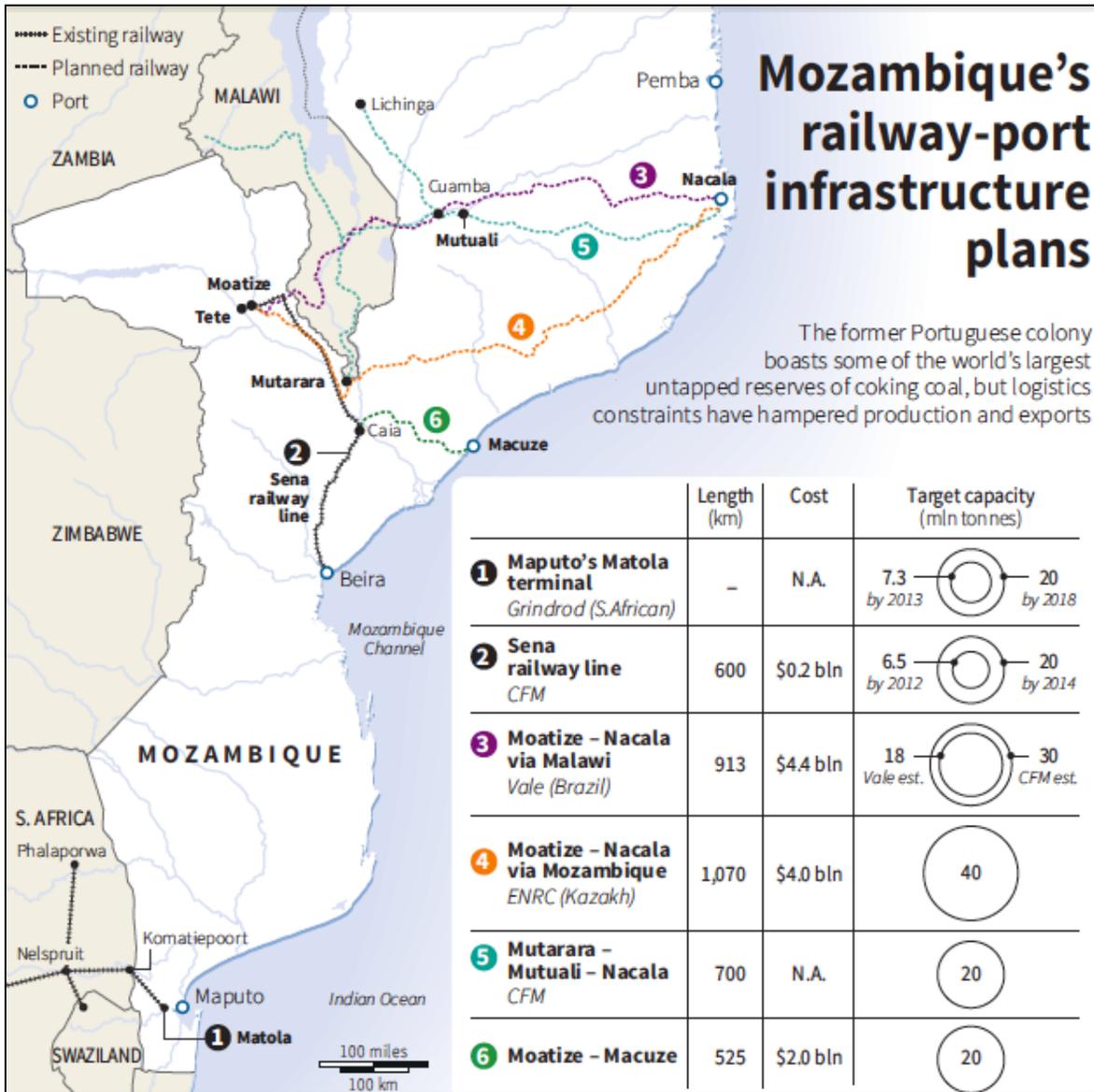
In order to respond to their export needs, major coal miners are interested in extending the rail systems in Mozambique under PPP models. See **Figure 23** below:

**VALE:** the Brazilian company is already building the Malawian branch of the rehabilitated line that will connect Tete and Nacala.

**ENRC:** the Kazakh firm proposed an analogous line, yet entirely in Mozambican territory.

**RIO TINTO:** the Anglo-Australian firm has recently qualified as preferred bidder to build a new rail line from Tete to Macuse, where a new port will also be constructed.<sup>173</sup>

Figure 23: Mozambique’s Railway-Port Infrastructure Plans<sup>174</sup>



Source: Reuters, (2013).

CFM is the publicly owned enterprise responsible for the ports and railways in Mozambique. After a recent restructuring, the company owns 100% of the Maputo railway system, the cereal and aluminum terminals in Maputo port and the fuel terminals in all ports. The remaining port operations and the North and Central railway corridors are in theory managed along with private partners under concession contracts granted by CFM.<sup>175</sup> However, CFM has also operated the Sena line on its own since 2010, after the contract with the Indian company RICON

was terminated due to delays in the reconstruction works.<sup>176</sup> Additionally, CFM recently announced its intention to hire an independent railway operator in 2013 to manage railway lines in Mozambique, whereas the pricing and access policies will remain the responsibility of a national regulating enterprise.<sup>177</sup>

### **Energy and Electricity**

Mozambique's energy supply is mainly composed of biomass at 78%, followed by hydropower at 14%,<sup>178</sup> while natural gas, petroleum and coal make up the remaining 8%.<sup>179</sup> This energy supply is derived from both domestic and international sources. However, a significant amount of the energy that is produced in Mozambique is actually exported.

With abundant renewable resources, all the energy that is produced in Mozambique is clean, with 88% hydropower and 12% solar energy.<sup>180</sup> Hydropower is generated in six dams<sup>181</sup> that, together, amount to an installed capacity of 2,184 MW.<sup>182</sup> Cahora Bassa is the biggest in the country and the largest regional generator, producing more than 16,000 GWh annually, out of which more than 90% is exported to South Africa, and to a lesser extent to Zimbabwe. Interestingly, 30% of that amount is re-imported to Mozambique through South African transmission lines and entirely consumed by the Mozal aluminum smelter.<sup>183</sup> Mphanda Nkuwa, a dam being built downstream Cahora Bassa, is expected to add 8,600 GWh every year, on average.<sup>184</sup>

Electricidade de Moçambique ("EDM") is the national entity responsible for the generation, transmission and sale of the electricity produced in all hydro plants but Cahora Bassa, which is owned by another public company – Hidroeletrica de Cahora Bassa ("HCB"). Yet, as the Mphanda Nkuwa ownership structure shows,<sup>185</sup> the sector permits private engagement through governmental concessions.<sup>186</sup>

## **3.2 Foreign Investment to Develop Railways for All**

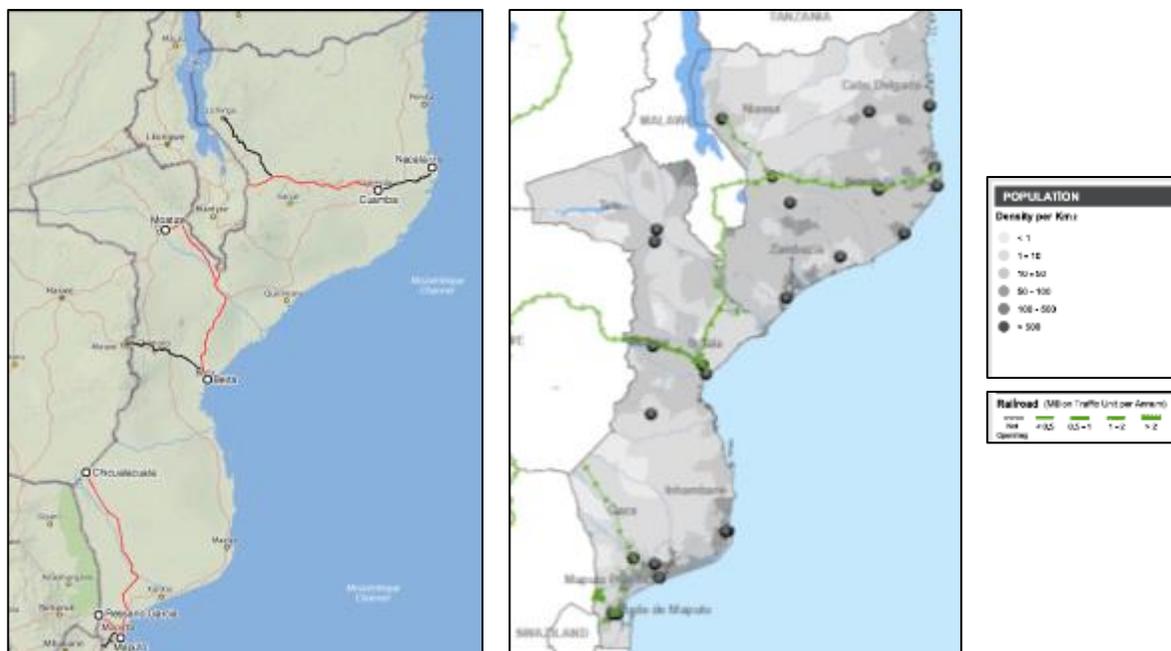
Despite the efforts of the government to improve railway services in Mozambique by opening the system to private participation, the capacity and the quality of both infrastructure and rolling stock remain very low. This has translated into unreliable operations that hamper the strategic potential of Mozambican railways. In fact, the World Bank has reported that decreases in passengers and cargo in 2008 reached 60% and 10%, respectively, relative to figures from 2005.<sup>187</sup>

As in other Sub Saharan countries, the low level of income of Mozambicans lead many to think that passenger services are *highly unprofitable*, and indeed, its user fees are subsidized at an 85% level.<sup>188</sup> This may help explain why, as shown in Figure 2 below, only five railway services carry passengers – as indicated by the red lines of the map on the left. However, unprofitability could be due to many other factors, including the poor condition of the facilities, low accessibility to the system, and an insufficient number of stations. Indeed, the fact that trains are overloaded where passenger services are offered seems to suggest that more users would pay a train fee if they were given the possibility. Moreover, railways are so far the preferred means of transport by Mozambicans, as alternatives such as public buses are rare and expensive.

On the other hand, not only would demand increase by facilitating the access to regular

passengers, but greater accessibility to the system would also likely boost small and medium scale production of goods, which in turn would increase the profitability of the railways. As mentioned in the linkages part of this report (see *Section 1.4: Creating Economic Linkages*), there are many regions in Mozambique with great potential for production where farmers currently produce at subsistence levels because they lack the infrastructure to market their products. Interestingly, many of these areas are relatively close to an existing rail corridor. Examples can be found in Niassa, Nampula, and Beira, among others.

**Figure 24: Railways in Mozambique, Passenger and Cargo Services**



Sources: Sharemap (2012) and AICD's Interactive Infrastructure Atlas for Mozambique (2011)

Unfortunately, this uncertainty over latent demand<sup>189</sup> for railways – from the perspective of both regular users and SMEs – means it would be difficult to justify public investment in new railway infrastructure to serve such a potential market. Yet, ensuring greater accessibility to existing services and to new projects would not significantly increase the investment cost of the railways, and it would provide Mozambicans with an opportunity to develop businesses and improve livelihoods.

**Recommendation 13:** The Government of Mozambique must ensure that, wherever possible, services in the existing and projected railways are accessible for passengers and for enterprises other than mining companies. The Government should also undertake studies to determine the most convenient location of train stops, taking into account the potential for local trade and connection with roads that link hinterland with the railways.

### *Vale's New Nacala Corridor*

In July 2012 the CLIN, a consortium formed by the Brazilian company Vale (80%) and CFM (20%), was awarded the contract to upgrade 682 km of the old corridor and build 230 km in new

branches from Cuamba to Malawi's southeastern border and from Moatize to Malawi's southwestern border. Additionally, Vale had already been granted a contract with the Malawian Government to build 136 km of new railway infrastructure and rehabilitate an existing 99 km branch within that country. The concession by the Mozambican Government grants Vale the construction and operation of the entire infrastructure, including the new port in Nacala, while it compels the company to cede a 5% of its share to Mozambican citizens and enterprises, once the construction is completed.<sup>190</sup> Furthermore, the contract foresees that in the future CFM will gradually increase its participation up to 50%.<sup>191</sup> While little information has been disclosed on the economic details of the contract, the terms with the Mozambican Government could be similar to those signed in Malawi, where the government is expected to receive US\$ 8 billion in concession fees annually.<sup>192</sup>

Once the new system starts operations, it is expected to transport coal, general freight and passengers. In fact, although Vale will increase its mining capacity up to 22 million tons per year in the next decade, the railway project will be designed to move around 30 million tons annually.<sup>193</sup> By comparison, the current system from Cuamba to Nacala<sup>194</sup> transports 200,000 tons of general freight and some 700,000 passengers every year. Thus, there is a large margin to increase both passenger and cargo other than coal in the rehabilitated system. The locations of stations and crossings with rural roads and the main road network have to be carefully taken into account so as to maximize the benefit of the railway at the local level.<sup>195</sup>

**Recommendation 14:** The Government must ensure that the alignment of the new Nacala railway supports the current commercial dynamics around the corridor, by linking with the rural and general road network to productive areas in Nampula and neighboring Niassa and Cabo Delgado.

**Recommendation 15:** The Government must ensure that at least general freight transport is granted to and from Nacala port, in order to extend the market for local businesses, and decrease their total transport costs.

**Recommendation 16:** Once connection is granted, access must also be ensured. The Government must negotiate payment mechanisms with the concessionaire to make sure that the user fees charged to passengers and local traders willing to use the train are affordable for the income levels of the area. These mechanisms must be set out and guaranteed in the operations contract. As part of the consortium, CFM is expected to earn profits from operations. This flow of revenue could serve to partially subsidize the fees for passengers and low-income level farmers in the first years of operations.

### *A New Railway to Macuse*

In late 2012 CFM launched a tender for the project involving the construction and operations of a new port in Macuse – located in northern Quelimane in Zambezia province – and a new 525-km railway from Tete to Macuse. This project, estimated at US\$ 3 billion, is intended to increase

the coal export capacity of Mozambican railways by 20 million tons annually, while it will likely provide Rio Tinto's operations in Tete with a transport route for its product that is much more reliable than the current one through the Sena line.<sup>196</sup>

Although at the date of this report, details regarding the design, construction and operations of the railway are unknown, a contractual structure similar to Nacala's upgrade project is expected. If so, a consortium will be formed to design, finance and build the infrastructure, partnering with CFM, in exchange for obtaining the profits during the operations period, extended over several decades.

It is very common that when talking about infrastructure needs in Africa the focus is set on the need to *maintain* what is already in place or the need to implement *basic* civil infrastructure.<sup>197</sup> Yet, the companies willing to engage in concession partnerships in Mozambique have both sufficient financial backing and broad knowledge as to implement modern durable systems. The Government must demand the highest standards of efficient, current infrastructure. Anything less will amount to condemning the national railways to permanent obsolescence.

**Recommendation 17:** Given that infrastructure concessions usually have a term of several decades, the Government of Mozambique must compel the concessionaire to implement a modern system at the levels of the best European or Asian railways. This means constructing a state-of-the-art infrastructure and purchasing the latest rolling stock technology.

A new port certainly has the potential to boost the local economy as well as to increase its population, as the need for labor force in port operations and other related activities in Macuse grows. More importantly, the new railway has the potential to increase the economy at the provincial level as it traverses Zambezia, the most populated province of Mozambique. Indeed, providing a broader population with a wider range of opportunities would have significant microeconomic and social development outcomes. The new railway to Macuse could even signify a means of daily transport for workers to new growth poles, which is already occurring with the train services arriving at full capacity to Maputo every day. However, mining companies usually prefer *dedicated* systems to move their coal, as these operations are simpler, do not require intermediate stops, and a fixed amount of profits is guaranteed.

**Recommendation 18:** Demand-side studies should be conducted, including hypotheses for the development of the new corridor and neighboring lands over the next decades. These studies may be used as a basis for the Government to negotiate with the concessionaire on different operational models that ensure access to the system for passengers and SMEs, at user fees affordable for the income levels of the area. The studies may also be crucial in deciding the most economically and socially convenient location for train stops, as well as the number of stations.

A handful of projects around the world show different options to operate railway systems that transport not only extracted natural resources but also general freight and passengers.

### Examples of Mixed Railway Operations From Brazil and Australia

In **Brazil**, Vale is the only operator of both freight and passenger services in its 2 railway lines. The 905-km EFVM connects the mines in the state of Minas Gerais with the state of Espírito Santo, in the Atlantic coast. It carries people and cargo – Vale’s iron extractions, and general freight and agricultural products for others. The passenger service, used by some 1 million Brazilians annually, is the only one offered in Brazil daily, and runs on 664 km between the capital cities of both states during a 13-hour trip. The 892-km EFC connects the mines in Pará with Ponta Madeira, in the coast of Maranhão, hauling manganese, iron, coal, copper and fuels. The train, which passes through 25 municipalities, also moves 350 thousand people annually, offering six services per week. Aside from being significantly cheaper than the public buses, the railway represents the only means of transport during the rainy season, when the road traffic is cut off.<sup>198</sup>

In **Australia’s** Hunter Valley, HVCC – the world’s largest coal operation scheme – uses a rail infrastructure managed by the state-owned ARTC. However, the access to the track is open to any rail operator willing to use it for cargo or passenger transport. Today, the private Pacific National, and the public QRNational operate independently hauling agricultural and industrial products as well as coal and other freight, while the public CityRail offers passenger services in some parts of the track. The trains in the main corridor or the system are constrained to move along *train paths* within a track section and a timeframe pre-agreed by the operators.<sup>199</sup>

#### *Sena Line*

To date, all the mining companies in Tete haul their coal through the Sena line, the 600-km railroad that runs to the port in Beira. This line had been awarded under a concessional model, but the government terminated the contract in 2011 after a series of delays with the much-needed rehabilitation of the infrastructure. CFM then took responsibility for the line, but operations have often been unreliable. In early 2013, for example, a derailment caused the suspension of the service for two weeks. Vale failed to export some 250,000 tons of coal alleging force majeure while Rio Tinto had to stop producing. Contractors are now undertaking rehabilitation of the line, after which the transport capacity is expected to rise from 3 to 20 million tons annually.<sup>200</sup>

The mining company Beacon Hill – owner of Minas Moatize Limitada (“MML”) – announced in February 2013 that they had recently appointed a railway operator to transport their coal. The appointment represented a crucial step toward obtaining permission to operate Beacon Hill’s own railways in the Sena line, which they expect to begin by the third quarter of 2013.<sup>201</sup> This illustrates that CFM may be willing to have a track open to different rolling stock operators.

As highlighted in *Section 1.4: Creating Economic Linkages*, the lands surrounding the Sena line constitute one of the most productive agricultural areas of Mozambique. Efforts are already being undertaken between the Government, non-profits and private partners to boost agricultural potential in the region. In 2010, the Beira Agricultural Growth Corridor (“BAGC”) initiative was launched *to stimulate and significantly increase production and farmers’ income through sustainable private investment*.<sup>202</sup> Under this scheme, Rio Tinto signed an agreement with the agricultural non-profit AgDevCo to research the possibility of producing food goods along the Beira corridor and supplying them to local communities and mining businesses in Tete.

Such a scheme would be a significant improvement over the current model where foreign companies are compelled to import food, as local suppliers are not capable of supplying the qualities and quantities needed *at a competitive price*.<sup>203</sup>

**Recommendation 19:** While a number of private operators are transporting their coal from Tete to Beira, an additional operator such as CFM needs to continue offering services for passengers and other freight. The Government should ensure that the rail line constitutes a reliable connection between the potential agricultural production areas along the Beira corridor, and the industries in Tete, thus providing the means for its “*growth poles*” strategy (discussed further below) to function.

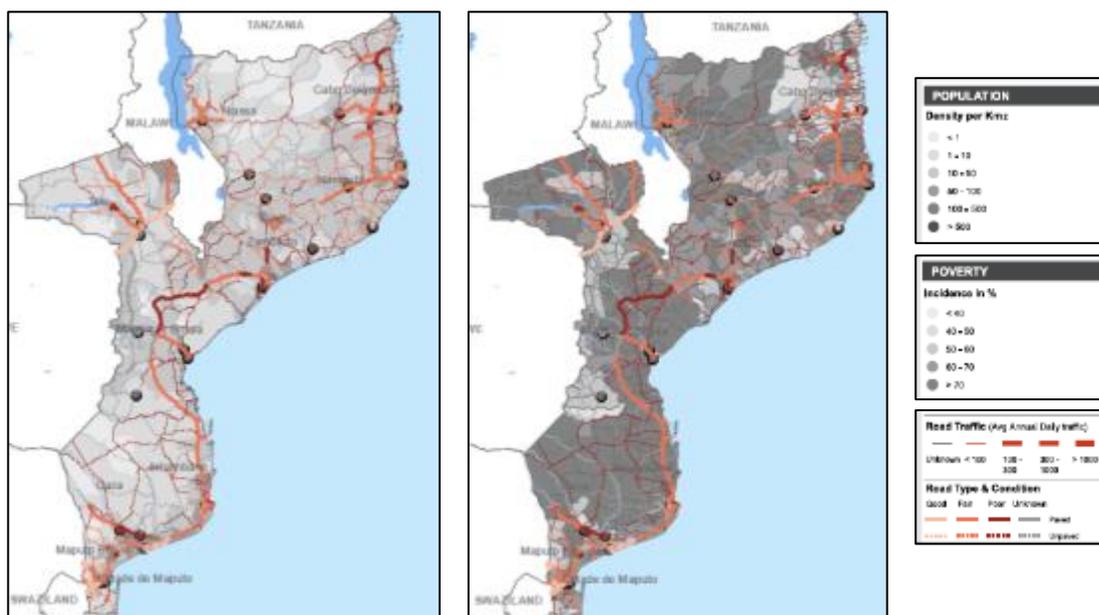
### 3.3 Roads that Fight Inequality

#### *More roads are needed everywhere...*

With only 37 km of roads for every 1,000 km<sup>2</sup> of land, Mozambique has one of the lowest road density rates in the world. By contrast, the average road density for middle-income and low-income countries is 132 and 318 km, respectively. Consequently, urban-economic hubs and rural areas alike are quite disconnected, which results in isolation and inefficiency. Indeed, only 25% of Mozambican peasants can access a road within 2 km.<sup>204</sup> As most of Mozambique’s population – 62% – live in rural areas, such isolation which is a key factor to take into account when considering inclusive development. Agriculture’s contribution to GDP amounts to 32%. While this is significant, it is important to note that agriculture also employs 81% of the national labor force.<sup>205</sup> This means that an extension and rehabilitation of the transport network, with a focus on rural areas, would undoubtedly result in GDP growth and potentially benefit the whole country.

#### *...Yet, Some Provinces are Worse than Others*

At the provincial level, infrastructure endowment is also rather unequal. Predominantly rural provinces like Niassa, Sofala, Inhambane, or Gaza, have some of the greatest incidences of poverty and the worst levels of road infrastructure endowment, measured by quantity and quality, see **Figure 25**.

Figure 25: Road Network Over Population (left) and Poverty (right)<sup>206</sup>

Source: AICD, Interactive Infrastructure Atlas for Mozambique (2011)

Differences can also be found *within* provinces. For example, new state-of-the-art highways are being planned or built in Tete linking the mining area with Zimbabwe, Zambia and Malawi, while the western-most part of the province, where the incidence of poverty is largest, remains disconnected. Both Cabo Delgado and Tete – the provinces where the majority of exploration and extraction is taking place – present some of the most alarming levels malnutrition.<sup>207</sup> The worst-affected groups are probably concentrated in areas where roads remain inaccessible, either because of their quantity or quality. Indeed, the condition of rolling stock for railways – a crucial factor affecting access times – might be especially important in Cabo Delgado and Zambezia. In these areas, despite having a reasonable number of roads relative to other Mozambican regions, we see the worst levels of GDP per capita in the country,<sup>208</sup> showing that where roads are theoretically available they may not actually provide users with the levels of connection and accessibility needed, probably due to the insufficient number and poor condition of roads. The eastern part of Inhambane has a major road axis in fair condition that links with Sofala, in the North, and Gaza, in the South, but the minor roads connecting this axis with the interior of the province are in very poor condition, meaning that the interior of the province lacks access and/or connection with the main corridor of the province, in the coast.

Unfortunately, the international community's economic support for transport infrastructure is focused on enabling private foreign investment around extractive areas. On the whole, financiers do not consider or address the potential risks of increasing inequality among districts and provinces.

**Recommendation 20:** In order to ensure greater participation by Mozambique's provinces in economic activity, and distribution of the profits from extractive operations, the Government and donors should focus on constructing paved rural roads to connect the extremely isolated rural areas with railway corridors and highways. Initial efforts could concentrate in the western region of Tete, Niassa, Cabo Delgado, Nampula, Sofala and Zambezia.

### *Addressing the Problem of Disperse Population*

An additional constraint the Government faces to supply infrastructure in the poorest regions of the country is the dispersion of Mozambicans. Interviews in the field reported that, in some regions, population hubs of about 25 families live as far as 50 kilometers away from the closest village, while two neighboring dwellings may be at a 1-kilometer distance. This issue poses a great financial challenge for the Government, since delivering infrastructure to every dwelling would require significant investment. In addition, the Government would probably need to implement subsidy programs to facilitate payment for infrastructure-related services – such as electricity – by the poorest peasants. In fact, this dilemma is at the heart of the strategy called *polos de crescimento* – growth poles – developed by the Government and supported by aid agencies. The Growth Pole strategy aims to group populations around certain economic clusters endowed with a decent infrastructure stock. However, in most cases the studies for this strategy emphasize the supply side of agricultural economies – what could be produced and where – as opposed to taking into account the existing skills and preferences of Mozambican peasants, that is, what activity they would like to be engaged with, or where they would be willing to move to. For example, it has been reported that some traditional rural populations reject the idea of moving, as they are very attached to the land where their ancestors rest. Furthermore, the strategy does not itself solve the problem of extremely low incomes in numerous rural communities, as it focuses exclusively on the lands surrounding the railway corridors,<sup>209</sup> leaving a large surface of the country unattended.

**Recommendation 21:** In order to ensure the success of strategies such as the growth poles, public consultation must take place in rural areas before the Government undertakes any action. Given the unwillingness of some Mozambicans to leave their customary towns, the relevant Ministries must engage with local communities about planning and decision-making to identify the natural growth possibilities in each region. The community's preferences must be taken into account to ensure that infrastructure implementation is attractive and effective. Without such consultation, there is a risk that new or upgraded infrastructure will not, in fact, attract the people.

### *Handling the Risks of Crowding and Slumming*

The rapidly growing cities of Tete, Pemba, Palma, Macuse, and potentially others, are transforming from rural subsistence economies to industrial urban clusters.<sup>210</sup> There is an enormous risk that this change will *increase* poverty rather than improve development, as slums and new pockets of poverty can easily emerge if the infrastructure and services needed to host rising populations are not available.

The potential risks of crowding and slumming have two perspectives in the new Mozambican economy. On the one hand, given that Mozambique's unemployment – at 17%<sup>211</sup> – and underemployment rates are high, those cities are expected to attract large numbers of workers in the near future. If regional infrastructure is in poor condition, this translates to slow commute times. In turn, and combined with a scarce and unreliable public transport system, workers have no option but to settle where their job is, overwhelming the few existing urban services.<sup>212</sup> Therefore, the provision of paved roads from neighboring towns and villages to the new urban-industrial clusters will play a key role in orderly development, as they allow workers to settle uniformly in several towns instead of crowding in the slums of the *new cities*.

Even with upgraded infrastructure, the low income levels of local populations make it likely that Mozambicans will still prefer to settle around their work place, given the lack of economic resources to purchase vehicles, fuel or even tickets for public transportation means – where it exists.

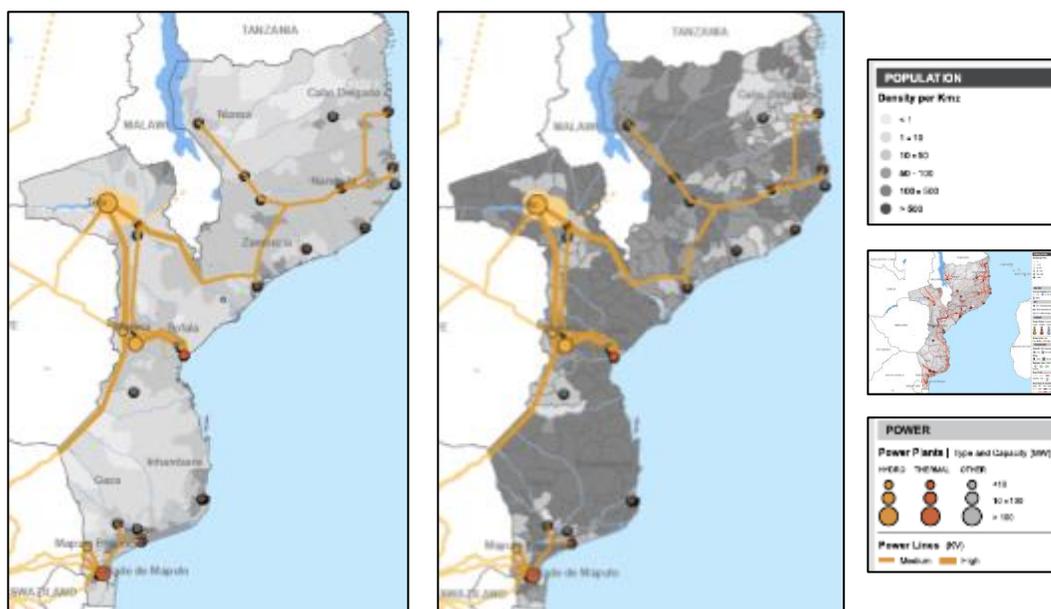
**Recommendation 22:** When roads are available between the industrial hubs and the neighboring villages, the extractive companies could partially finance the provision of shuttle services from those villages to the economic clusters where the mega projects and the businesses *servicing* them take place.

On the other hand, as mentioned in other parts of this report, mining activities often require the resettlement of communities surrounding extractive areas. The new locations need not only to provide the communities with basic social infrastructure, but they also need to be endowed with roads that connect them with main corridors and economic clusters. As highlighted in *Section 5.2: Gender considerations in extractive industry operations*, improved roads and footpaths would help to mitigate the greater effects of resettlement on women, as they would facilitate some of the tasks usually undertaken by them – collecting water, transporting children and elderly to schools or health facilities or delivering goods to markets.

### 3.4 Addressing the Paradox of Electricity

Mozambique has strikingly low rates of electrification, given the great potential for electricity production in the country. The World Bank estimates that in 2007 only 9.4% of the population had access to electricity, a figure much smaller than the averages of low and middle-income countries at 32.8 and 49.5%, respectively.<sup>213</sup> In particular, the access rate for Mozambique's large rural population is one of the lowest in the world, at 1.7%. By contrast, 26% of the urban population has electricity. Moreover, dwellings that do have electricity consume only 26kWh per capita annually, also much lower than the averages in low and middle-income countries.<sup>214</sup>

Electricity inaccessibility is undoubtedly hampering development. **Figure 26** below shows that, as of 2011, power infrastructure reached less than half of the country's populated districts, and did not extend to the poorest regions. Niassa and Cabo Delgado, for example, are greatly neglected in terms of power infrastructure, and also presented the worst per capita GDP.<sup>215</sup> Even around the corridors – along with the extractive zones, the supposed “drivers of growth” – electricity is available to less than 10% of households.<sup>216</sup> This represents a tremendous challenge for the future, as the World Bank has reported that it expects Mozambique's electricity demand to grow by 7%.<sup>217</sup>

Figure 26: Electricity Over Population (left) and Poverty (rate)<sup>218</sup>

Source: AICD, *Interactive Infrastructure Atlas for Mozambique (2011)*

At the firm level, electricity provision and unreliability also represent a challenge. While more than one tenth of Mozambique's companies have to generate their own electricity, those relying on the national grid report that they may be losing almost 3% of their sales because of outages. These outages occur some 40 days per year, lasting half of the workday, on average.<sup>219</sup>

The Government is undertaking several initiatives in an attempt to respond to the increasing needs of the population and firms willing to settle in Mozambique. The so-called "backbone project", Projeto Regional de Transporte de Energia Centro-Sul ("CESUL"), is a double line that will transport electricity generated in Cahora Bassa and Mphanda Nkuwa to Maputo and South Africa.<sup>220</sup> If distribution systems are also built, CESUL has the potential to improve access in *power-neglected* Inhambane and Gaza. However, this mega-project does not address the immense electricity needs in the northern regions of the country. To this end, the publicly-owned Fundo de Energia ("FUNAE") *funds and provides guarantees to develop projects enabling the expansion of low-cost energy services*.<sup>221</sup> In practice, its purpose is to supply energy where the national electricity grid is unavailable. Estimates gathered from several ministerial officials show that only 12% of Mozambicans today are connected to off-grid solar electricity systems. Additionally, EDM has been able to extend the national grid to 109 districts, while it expects to reach all 128 districts by 2014. Research in the field, however, showed that power infrastructure usually reaches the center of the districts, providing electricity to official buildings and neighboring businesses, while most of the inhabitants remain disconnected to the grid. This means that EDM's investment in the grid extension fails to benefit most of the people in those districts, who then lack incentives to secure and maintain the infrastructure. In some places like Palma, for example, EDM invested in extending the grid, only to experience significant losses after due to the theft of substantial amounts of wire. The wire is then bought by small-scale Mozambican and South African businessmen in the informal market, who transform them into easily sellable items such as pans or pots.<sup>222</sup>

As highlighted before, several of the poorest regions have also the biggest potential for economic growth and household income increases. Electricity availability will be crucial in this process.

**Recommendation 23:** The Government must ensure that the grid not only reaches the districts but that it actually reaches the people. A combination of public, FUNAE, donor and private funds could finance these investments, following consultation with the target communities. Access to electricity must be granted to the people at affordable prices, and subsidized if necessary.

Mozambique needs to take advantage of its great potential to produce more energy, especially from clean renewable sources. Specifically, hydropower production potential is estimated at 65,000 GWh per year – four times greater than current production – out of which as much as 70% is located in the Zambezi basin in the north of the country.<sup>223</sup>

The Government should not neglect its hydropower potential in favor of current natural gas extraction. Energy policy in Mozambique can be much more focused on this renewable source, especially given the fact that fossil fuels are likely to become much more scarce, and expensive, in the coming decades. With an energy model based on renewables, the Government could even pursue options such as electric public transport.

**Recommendation 24:** The Government should conduct analysis of potential hydropower developments, alongside its gas strategy. In particular, options to generate and use renewable energy sources domestically could help to drastically reduce Mozambique's energy costs (and environmental impacts) in future generations.

## Notes to Section 3

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<sup>161</sup> Human Development Index 2012 considers 187 countries. United Nations Development Program. *Human Development Index (HDI) - 2012 Rankings*. 2012. <http://hdr.undp.org/en/statistics/>.

<sup>162</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*. Africa Infrastructure Country Diagnosis, Washington, DC: The International Bank for Reconstruction and Development, The World Bank, 2011, 3.

<sup>163</sup> United Nations Development Programme. Human Development Report 2013. The Rise of the South: Human Progress in a Diverse World – Mozambique Explanatory note on 2013 HDR composite indices. United Nations Development Programme, 2013.

<sup>164</sup> Adapted from UN-HABITAT The Global Urban Economic Dialogue 2011.

<sup>165</sup> Social Infrastructure understood as housing, education infrastructure (schools and their amenities), health infrastructure – hospitals, nurseries, community clinics, and their amenities –, water and sanitation facilities at the community level and in schools and health centers, and climate change resilience –to combat, for example, the high risk of flooding in a number of Mozambican provinces.

<sup>166</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 8.

<sup>167</sup> Maps adapted from the WB's AICD Interactive Infrastructure Atlas for Mozambique (2011).

<sup>168</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 10.

<sup>169</sup> Central Intelligence Agency. Publications The World Factbook, several countries. 2013. <https://www.cia.gov/library/publications/the-world-factbook/>.

<sup>170</sup> Macauhub. "2 mil quilómetros de estradas vão ser entregues em regime de concessão em Moçambique." *Macauhub*. Macau, December 18, 2012.

<sup>171</sup> Central Intelligence Agency. Publications The World Factbook - Mozambique. 2008. <https://www.cia.gov/library/publications/the-world-factbook/geos/mz.html>.

<sup>172</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 13-15; Caminhos de Ferro de Moçambique. Linhas Ferroviárias. 2013. <http://www.cfm.co.mz/infraestrutura/linhas-ferroviarias/>. Caminhos de Ferro de Moçambique. Linhas Ferroviárias. 2013. <http://www.cfm.co.mz/infraestrutura/linhas-ferroviarias/>

<sup>173</sup> Reuters. *Rio Tinto among main bidders for Mozambique railway project*. April 10, 2013. <http://www.reuters.com/article/2013/04/10/mozambique-rail-riotinto-idUSL5N0CX4BB20130410>.

<sup>174</sup> Reuters. *Rio Tinto among main bidders for Mozambique railway project*. April 10, 2013. <http://www.reuters.com/article/2013/04/10/mozambique-rail-riotinto-idUSL5N0CX4BB20130410>.

<sup>175</sup> Caminhos de Ferro de Moçambique. Linhas Ferroviárias. 2013. Sobre o CFM - Restruturacao. 2013. <http://www.cfm.co.mz/sobre-o-cfm/a-empresa/restruturacao/>.

<sup>176</sup> All Africa. *Mozambique: Sena Line Closure Costing CFM Millions of Dollars*. February 25, 2013. <http://allafrica.com/stories/201302260223.html?page=2>.

<sup>177</sup> Cargo Edições. *Moçambique: Lançado concurso público de 2 mil milhões de dólares para projeto ferro-portuário*. November 22, 2012. <http://www.cargoedicoes.pt/site/Default.aspx?tabid=380&id=8435&area=Cargo>.

<sup>178</sup> Does not include electricity trade

<sup>179</sup> International Renewable Energy Agency. *Renewable Energy Country Profile Mozambique*. Country Profile, IRENA, IRENA, 2012.

<sup>180</sup> Ministry of Energy

<sup>181</sup> Cahora Bassa, Chicamba Real, Mavuzi, Corumana, Cuamba, and Lichinga.

<sup>182</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 33.

- <sup>183</sup> Ministry of Energy.
- <sup>184</sup> Hidroelectrica Mphanda Nkuwa. *Main Technical Features*. 2011. <http://www.hmnk.co.mz/en/go/o-projecto-main-technical-features> (accessed April 17, 2013).
- <sup>185</sup> Partnership of Camargo Corrêa, Insitec and EDM.
- <sup>186</sup> Foreign Policy Magazine. *Mozambique Private Sector Poised for Progress*. Special Advertising Supplement, Foreign Policy, 2011.
- <sup>187</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 15.
- <sup>188</sup> *Ibid.*, 16.
- <sup>189</sup> Refers to the transport demand that is not satisfied because the service is unavailable or inexistent.
- <sup>190</sup> Vale. *Controlada da Vale e governo moçambicano assinam contratos de concessão*. July 13, 2012. <http://saladeimprensa.vale.com/pt/releases/interna.asp?id=21755>.
- <sup>191</sup> Macahub. *Linha de caminho-de-ferro entre Moatize e Nacala, em Moçambique, entregue em concessão a parceria com a brasileira Vale*. July 4, 2012. <http://www.macahub.com.mo/pt/2012/07/04/linha-de-caminho-de-ferro-entre-moatize-e-nacala-em-mocambique-entregue-em-concessao-a-parceria-com-a-brasileira-vale/>.
- <sup>192</sup> Chiyembekeza, Chikondi. *Vale to prioritise Malawi rail project*. 2012. <http://mwnation.com/business-news-the-nation/16423-vale-to-prioritise-malawi-rail-project>.
- <sup>193</sup> Macahub, July 4, 2012.
- <sup>194</sup> Passenger service covers from Cuamba to Nampula but not from Nampula to Nacala.
- <sup>195</sup> Vale Columbia Center on Sustainable Investment's research on the Nacala corridor, summer of 2012.
- <sup>196</sup> Voices Of Mozambique. *Coal miner Rio Tinto named by Mozambique as a preferred backer for new US\$3bn rail and port*. April 11, 2013. <http://voicesofmozambique.com/news-articles/coal-miner-rio-tinto-named-mozambique-preferred-backer-new-us3bn-rail-and-port>.
- <sup>197</sup> Basic railroads with limited speed and transport capacity, as opposed to state-of-the-art systems.
- <sup>198</sup> Vale. *Ferrovias*. 2013. <http://www.vale.com/brasil/PT/business/logistics/railways/Paginas/default.aspx>.
- <sup>199</sup> Guarnani, Hareesh, Anuj Mehrotra, and Saibal Ray. *Supply Chain Disruptions: Theory and Practice of Managing Risks*. London: Springer-Verlag, 2012, 282.
- <sup>200</sup> Mocaweb. *Ferrovia de Sena reabre ao tráfego após paralisação de duas semanas*. March 6, 2013. <http://mocaweb.com/section-table/46-sociedade-mocambicana/2204-ferrovia-de-sena-reabre-ao-trafego-apos-paralisacao-de-duas-semanas.html>.
- <sup>201</sup> Beacon Hill Resources PLC. *Rolling Stock Operating Lease Signed, Sena Line*. February 1, 2013. <http://www.bhrplc.com/News.aspx?ArticleId=20662138>.
- <sup>202</sup> Beira Corridor. "Corredor de Crescimento Agrícola da Beira – BAGC. Potencial de Desempenho." Executive Summary, 2010, 2.
- <sup>203</sup> Rio Tinto. *Growing Opportunity for Mozambique's Farmers*. February 2013. <http://m2m.riotinto.com/article/growing-opportunity-mozambiques-farmers>.
- <sup>204</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 12.
- <sup>205</sup> Central Intelligence Agency. *The World Factbook Mozambique*. 2012. <https://www.cia.gov/library/publications/the-world-factbook/geos/mz.html>.
- <sup>206</sup> Maps adapted from the WB's AICD Interactive Infrastructure Atlas for Mozambique (2011).
- <sup>207</sup> The World Bank. *Mapping for Results - Mozambique, Africa*. 2012. <http://maps.worldbank.org/afr/mozambique>.
- <sup>208</sup> Knoema. *Regional Statistics of Mozambique, upto 2012*. 2012. <http://knoema.com/MNSORS2012Nov>.
- <sup>209</sup> The World Bank. *Perspectivas para os Pólos de Crescimento em Moçambique: Sumário do Relatório*. Summary, The World Bank, The World Bank, 2010.
- <sup>210</sup> Transformation is already undergoing in Tete and Pemba and is expected to happen soon in Palma and Macuse, among others.
- <sup>211</sup> Central Intelligence Agency. *Publications The World Factbook - Mozambique*. 2008. <https://www.cia.gov/library/publications/the-world-factbook/geos/mz.html>.

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<sup>212</sup> Such as water systems, electricity grid, schools, or health facilities.

<sup>213</sup> As of 2013 the Ministry of Energy reports a 36% rate of electrification including grid and off-grid connections.

<sup>214</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 31.

<sup>215</sup> Knoema. Regional Statistics of Mozambique, up to 2012. 2012.

<sup>216</sup> Vale Columbia Center on Sustainable Investment's research

<sup>217</sup> This figure might be larger, given the increasing interest of foreign companies in Mozambique. In fact, ministerial sources in Maputo estimated annual consumption growth at a 16% rate. Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 33.

<sup>218</sup> Maps adapted from the WB's AICD Interactive Infrastructure Atlas for Mozambique (2011).

<sup>219</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 33.

<sup>220</sup> Infrastructure Trust Fund - European Union Africa. *Mozambique Backbone (CESUL) Project*. 2013. <http://www.eu-africa-infrastructure-tf.net/activities/grants/mozambique-backbone-cesul-project.htm>.

<sup>221</sup> FUNAE. *Strategy Plan 2008 - 2010*. Summary, Maputo: FUNAE, 2007, 4.

<sup>222</sup> Local testimonies gathered in the research done to inform this report.

<sup>223</sup> Dominguez-Torres, Carolina, and Cecilia Briceño-Garmendia. *Mozambique's Infrastructure: A Continental Perspective*, 33.

## 4 Protecting Mozambique's Environment

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Mozambique's coal and natural gas reserves provide important challenges and opportunities for the country's natural environment. Increased revenues and economic development will provide the government with the funding necessary to better study and manage the country's ecology and plan the recovery of major fauna which are returning to Mozambique after years of civil war. The country's terrestrial forests and abundant reefs have only tapped the surface of the international tourism market, as a poor tourism infrastructure has limited the growth of this sector. Mozambique's economic development through these sectors can help boost the infrastructure and increase the country's large potential for tourism. However mining and natural gas exploitation both pose risks to the environment which—if not properly managed—can create disturbances that may negatively impact the ecology and the people that rely on the natural environment for their livelihoods, destroying tourism potential before it is realized.

This section will discuss the large-scale and small-scale mining and gas operations and how their environmental impacts can be mitigated. This section will also discuss Mozambique's legal framework for managing the environment. The current environmental governance in Mozambique has some strengths and weaknesses which if properly addressed will not only mitigate impacts from the extractive industry but also protect and rehabilitate one of the best coastal and terrestrial natural environments in Africa. Most importantly, natural gas exploration will be most active on the northern coast, which is also the site of the country's most important coral reefs. Similarly coal mining exports have taken off from biologically important areas of the country, such as those close to Lake Niassa. Mozambique's environmental governance has improved over the last decade, but given the rapid investment in extractive operations, environmental monitoring, conservation and protection must be given greater priority.

### 4.1 Background on Mozambique's Ecology

Of Mozambique's 786,380 km<sup>2</sup> of land 49.6% is forested with 10 million hectares of arable land. The country has 2,770 kilometers of coastline—more than the state of Florida in the U.S. and nearly as much coastline as South Africa.<sup>224</sup> The country is home to 5,500 species of plants and 4,271 species of terrestrial wildlife including 735 species of birds, and 384 species of mammals and reptiles. The coast is home to 1,860km<sup>2</sup> of pristine coral reefs and abundant marine life and, in 2012, a portion of the coast became Africa's largest coastal marine reserve.<sup>225</sup>

However Mozambique's flora and fauna face significant threats. The effects of civil war destroyed large terrestrial fauna and caused deforestation. While recent years have witnessed the reintroduction and rehabilitation of many species, overfishing and unsustainable agriculture practices are poised to put remaining plants and animals at risk. The country has 300 plant species on the International Union for Conservation of Nature ("IUCN") Red List and about 122 of these are threatened.<sup>226</sup> Mozambique ranks 89th out of 132 on the Yale University Environmental Performance Index, which groups the country among the world's "weaker performers."<sup>227</sup> With growing international attention and foreign direct investment flowing into Mozambique's coal and gas industry, these threats could be compounded by unsustainable mining practices that could go unchecked due to limited resources for environmental governance and monitoring. Conversely, the revenues from increased economic development,

extractives and tourism could bring important financial and political support and help to improve environmental management and monitoring.

The Government has given greater attention to environmental conservation in recent years by implementing new legislation, and by increasing protected areas from 11 to 15% of the country, with the goal of expanding it further to 16%.<sup>228</sup> Currently Mozambique has six national parks, eight national reserves and 12 *coutadas* or wildlife utilization areas.<sup>229</sup> Gorongosa National Park, featured on the cover of this report, has been recognized as one of the most ecologically diverse parks on the planet.<sup>230</sup> With the establishment of the 1997 *Environmental Law Nº / 97 of July 30 (AR-IV/044/30/07/97)*, the country set a general foundation for environmental management and has been improving this law over the past 15 years. However elements of environmental monitoring and governance are weak due to insufficient resources, lack of information and an environmental governance system that is integrated across ministries, yet diffuse in implementation. In addition, there is insufficient guidance for large gas and mining projects. Further guidance and detail are necessary to manage a country that will undergo rapid changes in the coming years from tourism and energy extraction.

The major ecological challenges which have currently been identified by the government are climate shocks, unplanned development, overharvesting of marine and timber resources and deforestation caused by fuel wood use and uncontrolled fires.<sup>231</sup> In addition, cyclones and floods have caused devastation in recent years. With increased investment in mining and natural gas, the government should prioritize the development of a framework to establish environmentally friendly mining and natural gas exploitation.

Renewable natural resource potential is also plentiful, but like oil, gas and minerals, they demand careful management and sustainable development. Mozambique's coastline stretches 2,500 km and is abundant with important marine resources, including fisheries, and tourism potential. Mozambique experiences frequent droughts, yet agriculture potential is high with the country historically a major producer of cash crops. Forestry is also a potential growth industry. However, at present, illegal logging threatens the forests and more importantly fuel wood use is estimated to contribute to deforestation 250 times more than logging.<sup>232</sup>

The country contains a network of protected forests, lakes and coastal areas. The coastal areas are a conservation priority for the World Wildlife Fund ("WWF") and Conservation International, while Lake Niassa (also known as Lake Malawi) is a reserve established by the government of Mozambique. Mozambique holds huge potential for tourism with only 2.2 million visitors in 2008 accounting for 3.1% of GDP or USD 434 million with projections to increase to USD 846 million by 2020.<sup>233</sup> However this is less than South Africa, where tourism revenues were estimated at nearly USD 12.2 billion in 2012. Poor infrastructure, poor international marketing, low transportation capacity and lack of skilled human resources are cited by the International Financial Corporation as barriers to an industry that—if rectified—could bring billions of dollars in tourism revenues.<sup>234</sup> Mining and natural gas infrastructure should be coordinated not only to maximize logistics potential, but also add to existing and future tourism infrastructure.

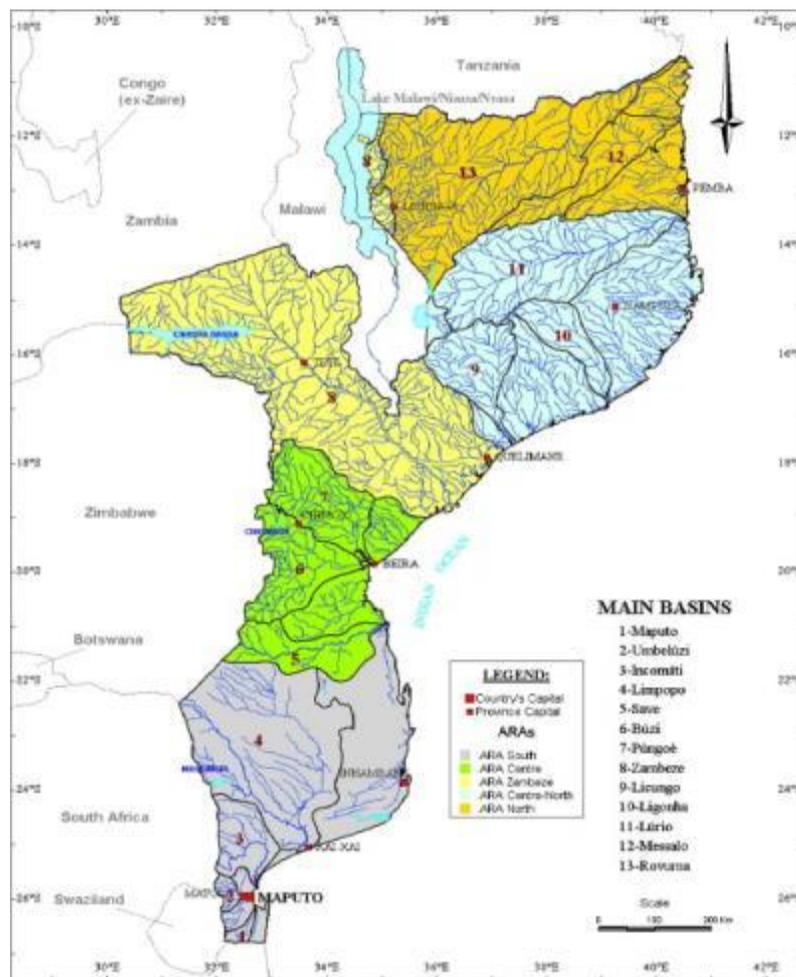
#### 4.1.1 Water

Pollution of water sources and sanitation are major areas of concern. Only a few cities, such as Maputo, have modern waste and water management systems. The majority of Mozambicans however, do not

have adequate access to clean drinking water. In rural areas only four percent have access to decent sanitation and 29% have access to improved water sources.<sup>235</sup> Pollution and poor sanitation have a huge human cost on Mozambique: The World Bank's Water Sanitation Program estimates that every year, over 14,400 people per year die due to diarrhea caused by water pollution and poor sanitary conditions.<sup>236</sup>

Despite these problems, water resources are relatively plentiful, with many perennial rivers including the Zambezi, Limpopo, Save, Lurio, Pubgue and Rovuma. Areas identified as important for river flows and precipitation are the Gorongosa Mountain—Rift Valley Complex, The Cheringoma Plateau, Zambezi Delta Grasslands and Swamps, The Great Inselberg Archipelago, The Chimanimani Massif, The Maputland Centre of Endemism ("MCE"), Coastal Barrier Lakes, and the Pebane Evergreen Coastal Forests.<sup>237</sup>

Figure 27: Water Resource Administration Units in Mozambique



Source: Jordi Gallego-Ayala and Dinis Juízo. "Strategic implementation of integrated water resources management in Mozambique: An A'WOT analysis." *Physics and Chemistry of the Earth, Parts A/B/C* 36, no. 14 (2011): 1103-1111.

### 4.1.2 Fisheries

Historically, the low amount of large-scale mining, artisanal mining and natural gas exploration has caused few impacts to Mozambique's fisheries. But with the rapid increase in natural resource exploitation, the direct and indirect impacts of these industries could be large in the coming years in the absence of sufficient monitoring, guidance and – especially in the case of artisanal mining – capacity building by the government and international community. Mozambique is rich in marine biodiversity, especially within its 1,860 km<sup>2</sup> of coral reefs. The majority of the reefs are in the north, along the mainland shore and around the islands which were recently made marine reserves, but are located near the center of natural gas exploration. Bleaching, unsustainable fishing practices and tourism activities pose threats to the reefs, and overfishing has dramatically reduced freshwater and river fish stocks.<sup>238</sup> Lake Niassa supports 700 to 1,000 species of fish found nowhere else in the world and likewise faces threats from tourism and overfishing, especially from Malawi.<sup>239</sup>

Current government monitoring resources are insufficient, leading to difficulties in regulating unlicensed operators. In addition, the fishing of sharks and rays to meet Chinese demand for their fins has also depleted stocks.<sup>240</sup> This is complicated by the fact that Mozambique's marine biodiversity has not been well-studied and understood.<sup>241</sup>

The government is undertaking several activities as stated within a report to the Convention on Biological Diversity by Mozambique's chief environmental body, the Ministry of Coordination of Environmental Affairs ("MICOA"), including establishing new marine stocks and incorporating more community involvement. In anticipation of extraction activities accelerated monitoring will be needed to ensure that a sufficient baseline of marine and freshwater biodiversity is maintained, and to better understand and mitigate the impacts of gas and coal extraction. For example currently the Ministry of Fisheries currently has few boats, posing a challenge to filling in data gaps, monitoring unlicensed fishing and monitoring environmental impacts.<sup>242</sup> Accordingly, outfitting the Ministry of Fisheries with upgraded equipment, boats and funding for local and international experts should be a short-term priority.

**Recommendation 25:** In the medium term, utilize income from the recommended sovereign wealth fund to outfit the Ministry of Fisheries with the necessary equipment and staff as well as to fund international cooperation programs to monitor overfished fishing stocks and precious corals.

### 4.1.3 Climate change

Drought, floods and cyclones are frequent in Mozambique with high levels of flooding in the central and southern provinces. The effects of flooding were particularly devastating during El Nino/La Nina oscillations in 2000-2001 and again in 2008, displacing tens of thousands of people.<sup>243</sup> Precipitation variability is expected to increase with climate change. Temperatures could increase by 1.8-3.1°C by 2075 in addition to a 5 to 10% decline in rainfall.<sup>244</sup> With more than 60% of the population living in coastal areas and more than 70% of the country engaged in agriculture, the impact of flooding will increase as with rising temperatures.<sup>245</sup> According to World Bank analysis, as much as 4,850 square km of land could be permanently lost and 916,000 people will have to migrate from populated coastal areas, creating a burden of USD 103 million per year by 2040.<sup>246</sup> In addition to these economic losses, there would be heavy losses in investment and tourism. With such consequences, a sound management plan for adaptation to environmental changes will be necessary. In particular infrastructure projects related to oil and gas extraction will need to avoid roads and railways that are located on potential flood plains.

**Recommendation 26:** Review company and company-government infrastructure plans with a long term view of climate change impacts. Do not build mining infrastructure within floodplains as these could become more susceptible to inundation as sea levels rise.

Three years after Mozambique transitioned to democracy in 1994, the country passed its 1997 *Environmental Law N° / 97*. This has been supported by further legislation, most importantly the 2004 *Constitution of the Republic of Mozambique* which commits “the State and local authorities in collaboration with other appropriate partners to adopt policies for the protection of the environmental and care for the rational utilization of all natural resources” and in article 45 in the government’s duties towards the communities strives to “defend and promote health” and “protect and conserve the environment.” However the most important environmental departments are too small and face extreme financial constraints. While extractive investment is booming, investment in environmental monitoring resources is woefully low and insufficient to monitor the environmental impact assessments (“EIA”). The country’s size, lack of infrastructure and lack of qualified personnel pose additional barriers to good environmental governance.

#### International Environmental Agreements Signed by Mozambique

- UNFCCC
- Endangered Species
- Hazardous Waste
- Law of the Sea
- Ozone Layer Protection
- Ship Pollution
- Wetlands

At the top of Mozambique’s environmental management structure is the National Commission for Sustainable Development (“CONDES”) established in 1997 under Article 6 of *Environmental Law 20/97* in the cabinet that is assisted by a secretariat.<sup>247</sup> Included in the CONDES secretariat are two staff members from MICOA, which was created in 1994 as the head of Mozambique’s environmental management.<sup>248</sup> The formal role of MICOA is to implement the National Environmental Management Plan (“NEMP”) and coordinate the implementation of environmental activities across ministries and departments along five directorates, which includes managing EIAs. However MICOA’s role is only to coordinate and the Ministry lacks implementation power or jurisdiction within the departments that share environmental management.

The responsibilities of environmental management are spread across Directorates in the Ministry of Tourism, the Ministry of Agriculture and five environmental units within the Ministries of Agriculture (“MINAG”), Energy, Mineral Resources, Public Works and Health. In addition there are seven directorates within MICOA and an International Coordination Department. This integrated approach has led to gaps in the country’s environmental management system, and weak implementation. For example the Ministry of Tourism is responsible for developing both the tourism industry and forest conservation, resulting in a conflict of interest. For example, tourism licenses may be issued for projects before EIAs have been completed.<sup>249</sup>

#### 4.1.4 General Environmental Considerations and Recommendations

##### *Strengthen Government Capacities on Environmental Monitoring*

For a fast growing country like Mozambique, the recent discovery of huge reserves of offshore natural gas could be a double-edged sword in terms of the country’s future development. The most important issue is that the goals of different levels of government need to be aligned in order to gain a win-win result through effective cooperation with international oil companies.

In execution, balancing development with conservation could involve many different aspects, such as revenue management, resettlement, and infrastructure construction. One of the key issues to for environmental sustainability lies in the government's capacity to monitor the extractive companies' operations. Monitoring is currently undertaken by MICOA. However, from the field interviews conducted with civil society groups and MICOA itself, we realized that even though MICOA has local administrative representation in different provinces, those local offices lack the capacity to both actively monitor compliance by extractive companies and assess their environmental impacts. In actual practice, the MICOA local branches are only involved in the data review process, whereas the monitoring of environmental data is typically conducted by extractive companies. This might impact the independence of the environmental data since the information is not always collected by MICOA itself.

In terms of strengthening the capacities of local offices, MICOA should focus more on human capital management and facility updating in those local offices. Thus MICOA will gain the expertise to have a better understanding of data sources and to reduce unnecessary conflict with companies. On the other hand, from the interviews conducted, it was ascertained that the government has no specific plans to deal with potential mining accidents. The government currently only requires companies to propose their own safety and emergency programs. This lack of a national, uniform plan can inhibit the government's ability to deal with emergencies in the future. Accordingly, it is necessary for the Government of Mozambique to set this issue as its priority and establish a comprehensive government-led, emergency response plan.

**Recommendation 27:** Given the scale of mining activities and potential for environmental and social impacts, the Government of Mozambique should create an emergency response plan for mining accidents. This will align government departments and allow rapid response should large environmental accidents occur.

### *Forestry Protection*

On the issue of protecting Mozambique's forest resources, one of the biggest challenges is illegal logging. Increased illegal logging is threatening the existing ecological environment, which is particularly fragile in the northern region of the country. Currently the Government of Mozambique is working actively on addressing this problem. However, there are still outstanding potential problems related to the illegal logging. In some cases in other countries, illegal logging involves cooperation with the government officials. While local administrative staff might be well aware that some groups are engaged in illegal logging in their administrative area, logging entities may share business interests with some senior government officials. Thus due to such political tension, local officials might refrain to intervene in the illegal logging directly. This ultimately leads to lack of supervision by the local government. In order to prevent a similar situation from occurring in Mozambique, the national government should enhance the transparency of the government and logging industry at different levels, as well as establish a good petition system. A petition system to investigate possible illegal activity should open to the civil society and the public. Meanwhile, the government should create a responsibility tracking system, that would give the public the right to track every petition that has been filed and the right to make further appeals. Such a system could reduce the possibility that senior official's business interests infringe on local government regulation. Logging tracking systems have been implemented with success in countries such as Indonesia and Latvia.<sup>250</sup>

### *Mitigation on Artisanal Mining*

During our interview with MICOA, we learned that artisanal mining has relatively more harmful environmental impacts, even though the scale is quite small. Most of the international mining companies operating in Mozambique adhere to the same environmental compliance standards as in their home countries. However, lack of training, expertise and organization in artisanal mining activities can lead to extremely harmful environmental impacts. We were told that MICOA is currently organizing artisanal miners into specific associations and conducting vocational training to help them gain necessary life skills that they can apply to other tasks. Organizing associations and conducting trainings is an important step in creating a small-scale mining sector that is safe for people and the environment. The government should also increase its engagement with civil society and other ministries while they are working with artisanal miners. For instance, in order to ensure high attendance rates and quality of training, MICOA could cooperate with the Ministry of Education and local youth development NGOs to create a teaching system that is relevant and effective.

### *Necessity of having a clear roadmap of National Extractive Industry Development*

Another issue to address is the national environment strategic plan on extractive industry's development. It is clear that extractive industry operations will have an impact on the environment and on biodiversity. However, examples from other countries demonstrate that environmental impacts can be minimized if companies are willing to apply the best international practices.

It is important for the government to know the aggregate impact of approving several projects in the short term. Under the current situation, each company conducts its EIA and submits it to MICOA who then evaluates the feasibility of the project on a case-by-case basis. However, it is important for the national government to have a comprehensive understanding of the aggregated impacts in the long term and the overall environmental impacts of these projects. Otherwise, in the long term, the environmental costs of developing these extractive projects could outweigh their overall benefits. On the regulation side, the government could utilize reference laws from other countries until the gaps in Mozambique's legal framework are filled. This especially applies to Mozambique's offshore gas industry.

## **4.1.5 Mining and Natural Gas**

Mozambique possesses a huge range, and quantity, of valuable natural resource. The country's large deposits of coal, natural gas, mineral sands, phosphates and other resources have been drawing increasing attention from local and overseas extractive companies. In the mining sector, coal in particular shows great potential, with resources estimated at 23,000MT.<sup>251</sup> These abundant coal, hydropower and natural gas reserves show huge economic potential, but are largely untapped. In addition, the country has ongoing aluminum exports and several other mineral resources including gold, gemstones, titanium and bauxite.<sup>252</sup>

Mozambique's mineral and mineral product exports accounted for 72% of all exports in 2011.<sup>253</sup> As of March 2011, 1,076 licenses for coal have been issued to mining companies.<sup>254</sup> As more proven reserves of natural resources are discovered, Mozambique is receiving greater international attention and foreign direct investment. Efforts have been made to promote equity of resource revenues in the law. For example, forestry legislation requires that 20% of tax revenues from forest and wildlife natural resource concessions be reserved for communities in the location, however no such requirement exists for minerals.<sup>255</sup>

## 4.2 Mining in Mozambique, Environment and Health

Mozambique's mining resources have been important for large scale, small scale and artisanal miners. These include vast coal deposits with the potential to produce 4.6 million tons of coal this year.<sup>256</sup> Rio Tinto has stated that Tete is home to the world's largest undeveloped cooking coal.<sup>257</sup> Artisanal and small-scale mining, driven mainly by poverty, can be an important part of economic activity and poverty alleviation. In 2008, an estimated 60,000 people were working in Mozambique's small-scale and artisanal mining sector.<sup>258</sup> However data on artisanal mining is scarce and the government has insufficient monitoring resources. Moreover, awareness of the harmful health side effects of unsafe practices is low among artisanal miners. If environmental and health issues are not taken into consideration, the economic benefits of mineral exploitation can be reversed by their harmful effects on the ecology, tourism, and health of Mozambique's people.

Air pollution from the mining industry is of increasing concern with mining causing pollutants such as dust, SO<sub>2</sub>, lead, arsenic and other particles and gasses.<sup>259</sup> When unregulated, such pollutants from upcoming large-scale mining projects could present respiratory risks to communities and decrease the tourism potential in certain parts of the country. Pollutants from industrial and artisanal mining can enter the waterways causing environmental damage to areas far from the mining sites and affect agricultural productivity. In addition, pollution from agriculture, industrial mining, and relatively unmonitored practices of artisanal mining, are sources of contamination to the country's pristine marine environments, as chemicals are emptied or washed into waterways leading to the sea. The Swedish International Development Cooperation Agency ("SIDA") reports that samples of water from the Monapo, Pungué, Maputo, and Incomati rivers have tested positive for many pesticide chemicals, but the larger environmental effects of mining activities in these water bodies remains unstudied.<sup>260</sup>

### 4.2.1 Large Scale Mining and the Environment

While humans have mined for thousands of years, it is only recently that the value of environmentally sustainable mining has been recognized. For many developed countries, mining with total disregard for the after-effects is a thing of the past, as both states and companies recognize that it is cheaper to pay the extra cost of good practices than it is to clean up past mistakes.

**The User-Pays Principle:** Those who profit from mining activities should be held liable for any negative impacts. In mining this means that companies should incorporate the cost of rehabilitating any ecosystems that are damaged by mining activities. In the case where full rehabilitation is not possible, the company should pay compensation for environmental damage.

The concept of ecosystem rehabilitation is relatively new, but with good planning that incorporates rehabilitation as part of a comprehensive mining plan, there can be significant, even full recovery after the extractive resource is depleted. Likewise, if mining companies or cooperatives are not held liable and rehabilitation is not a part of planning, then rehabilitation may not occur or worse, the impact of the mine can negatively affect the ecology and community for generations not just at the mine site but also in surrounding areas.

A famous example of the consequences of poor environmental governance is the Bougainville Copper mine in Papua New Guinea. The Bougainville Copper Ltd., a subsidiary of Rio Tinto, began the Panguna

mine, which became an important source of income for the Papua New Guinean Government. The Government received 20% of the profits while the locals saw only 0.5-1.5% of the total profit. Environmental rehabilitation was not a consideration when developing the mine and the activities from the massive surface mine dumped at least 78,000 tons of tailings into the Jaba River per day. The results of the dumping destroyed aquatic ecosystems and the surrounding rainforest, creating an uninhabitable ecological wasteland.<sup>261</sup> The local communities blamed the mine for an increase in birth defects and the death of local wildlife. Negotiations between the locals, the mining company and the Papua New Guinean government broke down leading to an uprising which caused large economic losses and the death of over a hundred Papua New Guineans in the ensuing conflict. While the mine was eventually closed down in 1989, the consequences of the environmental degradation led to a civil war which was not resolved until 1996.<sup>262</sup>

## 4.2.2 Practices to Integrate Environmental Rehabilitation into Planning

### *Water and Mining*

Access to water was identified as a major concern by the Government of Mozambique and stakeholders interviewed during this research and from past research conducted by Columbia University's Earth Institute.<sup>263</sup> Limited access to fresh water can significantly inhibit economic growth, but mineral processing can be water intensive, reducing aquifers and natural reservoirs. Additionally, pollution from tailings can make usable sources of water unusable, whether by being directly poured into waterways, polluting water tables through the soil, or poor dam preparation for captured tailings that can flood into lakes and rivers in times of heavy rain.

Leached water can leak into waterways if not properly contained leading to acidification, death of fish, plants and other life sensitive to changes in pH (a measure of soil alkalinity). If polluted, the water sources can become unsuitable for agriculture and consumption.<sup>264</sup>

Vale's Moatize mine has proposed utilizing a comprehensive water plant that minimizes water used in operations. The mining project planned to be water intensive in the first year, but recycle 90% of the water in the second year.<sup>265</sup> It would be insightful to know if Vale was able to meet this target.

**Recommendation 28:** Water strategies need to be part of a comprehensive environmental strategy and integrated into the mine's management plan.

### *Air*

The open pit mining process creates large amounts of dust from the use of heavy machinery. This dust, which often contains coal and silica, can pollute surrounding areas causing asthma problems, headaches, mouth blisters, sinus problems, nausea and kidney and cardiac diseases.<sup>266</sup>

Dust can be mitigated by using water for dust suppression, or by planning uninhabited land surrounding the mining area as a buffer zone between the mine and inhabited areas, can reduce the effects of pollution and dust.

In addition, greenhouse gases are an issue. Mining and ore processing can release significant amounts of methane into the atmosphere that has a global warming potential over 20 times higher than carbon dioxide.<sup>267</sup>

One method to overcome this is to combine methane extraction with mining. For example, the Moura mine in Queensland, Australia has a methane business on site of its mining operations, which saves as much as 2.8 million tons of CO<sub>2</sub> per year.<sup>268</sup> Examples such as these could simultaneously increase profits through the methane business or sold as offsets through carbon markets.

**Recommendation 29:** Combine methane extraction with mining to address greenhouse gas emissions.

### *Land Degradation & Biodiversity*

Natural habitats can be permanently damaged by resource extraction, especially in open pit mining. While the techniques for land rehabilitation have improved, mining can still have huge impacts on wildlife, habitats and stability of species. Particular care needs to be taken in Mozambique's priority conservation areas.<sup>269</sup>

The Moatize mining project is located at the juncture of two of WWF's priority conservation areas: the Miombo Woodlands and Coastal East Africa. These are also two of only 34 biodiversity hotspots identified by Conservation International.<sup>270</sup> Biodiversity hotspots are defined as threatened areas rich in plant and animal diversity. The 34 hotspots cover only 2.3% of global land area but are home to 50% of the world's plant and 42% of terrestrial vertebrate species on earth. If not properly managed, the mining projects in Moatize and other parts of Mozambique could damage tourism potential in these areas.

### *Infrastructure Construction*

To fulfill the economic potential of Mozambique's coal and mineral reserves, the industry and the government will need to make significant investments in infrastructure construction to move extracted resources to ports and logistics centers. Since many of the natural resources are in areas difficult to access by present infrastructure, EIAs and planning that takes the preservation of flora and fauna into account will be critical to ensuring that the impacts on the country's ecological assets are minimized. For example, infrastructure construction has intensified in the Zambezi Valley as a result of efforts to exploit extractive resources. The reintroduction and rehabilitation of large terrestrial mammals is a priority of the Government of Mozambique, but if critical habitats are damaged by roads, railways or settlements, the country's ecological health could be further impaired.

**Recommendation 30:** All infrastructure planning should be approved by the Council of Ministers or relevant bodies (in accordance with Article Six of *Land Law Regulation Decree 66/98*) only after review by MICOA and other environmental authorities. Furthermore the Government of Mozambique should seek the advice and cooperation of international environmental organizations to learn about and adapt best practices in order to mitigate the harmful environmental impacts of infrastructure development.

## **4.2.3 Artisanal Mining in Mozambique**

Artisanal and small-scale mining are mining practices undertaken by individuals, families, groups or communities with little to no mechanization or technical expertise. Artisanal mining can include underground, open pit, and placer mining and minerals commonly exploited by artisanal miners such as gold, bauxite, gemstones, iron ore, marble and limestone. The International Labor Organization ("ILO") estimated that there were 60,000 artisanal and small-scale miners ("ASM") in Mozambique in 2002.<sup>271</sup> Artisanal miners play an important economic role in the country and in 2008 it was estimated that over

90% of the country's gold production was undertaken by artisanal miners.<sup>272</sup> Artisanal and small-scale mining is often conducted illegally with little knowledge of or regard for environmental best practices. Like large-scale mining, artisanal mining should take into consideration social and environmental issues including pollution, environmental degradation and child labor. These issues are discussed in further detail below, and we make a number of recommendations to help Mozambique ensure that small-scale mining can be a vehicle for growth.

Harmful health and environmental effects of artisanal mining arise due to poor practices in mining, processing and marketing.

#### **Harmful Conditions of artisanal and small-scale mining in Mozambique**

- Emphasis on physical work over mechanization.
- Low occupational safety and health standards.
- Incorporates workers with little to no technical expertise or qualifications.
- Low recovery value: Inefficient mineral exploitation and processing which results in low income.

#### **Poverty and Artisanal Mining**

Artisanal mining, with its many negative consequences, is driven by poverty. If managed well, artisanal mining can improve the economic situation of poor communities. While poverty levels have decreased across much of Mozambique, it still affects an estimated 54% of the population.<sup>273</sup> While decreasing through the north and south of the country, in central Mozambique poverty has increased from 46 to 60% between 2003 and 2008.<sup>274</sup> There are particularly high rates of poverty in the provinces of Gaza, Maputo and Zambezia.<sup>275</sup> The mining growth in Tete and other areas will likely contribute to poverty reduction in central Mozambique, and with planning this can become a healthy industry that builds livelihoods with minimized environmental harm. Artisanal mining can be a key step contributing to a 12% poverty reduction by 2015, as envisioned in the Republic of Mozambique Poverty Reduction Action Plan 2011-2014 ("PARP").<sup>276</sup> However, without rational planning or monitoring, the economic benefits of artisanal mining can be offset by harmful health effects and environmental degradation.

#### **Environmental Impacts of Artisanal Mining**

There are a host of environmental considerations for small-scale mines in Mozambique but unfortunately the industry as a whole has not been well researched. Some organizations, however, provide useful guidance on the subject, including the International Institute for Environment and Development ("IIED").<sup>277</sup> Environmental problems from small-scale and artisanal mining include mercury pollution, cyanide pollution, direct dumping of tailings and effluents into rivers, improperly constructed tailing dams, acid rock drainage, improper closure, river damage in alluvial areas, river siltation and many others.

Of the chemical pollutants, mercury is one of the major concerns. Mercury is used towards the end of the gold mining process to amalgamate the mined ore after which excess material is burned off, leaving

the gold in a recoverable form. Cyanide is then often used to extract residual gold. However not all mercury is recovered after the amalgamation is burned, and some mercury is dissolved into the cyanide. If improperly stored or disposed, the mercury cyanide can be washed into the ground or nearby water bodies through rainwater or floods. Mercury has well documented toxic physical and neurological impacts on people that are exposed to high levels, and in addition to direct exposure, mercury can be carried through fish that have absorbed the toxin.<sup>278</sup>

It is important to keep in mind, however, that each of the “direct” causes and types of environmental harm have systemic and underlying causes that need to be addressed.

<b>Direct causes and types of environmental harm:</b>	<b>Underlying causes of environmental harm:</b>
<ul style="list-style-type: none"> <li>• Pollution (mercury, cyanide, direct dumping of tailings and effluents)</li> <li>• Poorly constructed tailing containment dams</li> <li>• Acid rock drainage (particularly in coal mining)</li> <li>• Improper closures</li> <li>• River siltation and river damage in alluvial areas</li> <li>• Erosion</li> <li>• Deforestation</li> <li>• Garbage and solid waste from human settlements</li> <li>• Increased prevalence of tropical diseases</li> <li>• Damage to local cultural heritage</li> <li>• Unmonitored mining in protected areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Insufficient knowledge, education and training</li> <li>• Insufficient funding for monitoring and mitigation</li> <li>• Under-resourced government agencies</li> <li>• Lack of access to technology</li> <li>• Lack of access to skilled workers</li> <li>• Lack of information and access to good practices</li> <li>• Lack of control and enforcement</li> <li>• Inadequate environmental legislation</li> <li>• Lack of research and baseline studies</li> <li>• Disruption to other sources of income</li> </ul>

### *Health Impacts of Artisanal and Small Scale Mining*

As many small-scale mines operate illegally, the establishment of sanitation and public health provisions in or near small mining communities may be extremely deficient. Even in the event that semi-permanent or permanent dwellings are built in small mining communities, it may be years before they become settlements officially recognized by the government. In addition, small scale and artisanal mines are much more prone to accidents due to the lack of strict regulation, awareness, training and technical expertise.

According to an ILO study, artisanal mining has six major health risks: exposure to dust (silicosis); exposure to mercury and other chemicals; effects of noise and vibration; poor ventilation; over-exertion; and inadequate workspaces and safety equipment.<sup>279</sup>

Of particular concern is exposure to mercury. Small amounts of mercury occur naturally in the air and usually range from 0.01 to 0.3 Hg  $\mu\text{g}/\text{m}^3$  (micrograms of mercury per cubic meter). The World Health Organization (“WHO”) recommends yearly averages of 1 Hg  $\mu\text{g}/\text{m}^3$  in the air and 1  $\mu\text{g}/\text{liter}$  in water

bodies estimating that concentrated mercury vapor exposure over the long-term is safe up to 0.2 Hg  $\mu\text{g}/\text{m}^3$ .<sup>280</sup> Studies conducted in Manica Province of central Mozambique around mining communities have found the average mercury level in miner's breath to be 8.23  $\mu\text{g Hg}/\text{m}^3$  on average and as much as 30  $\mu\text{g Hg}/\text{m}^3$  in some areas. However pilot programs to provide awareness of the dangers of mercury inhalation as well as the introduction of simple retorts (a simple glassware item used in chemistry) used to mitigate mercury vapor have been effective in Manica.<sup>281</sup>

**Recommendation 31:** Increase efforts to organize artisanal miners into officially registered and monitored associations. Institute training and awareness campaigns on the danger of mercury pollution and inhalation and introduce locally available solutions, with the use of a retort, that reduce mercury vapor and increase mercury recovery.

### ***Mine safety and accidents***

Accidents in artisanal and small-scale mines include rock falls, subsidence (sinking of the earth), lack of ventilation, and misuse of explosives. These accidents occur due to lack of knowledge, lack of training, violation of regulations and poor equipment.<sup>282</sup>

### ***Conflict and other social issues***

If individuals or communities conduct mining without broader stakeholder communications, they may come into conflict with other communities in the areas they work. Investigations on mining in Ghana have found that the influx of artisanal miners from outside of the community has led to increased crime and other social problems.<sup>283</sup> Other social consequences include increased school dropouts, and security conflicts with communities and larger scale mining companies. There are significant drawbacks to social non-compliance. For example, when international press confirmed the involvement of children in Columbian coalmines, some countries imposed a ban on imports of Columbian coal.<sup>284</sup>

## **4.2.4 Preventative Measures for Environmental Impacts**

Like large-scale mining, artisanal operations should be conducted according to the type of deposits, and directly address specific mining circumstances and risks specific to ASM. The social, safety, health, and environmental considerations for small mines are different than for large-scale projects and thus should have their own legal framework to guide the administration of local governments as well as provide a reference point for miners themselves.

### ***Formal Recognition***

It is impossible to mitigate the environmental and health impacts of artisanal mining without formalized recognition of the risks posed to artisanal miners themselves and sound laws to regulate their activities. In Mozambique, like many countries, artisanal mining is an informal industry. The draft mining law under consideration contains very few precise provisions that directly address small-scale and artisanal mines. The law needs to be more specific in order to facilitate compliance, decrease illegal mining practices, and provide protection for the small mine owners.

**Recommendation 32:** Improve the legal framework for small-scale and artisanal miners through formal recognition. Mozambique should ensure that small-scale and artisanal mines are subject to specific regulations including requirements that:

- Owners possess a mining title and an environmental license;
- Owners ensure compliance with environmental laws;
- Owners pay appropriate taxes; and
- The extracted product is distributed or exported in accordance with regulations.

The local and federal governments should recognize that small-scale mining, if properly managed, could be an important source of income for rural populations, helping to alleviate poverty and promote sustainable development. However if there is no incentive to operate legally, the informal ASM sector may continue to grow, and continue to have harmful environmental and social consequences.

### ***Legal and Compliance incentives***

The Government can, however, use legal and compliance incentives to help improve mining practices. First, it should create a business environment where small miners can benefit from the protection and capacity building provided by the government. Second, it should conduct enforcement measures that restrict environmentally harmful practices and hinder illegal mining. Third, the government should develop environmental and occupational regulations accessible that are known and accessible to the poor.

**Recommendation 33:** Building a good business environment for small-scale miners to operate within the legal framework is key. This includes: Sufficient tax regulations that do not overly burden the small mines; simple and sound bureaucratic procedures; outreach and awareness-raising in areas where miners operate, including education and mitigation of harmful pollutants, such as mercury.

### ***Provide Technical Solutions***

Many problems such as end-of-pipe technology are a technical solution to mercury emissions often overlooked by artisanal miners. End of pipe technology consists of providing solutions that treat or filter harmful waste before it is disposed or released into the environment, as opposed to more involved changes in the mining process itself. A portion of revenue from mining development could be set aside to create government-run waste-processing facilities where all waste from artisanal mines could be processed. This could be paid for in part by the mining associations and in part by the Mozambique government.

### ***Child Labor***

Child labor is often present in small-scale mining due to a number of social and economic drivers, including poverty, lack of education, poor infrastructure, lack of awareness by parents on the dangers of mining, as well as the fact that children in the region have traditionally worked in mines.<sup>285</sup> Child labor has negative effects on communities, including the perpetuation of low school attendance and lack of education, physical and psychological development problems, poor health outcomes and workplace accidents.

### ***Prevent Child Labor***

As Mozambique is a participant in the ILO's International Programme on the Elimination of Child Labour

("IPEC"), efforts should be made to ensure its compliance.<sup>286</sup> In order to prevent child labor, IPEC strategies include the prevention and removal of children from working in small-scale mines, improving working conditions, and increasing awareness on the living and working conditions of children. Studies and regulations can be instrumental in understanding the demographics of artisanal mines and preventing child labor.

#### 4.2.5 Gender Issues with Artisanal Mining and Health

In Mozambique there are an estimated 18,000 women working in the small-scale and artisanal mining sector. Contact with the chemicals may be particularly harmful to women, especially if they are pregnant. To the specific health consequences posed to women, it is critical that women not participate in certain aspects of mining activities. As engagement with artisanal miners increases in Mozambique, resources should be used to understand gender roles unique to Mozambique and the role of women (see *Section 5.2: Gender considerations in extractive industry operations*).

##### *Supporting Measures for ASM Mines*

Mozambique's ASM mining sector is poorly understood. The Government of Mozambique can change the current lack of understanding by first protecting miners' rights by ensuring safer practices through stronger legislation and policies, along with their implementation. This can also provide stability in the country to attract larger investment in the sector and—with government guidance—provide more capital for safer mining methods and waste management processes. The government needs to provide more incentives to operate legally and open the potential of this sector for decreasing poverty.

**Recommendation 34:** Create a support fund for small-scale and artisanal miners. In an effort to better study and build capacity in this sector, the Government of Mozambique should set up a fund with revenues from large scale mining operations, that goes directly to supporting artisanal miners and the ASM sector through trainings, research on local mining habits, credit and activities to mitigate negative social consequences of mining.

Many artisanal miners do not have the organization or resources to conduct in depth environmental and social assessments, however many small-scale miners are part of associations or organized businesses and should be held accountable to the law and their communities as large mining corporations. In addition, the government should require and facilitate small-scale mining companies to conduct social assessments and outreach with local communities. It is possible for artisanal and small-scale mining to be included as part of the economic mix, but if left unmonitored for too long an endemic culture of poor conditions can become more and more difficult to correct.

##### **Case Study: Tanzania's artisanal and small-scale mining reform**

The Government of Tanzania implemented trade reforms in the 1980s that created a more formalized ASM sector with active mining associations, including a women's mining association.<sup>287</sup> Legislation included allocating land areas specifically for small-scale mining, a decentralized permitting process to make mining formalization more accessible, developing microfinance services for small-scale mining and strengthened outreach activities with artisanal and small-scale mining groups. While most mining practices still remained informal, the sector has grown to produce an estimated USD 107 million in gold per year, and has become an important poverty alleviation tool.<sup>288</sup>

### Strategies to Support ASM Mines

- Incentive scheme for legal operations and compliance of small scale
- Transparent framework that directly addresses small scale miners and is not overly bureaucratic
- A system that has sufficient capacity to monitor the artisanal mining sector
- Engagement with both unorganized artisanal miners, as well as organized small-scale mining operations and associations.
- Raise awareness of the importance of safety, environmental protection and compliance with small scale miners

## 4.3 Environmental Concerns in the Offshore Extractive Industry

The significant amount of offshore natural gas discovery has given Mozambique the potential to be the world's fourth largest producer of natural gas behind Russia, Iran and Qatar.<sup>289</sup> However despite considerable natural gas reserves, skepticism from domestic and international observers is rising. On the one hand, the concern is that the lack of proper transportation capacity will limit the development and exportation of natural resources; on the other hand, inadequate environmental regulations and its implementation have raised concerns regarding the impact of natural gas exploration on marine biodiversity and the local fishery industry.

However, even though the fossil fuels are non-renewable energy resource, given proper management and regulation, they could turn into an important revenue sources for Mozambique's sustainable development and a prosperous future. The country should focus on four main aspects of environmental issues related to offshore hydrocarbon:

- 1) Strengthening the Capacity of environmental management;
- 2) Risk prevention and management;
- 3) Public awareness and participation; and
- 4) Transparency and equity.

This section contains six sub-sections that cover the whole range of issues related to offshore oil and gas development. Since Mozambique is in the early stages of offshore natural gas development, this part will not cover real case studies of offshore production. However previous successful development cases will be introduced and discussed. These recommendations and analysis are based on field research, literature and interviews conducted with various stakeholders in Mozambique.

### 4.3.1 Environmental Effect of Offshore Geologic Seismic Surveying

Most energy companies will conduct seismic surveys when they are looking for offshore hydrocarbons.

Sound energy is pulsed into the seabed to understand the geology and to detect the presence of oil and gas. However, the long-term consequences of such surveys are not well known, though mitigation measures are available. The powerful sound waves generated by seismic surveys are known to have harmful effects on fish. Impacts to fish and whales include damaging orientation systems, reducing their ability to find food, and even death. Moreover, the seismic process might disturb marine animals and cause them to change their swimming and migration patterns.

Below is a brief example of an international best practice on legal restrictions on seismic survey:

#### Norway Regulations for Offshore Gas Exploration

- Prohibition of seismic surveys in fishing zones, observing a buffer zone of 50km around the outer edges of the fishing areas. Surveys within these zones are only allowed when no fishing takes place.
- Prohibition of seismic surveys during fish migration periods.
- Prohibition of seismic surveys in shallow areas known to be nurseries for fish.

**Recommendation 35:** Due to the importance of fisheries and marine biodiversity to Mozambique's environment and economy, the government should exercise caution during their issuance of exploration licenses:

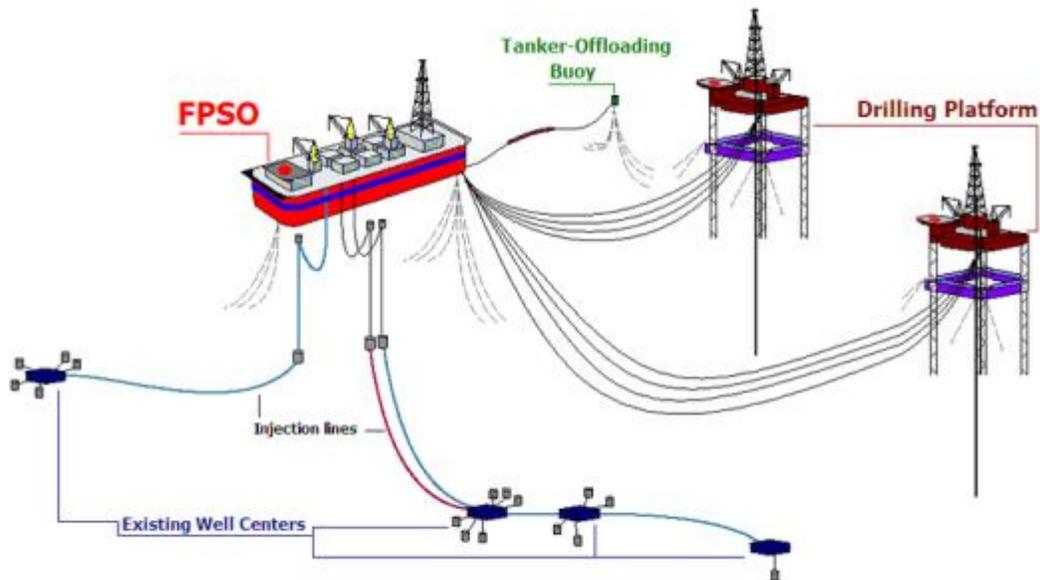
- Strategic Environment Assessment (i.e. geological seismic survey) should be conducted with multiple players, such as coastal managers, the fishery sector, environmental nonprofits and local communities.
- The SEA should reserve certain areas and prohibit exploration in those sites, including all artisanal fishing areas.
- The government should have clear standards for geological seismic surveys, such as enforcing the companies to comply with EIAs and related international treaties.
- The government should prohibit seismic surveys in shallow or marine protected areas, given that these areas are very important for renewal of fish stocks.
- Companies should also avoid conducting surveys during the migration of key and endangered species. Meanwhile, drilling companies should be required to use "soft start" technique when they are conducting the surveys. Finally, it is important for the company to comply with UNCLOS ("United Nations Convention On the Law of SEA").

### 4.3.2 Importance of FPSO regulation

After survey, the necessary floating production storage and offloading vessels ("FPSO") regulation also is also important. The FPSO is an offshore facility to process of hydrocarbons and for storage oil, usually oil

and gas that is extracted offshore. **Figure 28** illustrates the function of FPSO.

Figure 28: FPSO Diagram



Source: "LADOL to construct first FPSO in-country" (March 5, 2013) *Sweet Crude Reports* available at: [http://sweetcrudereports.com/wp-content/uploads/2013/03/FPSO\\_diagram.png](http://sweetcrudereports.com/wp-content/uploads/2013/03/FPSO_diagram.png).

### Drilling and Production Operation

The third process for most offshore energy companies is drilling and production. Similar to onshore production, a large water reservoir is normally situated under the oil and gas reserves. Once exploratory drilling starts, in the case of large oil field, more than 50 production-wells are drilled. During the drilling, a drill head at the end of drilling tube will penetrate rock layers. In the meantime, drilling fluids are injected to the well for lubricant. In this process, there are two significant sources of pollution. First are drilling muds, which are composed of different kinds of chemical compounds. A typical offshore production platform may discharge about 60,000 m<sup>3</sup> of drilling fluids and 15,000 m<sup>3</sup> of drilling cuttings. These cuttings and fluids can smother seafloor organisms, especially for those are living near the operation spots. There are normally two kinds of drilling fluids. The water-based drilling fluids are the safest for marine environments. On the opposite, oil-based drilling fluids are the most toxic and persistent. It is also difficult for oil-based fluids to break down and degraded in the marine environment.

The second source of pollution comes from geological formation water, which also known as produced water. It is by far the largest-volume by-product associated with offshore oil and gas production. Produced water primarily contains dissolved oils, heavy metals and polycyclic, aromatic and hydrocarbons ("PAH"). From an environmental standpoint, produced water can lead to a severe cascading effect: when the PAHs are discharged to sea, it could pass on to the marine life chain. PAHs are carcinogenic and its content from gas field is much higher than oil fields. It will be important for the Mozambique government to conduct further study on PAHs since offshore natural gas reserves are the country's major hydrocarbon resources. Currently there is no specific environment legal requirement on Mozambique's offshore gas exploration. Thus popular regulations used by other countries have been listed in **Figure 29**.

Figure 29: Examples of National and Regional Offshore Drilling Regulatory Frameworks

	<b>OSPAR Convention</b> North-east Atlantic	<b>Helcom Convention</b> Baltic Sea	<b>United States</b>
<b>Drilling muds</b>	<ul style="list-style-type: none"> <li>- Oil based muds shipped to shore.</li> <li>- Water based and synthetic based muds are tested for toxicity prior to discharge.</li> <li>- Prohibition on discharging muds containing more than 1% of oil.</li> </ul>	<ul style="list-style-type: none"> <li>- Oil based muds shipped to shore</li> <li>- Water based and synthetic based muds are tested for toxicity prior to discharge.</li> <li>- Prohibition on discharging muds containing more than 1% of oil.</li> <li>- Prohibition on discharge muds with more than 1 mg cadmium and mercury per kilo.</li> </ul>	<ul style="list-style-type: none"> <li>- Oil based muds shipped to shore.</li> <li>- Water based and synthetic based muds are tested for toxicity prior to discharge.</li> </ul>
<b>Produced water</b>	<ul style="list-style-type: none"> <li>- Re-injecting into the geological formation in vulnerable areas such as estuaries and coastal areas.</li> <li>- When discharged to sea, oil content is lowered to 30mg/L.</li> </ul>	<ul style="list-style-type: none"> <li>- Re-injecting into the geological formation in vulnerable areas such as estuaries and coastal areas.</li> <li>- When discharged to sea, oil content is lowered to 30mg/L.</li> </ul>	<ul style="list-style-type: none"> <li>- Re-injecting into the geological formation in vulnerable areas such as estuaries and coastal areas.</li> <li>- When discharged to sea, oil content is lowered to 15 mg/L in Alaska, 18mg/L in California, 29mg/L in Gulf of Mexico.</li> </ul>
<b>Gas</b>	Either exploited or re-injected.	Either exploited or re-injected.	Either exploited or re-injected.

Source: WWF WAMER: Bureau du programme marin pour l’Afrique de l’Ouest, Oil & Gas, WWF, 2009: [http://assets.panda.org/downloads/extractive\\_industries.pdf](http://assets.panda.org/downloads/extractive_industries.pdf).

#### Recommendation 36:

- The Government should conduct Strategic Environmental Assessments (“SEAs”) in line with the Abidjan Convention and Paris Declaration.
- Establish legal water quality standards for offshore natural gas exploration.
- Prohibit production in venerable areas, such as Marine Protection Areas, around all coral reefs—especially shallow corals used by artisanal fishermen—and other nursery areas for the renewal of fish stocks.
- Implement zero discharge regimes prior to production.

### 4.3.3 Good Governance in Managing the Offshore Gas Industry

Similar to West Africa, it is likely in the near future that Mozambique’s entire coastal zone will be divided into different gas exploration blocks, due to the pace of expansion of natural gas exploration. These blocks might include protected areas and important tourism areas. Thus, it is important to ensure that the rule of law is established and implemented, such as adequate legal safeguards for controlling and

monitoring of offshore oil and gas operations. Moreover, the government should also pay attention to the potential environment disasters, which can trigger civil strife.

### *Investment Regulation*

Furthermore there needs to be detailed environmental regulations on investment in hydrocarbons. This is an essential point for Mozambique's future sustainable development. The Government of Mozambique could establish a national inter-ministerial extractive industry committee and appoint a chairperson. It should deal with planning, contacting, SEAs, transparency and enforcement of laws. Moreover, the committee should insist that companies repair all possible damages after any accident. The lawmakers should also ensure that a certain percentage of natural gas revenue goes into renewable energy investment.

### *PSSA Protection*

The sixth concern is how to deal the particularly sensitive sea areas ("PSSAs"). PSSAs could help reserve fishery resources by providing extra protection to wetlands, estuaries, mangrove forests and other habitats. The Government could apply for PSSAs at the International Maritime Organization. A gas project's SEA process should also cover the identification of potential PSSAs. If there is a sensitive and vulnerable site that is shared by two or more countries, all stakeholders should work together to develop a joint protective measures.

The preceding six factors provide guidance on the most common environmental issues in offshore oil and gas development.

## **4.4 Recommendations for the Regulations on Offshore Natural Gas Exploration**

It is not unusual for a country such as Mozambique to face capacity constraints when encountering a boom in natural resource discoveries and the corresponding dramatic growth in foreign direct investment. The same issue applies to the well-developed economy too. For the U.S., the 2010's BP deep water horizon oil spill is an example that, even for country with one of the most sound legal systems in the world, it still faces the challenges of properly regulating and monitoring on its own extractive industry. Since recent offshore oil and gas production is based on technology that has not been mastered by many companies, the risk of accident is actually much higher than the onshore production.

Based on our interviews and legal research, the Mozambique government has no administrative legislation on international oil company (IOCs) offshore drilling activities. Thus the government actually has no risk control to these offshore drilling activities. Lawmakers might not have difficulty to introduce a complete regulation on the offshore natural gas drilling in time for investments and exploration from foreign companies. However, it is necessary and possible for the Mozambique government to make the reference to the laws of other countries. By requiring the IOCs to use the international drilling standard, Mozambique could greatly reduce the risk of offshore drilling accident.

Below are examples of three countries for Mozambique legislative and administrative bodies' reference.

#### 4.4.1 Countries of Reference for Offshore Extractive Industry Development

##### *New Zealand*

Although New Zealand is not a major oil and gas producer in the world, it does have a relatively well-regulated legal system on offshore oil and gas installations. The New Zealand government has a wide range of requirements on its hydrocarbon production activities. The main legislations are *Maritime Transport Act 1994* and *Resource Management Act 1991*.<sup>290</sup> They cover ten different aspects of gas extraction; many of which are related to environment.

##### **Ten Key Areas for Offshore Environmental Governance**

- 1) Requirements for vessels, installation and ports. Specific requirements for waste discharge and exclusive zones around offshore installations are also included in this section.
- 2) Oil and oily waste.
- 3) Chemicals and their risks.
- 4) Sewage discharges.
- 5) Garbage disposal in the marine environment.
- 6) Marine dumping.
- 7) Marine oil spill risk assessment.
- 8) Responding to spills and pollution.
- 9) Biosecurity.
- 10) Youth Education on marine biology and marine biodiversity.

These ten aspects could be applied by Mozambique's Government as a temporary strategy or as regulatory guidelines for its emerging natural gas industry. The most important factor will be to reference the various standards that might not exist in Mozambique's own regulation system.

##### *United States of America*

The second country Mozambique could refer to for guidance is the United States. Mozambique could learn from U.S. in terms of its regulatory structure on offshore production. As a major oil producer and importer, the U.S. has a specific regulatory body that has the primary goal of maintaining compliance of its offshore extractive industry. This department is called Bureau of Safety and Environment Enforcement ("BSEE").<sup>291</sup> The BSEE is part of an offshore regulatory entity under the Department of Interior ("DOI"). It has four main functions.

The first is to initiate an offshore program that develops standards and regulations and emphasizes a culture of safety in all offshore activities. The second function of the BSEE is to respond to oil spills,

which includes reviewing industry oil spill response plans to ensure that companies are compliant with regulatory requirements. The third is to enforce environmental law and ensure that operators are compliant with all related environmental regulations. The fourth is to fund scientific research to enhance the information and technology needed to build and sustain organizational, technical and intellectual capacity within the BSEE. It is necessary for a regulatory entity, especially one that regulate operations utilizing complex technology, to keep paces with the industry technological improvements. Thus ensure the capacity of the regulatory body is sufficient to identify and reduce risks through systematic assessment regulatory actions.

For Mozambique, it might be unrealistic at this stage to ask any governmental entity to have the same capacity as BSEE. However, the Government of Mozambique should have the vision to make a long-term sustainable development strategy for the development of its offshore resources. In the case of Mozambique, a similar entity as the BSEE, could oversee the offshore operation activities, and be jointly established by a number of government departments, such as MIREM, MICOA, Ministry of Agriculture and Ministry of Tourism. The purpose of this joint structure would be to make sure each related department could contribute their expertise in the practical regulation. Moreover, it will also help level the playing field for different ministries. In some countries, the environmental department might have less leverage on decision-making. Thus the joint structure set-up will make ensure that officials from different ministries could have equal input with respect to future offshore development.

Another suggestion is that the joint structure should focus on future capacity building since the current ministries might not have enough capacity to fully monitor offshore production. The short-term solution to this dilemma is to consult other courtiers that have more experiences on regulating their own offshore extractive industries. The midterm to long-term strategy should focus on human capacity building. Thus finally Mozambique could be fully self-relying on its own offshore development strategy.

### *Australia*

Australia also has which also has abundant offshore natural gas reserves. One of the significant differences is that Australia has a relatively sound and complete legal system on offshore natural gas exploration's regulation.<sup>292</sup> Also, Australia's offshore natural gas industry is more developed and advanced than Mozambique. Since the Government of Mozambique does not yet have specific regulations in place on its offshore natural gas resources, it is recommended that it refer to Australia's experience on legislation and regulation in the meantime.

#### **4.4.2 Environmental Impact Procedures Need to Be Improved**

Currently, the Environmental Impact Review Process allows applicants of extraction related licenses 45 days for review by the government and public.<sup>293</sup> A license may be issued if there are no objections, alterations, or resubmissions during this period, and all other requirements are met. However the current EIA review policy presents three problems. One is that the government and public have insufficient resources to thoroughly review the EIAs properly within this time limit. The EIAs for large extraction projects that affect large portions of land, waters and people often result in a large report and a host of supporting documents. There are concerns that reviewers of EIAs, including qualified scientists from the academic field, and individuals from non-for-profits, community and government lack time and resources to thoroughly review the particularly long EIAs. These shortcomings increase the likelihood of overlooking minor and major risks before the commencement of mining activities. The review period of 45-days may be sufficient for tourism infrastructure (such as hotels) or small-scale

projects, but should likely be extended for larger extraction projects.

#### **Case Study: Ramu Nico Mine in Papua New Guinea**

In 2010 the Papua New Guinea court ordered an injunction against the Chinese-Papua New Guinea joint venture nickel mine that planned to dump tailings into pristine coastal waters. The 1.37 billion project was brought to a halt citing numerous complaints about the publicly available project plan from people, scientists and government officials. However, since the plan was already underway it was deemed cost prohibitive to make the changes necessary to mitigate such risk. The project is proceeding and there is concern that the submersed tailing dumping could threaten economically important fisheries off the coast of Papua New Guinea

In addition there is no law addressing the availability of EIAs to the public. Well-crafted EIAs are vital to identifying the risks to the environment, economy and society. While EIAs may include items which on the surface appear as minor risks to local or foreign companies, these very items may in fact have major social and environmental implications for the people of Mozambique. Overlooking and failing to discuss risks with communities, and making the necessary adjustments to the extraction projects, can lead to social unrest and irreversible environmental and economic consequences.

The period for reviewing EIAs in other countries is similarly short, for example, with 30 days in the United States and 60 days in Botswana. Given the magnitude of mining and natural gas projects in the pipeline, and importantly, the significant impact on the country's fisheries, corrals, biodiversity, pristine forests and coasts, Mozambique should significantly increase the review period for EIAs. This review period should not be disruptive for the commercial planning of extraction projects but should be sufficient for adequate review.

**Recommendation 37:** EIA review period for extraction project exceeding 100 million dollars should be 90 days or more.

A second problem with the current policy is that there is no clear guidance on the accessibility of completed EIAs. Copies are typically only available for review at a government office and on an appointed date, presenting constraint for qualified scientists who seek access to reviewing EIAs. In addition it is difficult, if not impossible, to obtain printed or electronic copies of the EIAs. A recommended best practice to follow would entail having all EIAs available in electronic form for the public's easy access and review. In addition to mitigating environmental harmful consequences to the environment, the results of high quality EIAs can provide research guidance on Mozambique's ecosystems, and help to identify key areas where environmental laws and regulations can be improved.

**Recommendation 38:** Make EIAs publicly available in electronic form on company or government websites during and after the review period.

A third issue with the current EIA system is that even when areas of risks have been identified, the law is silent on addressing the scope of accountability for companies in mitigating such risks. The current Environmental Law does not have clear provisions on specifically how extraction companies should

address potential environmental risks. Many of the gaps in addressing environmental impacts may be brought up in the EIAs created by government or third-party experts.

**Recommendation 39:** The Mozambique Government should have the power to turn suggestions written in EIAs to be adhered to as other environmental laws.

#### 4.4.3 Biodiversity Offsets

The destructive environmental consequences of mineral and natural gas extraction can be mitigated to some extent, but must go beyond mere mitigation and compensation for environmental damage. The concept of achieving ‘no net loss’ in commercial projects is the core concept of biodiversity offsets which has been embraced by other governments including Uganda, Brazil and Malaysia.<sup>294</sup>

##### DEFINITION OF ‘BIODIVERSITY OFFSETS’

From the Biodiversity and Business Offset Program

“Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people’s use and cultural values associated with biodiversity.”

The Biodiversity and Business Offset Program (“BBOP”) Advisory Group is a joint partnerships between conservation experts, governments and companies to promote the use of biodiversity offsets in areas that contain high biodiversity and economic potential.<sup>295</sup> Such a partnership could build on the UN’s Poverty-Environment Initiatives study in Mozambique.<sup>296</sup>

An example would be a large-scale mining project that includes the destruction of a pond or other body of water; full rehabilitation of the pond may be impossible after the mining is complete. The project should include initiatives that work to clean, rehabilitate or create a body of water in another part of the country that includes comparable biodiversity net worth.

Mozambique actually has its own description related to this issue. The *Environment Law no. 20/1997, Article 4 “Fundamental Príncipes”*, states that “Responsibility, on the basis of whoever pollute or in any way degrades the environment shall always have the obligation to repair or compensate the resulting damage.”

Despite such a clear provision on environmental compensation in the *Environment Law*, MICOA’s limited enforcement capacity hampers the implementation of said law. We recommend that in the future practice, MICOA should more focus on the 10 principles below.<sup>297</sup>

If these 10 principles are well implemented, Mozambique will have a more environmentally sustainable and biologically healthy future balanced with the extractive industry’s development. Companies should be required to conduct a baseline ecology study where none is available, internalize the costs of rehabilitation into the cost of mining projects and, where rehabilitation is not possible, conduct work of funding for ecological rehabilitation, restoration or conservation in other parts of the country.

**BBOP PRINCIPLES ON BIODIVERSITY OFFSETS**

From the Biodiversity and Business Offset Program

- 1) **Adherence to the Mitigation Hierarchy:** A biodiversity offset is a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate avoidance, minimization and on-site rehabilitation measures have been taken according to the mitigation hierarchy.
- 2) **Limits to what can be offset:** There are situations where residual impacts cannot be fully compensated for by a biodiversity offset because of the irreplaceability or vulnerability of the biodiversity affected.
- 3) **Landscape context:** A biodiversity offset should be designed and implemented in a landscape context. This is to achieve the expected measurable conservation outcomes, taking into account available information on the full range of biological, social and cultural values of biodiversity and supporting an ecosystem approach.
- 4) **No net loss:** A biodiversity offset should be designed and implemented to achieve *in situ*, measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity.
- 5) **Additional conservation outcomes:** A biodiversity offset should achieve conservation outcomes above and beyond results that would have occurred if the offset had not taken place. Offset design and implementation should avoid displacing activities harmful to biodiversity to other locations
- 6) **Stakeholder participation:** In areas affected by the project and by the biodiversity offset, the effective participation of stakeholders should be ensured in decision-making about biodiversity offsets, including their evaluation, selection, design, implementation and monitoring.
- 7) **Equity:** A biodiversity offset should be designed and implemented in an equitable manner, which means the sharing among stakeholders of the rights and responsibilities, risks and rewards associated with a project and offset in a fair and balanced way, respecting legal and customary arrangements.
- 8) **Long-term outcomes:** The design and implementation of a biodiversity offset should be based on an adaptive management approach, incorporating monitoring and evaluation, with the objective of securing outcomes that last at least as long as the project's impacts and preferably in perpetuity.
- 9) **Transparency:** The design and implementation of a biodiversity offset, and communication of their results to the public, should be undertaken in a transparent and timely manner.
- 10) **Science and traditional knowledge:** The design and implementation of a biodiversity offset should be a documented process informed by sound science, including an appropriate consideration of traditional knowledge.

## Notes to Section 4

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## 5 Ensuring Social Equity in Extractive Industries-Based Development

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### *Extractive Industries, Communities, and Resettlement*

*Around the world, local communities often bear the worst of the environmental, social, and economic impacts of mining operations. Communities may be forced off their lands as a result of concessions granted to mining companies, and have to forego traditional means of earning a living. Their drinking water, rivers, and lakes may be polluted as a result of improperly designed or badly conducted mining operations. Smelters can release toxic air pollutants with serious health and environmental consequences. The introduction of outside practices and lifestyles may interfere with local social and cultural traditions, and introduce devastating diseases and problems, such as HIV/AIDS and alcoholism to remote villages.*

Environmental Law Institute<sup>298</sup>

Mozambique's natural resource project expansion is in the early stages of development. The nation has the extraordinary opportunity to learn from current challenges, apply lessons learned to new concessions, and strategically translate its mineral assets into long-term sustainable development for all Mozambicans. Extractive operations can only be fully successful if they are embedded in prosperous communities, as deprived conditions affect security, hinder local resources, and very importantly, obstruct a social license to operate. Therefore, one of the country's top objectives should be to leverage the recent boom in extractives industries to improve the living conditions of Mozambicans and to ensure a prosperous environment in which companies can diligently operate.

As stated in the Natural Resource Charter's<sup>299</sup> Precept 1, "the development of a country's natural resources should be designed to secure the greatest social and economic benefit for its people. This requires a comprehensive approach in which every stage of the decision chain is understood and addressed".<sup>300</sup> The Charter highlights that resources should be managed in a way that ensures benefits to current and future citizens. Mozambique's natural resource extraction gives the country the opportunity to become a regional leader not only by increasing its annual GDP growth, but also through improving the health, education, food access, and livelihoods of its citizens.

Mozambique's recent resource boom in natural gas, coal, and increasingly, agro-industrial activities, are deployed from or anchored in remote rural areas predominately characterized by poor socio-economic conditions. In particular, the communities in Tete and Cabo Delgado Provinces, where most of the coal and natural gas reserves have been found, are extremely remote. The International Fund for Agricultural Development ("IFAD") affirms that "poverty is still predominantly a rural phenomenon in Mozambique. More than 80 percent of poor households live in rural areas".<sup>301</sup> Poor, remote and politically marginalized communities have been the most heavily impacted by extractive industry operations. As a result of Mozambique's significant increase in extractive resource production, resettlement of these poor, remote and politically marginalized communities is becoming increasingly common.

The coexistence of communities and extractive operations does not have to be a risk for investors or a disadvantage for communities. A well-structured and well-managed resettlement process which is jointly agreed upon by communities and companies can help to ensure that extractive industry operations enjoy greater community buy-in and can benefit from local resources (including human capital), thereby reducing the likelihood of conflict. The following sections provide an analysis of the current resettlement process in Mozambique along with recommendations which aspire to promote mutually beneficial resettlement agreements leaving all parties affected better-off and fairly attended. Natural resource extraction is not an end in itself but rather a means to development and Mozambique holds in its hands an unparalleled opportunity.

## 5.1 Resettlement Resulting from Extractive Activities

There is an increasing amount of resettlement required in Mozambique due to the expansion of mining and hydrocarbon exploration and production. As illustrated below, coal and other mining operations has growing impact on allocation of land and (inherently) livelihoods in Tete Province. “Between 2009 and 2010, Vale resettled 1,365 households to a newly-constructed village, Cateme, and an urban neighborhood, 25 de Setembro.”<sup>302</sup> In 2011, Rio Tinto and Riversdale resettled 84 households to Mwaladzi. By May 2013, Rio Tinto plans to resettle an additional 595 households to Mwaladzi and to urban areas near Moatize.<sup>303</sup> Jindal Steel, Power Limited, and other companies will also resettle several hundred households in the coming years upon government approval of its relocation plans. As natural gas exploration scales up and production comes online, households in Cabo Delgado Province in northern Mozambique will also require resettlement and communities will likely experience significant other impacts on livelihoods due to extractive industry operations and inward migration (see *Section 2.3.3: Areas of Concern*).<sup>304</sup>

Resettlements of communities stemming from mining activities affect a wide range of rights and responsibilities guaranteed under Mozambique’s Constitution, laws and international human rights standards. These include the rights to adequate housing, health, education, work, security of the person and home, and freedom from cruel and degrading treatment.<sup>305</sup> Mozambique’s Constitution also guarantees the right to compensation for damages caused to these fundamental rights.<sup>306</sup> However, as documented in Tete Province, policy and implementation of resettlement to date is challenged in several ways. Obstacles regarding the productivity of the land without irrigation, access to markets and transportation, livelihood diversity, and maintenance of infrastructure have resulted in friction between the communities and other stakeholders. Tensions came to the fore in January 10, 2012 when an estimated 500 residents of the Vale resettlement village Cateme protested by blocking the railroad linking Vale’s coal mine with the port in Beira.

Accordingly, the consequences of any attempt to resettle communities as a result of extractive operations must be considered in light of the Constitution of Mozambique. Mining and hydrocarbon projects must comply with legislative and Constitutional guarantees by providing protection for social impacts, namely resettlement, livelihoods, and health of communities. As highlighted in the Constitution of Mozambique itself, resettlement must be avoided wherever possible, and should be considered as a last resort for the establishment of mining operations or any economic activity.<sup>307</sup>

Mozambique is a party to the International Covenant on Civil and Political Rights (“ICCPR”), the Convention on the Elimination of all Forms of Discrimination Against Women (“CEDAW”), the Convention of the Rights of the Child (“CRC”), and the African Charter on Human and Peoples’ Rights

(“African Charter”).<sup>308</sup> It is therefore required to uphold its International Human Rights Law obligations to reduce the disruptions to standards of living, livelihoods and access to services. The recommendations for Mozambique’s 2012 Resettlement Decree<sup>309</sup> provided in the following sections are based upon interpretation of the Mozambican Constitution, these human rights obligations and other international law obligations, and examples of policies and best practices from other countries with respect to the resettlement of communities.

Given the increasing level of resettlements taking place in the country due to coal and gas exploration and production, the following recommendations provide basic principles for ensuring long-term stable agreements with the communities. It is imperative that extractive operations establish and maintain a solid social license to operate (see *Section 2: Translating Extractive Industry Prosperity to Mozambique’s Communities*). Given that Mozambican communities are more aware of their rights, compliance with these basic principles will ensure respect for human rights, a stable investment environment, and promote sustainable development.

### **5.1.1 Establish early, inclusive, free, and transparent consultation processes and ensure community participation in all stages of the resettlement process**

Honest and open consultation by companies builds support and critical buy-in from impacted communities, ensuring a social license to operate and long-term success for extractive projects. A consultation that takes place early in the resettlement process, and is inclusive, free, and transparent is more likely to lead to a dialogue where communities are able to express their concerns, are listened to effectively, and can decide on what impacts their lives. Also respectful and transparent dialogue will establish a more constructive relationship with host countries, communities and other stakeholders, leading to greater success in extractive operations.

The current Resettlement Decree puts forth a narrow interpretation of the public consultation and hearing process by relying primarily on public meetings and designating community representatives who will be charged with dissemination of information on resettlement issues: “The dissemination of this process, through the means deemed adequate to guarantee public participation, with a view to collect comments, suggestions or recommendations concerning the draft Resettlement Plan, constitutes a guarantee of citizens’ right to information, particularly on the part of the affected or interested people”.<sup>310</sup> With respect to public hearings, the Decree provides that: “in the resettlement process there shall be hearings of local communities and other parties interested in and affected by the activity”.<sup>311</sup> Public discussions should include more broad-based consultations on the design, implementation as well as the post-stages of resettlement. Public hearings, just one method of community participation, should be combined with other measures, including the participation of women, people with disabilities and other marginalized groups. A positive element of the current Decree includes public requests for clarification, which must be addressed by Public Administration bodies within 15 working days.<sup>312</sup>

Mozambique’s extractive sector is very promising, particularly to private investors looking for high rates of return. However, a well-obtained social license is key to insuring stable long-term operations. Since resettled communities will be the most affected by new extractive operations, the Government must ensure that they can actively participate in all decisions regarding the new location, its conditions, and the resettlement process, in a way that meets their capacities and capabilities, and addresses technical asymmetries. The Environmental Law Institute states that, “Prior informed consent is intended to

promote a more sustainable form of development, in which the short-term mining interests do not compromise the community's longer-term needs for survival".<sup>313</sup>

Timeframes for consultation with local communities must go beyond short-term risk avoidance and be long enough as to allow for comprehensive discussions. Usually communities, especially rural communities, are not formally organized, are preoccupied with meeting their livelihoods, and are unfamiliar with sophisticated negotiations about extractive operations and its implications. For this reason, both private investors and the government must allow communities time to organize themselves, deliberate and reach consensus. They must also be prepared to hold lengthy negotiations if necessary.

As disagreement and disputes are legitimate stages in any consultation process, "for conflicts arising in the course of negotiations the World Commission on Dams guidelines recommend the use of an independent dispute resolution body that is created with the participation and agreement of stakeholders".<sup>314</sup>

**Recommendation 40:** Ensure that the consultation process starts during the exploration phase of the project. The private company that is carrying out exploration activities and causing the resettlement should bear the cost of consultation. The role of the Government is to provide the regulatory framework, oversee activities and ensure that the agreements reached are fair to the community and in accordance with the law.

- Clarify who is to be recognized as both legal and legitimate community representatives and interlocutors. Set up a protocol to identify and validate these legitimate representatives and ensure the full representation of ethnic and minority groups (See below the Case of Chinalco and the Resettlement of Morococho in Peru).
- Define what instances of participation correspond to a legal consultation as opposed to solely informing communities about resettlement. Demand proper inclusive consultation in addition to basic informational activities.
- Ensure fair agreements by addressing technical and information asymmetries, building the capacity of communities to be able to fully participate in consultation processes and negotiations (to be addressed ahead).

#### **CASE STUDY: THE CASE OF CHINALCO AND THE RESETTLEMENT OF MOROCOCHA IN PERU**

Based on a case study written by Mariana Costa Checa and Carolina Ocampo-Maya, to be published by the Case Consortium @ Columbia in the Summer 2013.

Chinalco, Aluminum Corporation of China, in 2007 acquired what will be Peru's largest copper mine, [the Proyecto Toromocho]. The mine is expected to produce 865,000 tons of copper concentrate annually, for over 36 years and starting in 2013. The Proyecto Toromocho, however, required the resettlement of an entire town of 5,000 people – Morococho.

The idea of a resettlement was consulted and socialized with the support of a private specialized consultancy firm for over three years. However, once the new town, Carhuacoto, was ready to be inhabited, less than 70 percent of the population were willing to move.

A Dialogue Table for the Resettlement of Morococha was diligently set up in 2011 to reach a Unified Framework Agreement that would govern the relationship between the company and the community. However, when the regional government and the company went on to identify legitimate representatives to join the table, they realized that there were few formal institutions within the community. Fred Goytendía Matos, Executive Secretary of Junin region's Concertation Table to Fight Against Poverty, a public-private institution took on the task of establishing a methodology to identify these representatives.

"Considering the social characteristics of Morococha, and the weakness of its civil society, Goytendía made specific efforts to ensure representatives were adequately selected and trained. 'When we were assigned with this task, we elaborated a methodology considering two main issues: first, legality. Were these organizations legally constituted? We gave them multiple options to legalize their status. They could show proof of public registration, the notary, the justice of the peace....anything where they could show the birth certificate of the organization. The other key issue was legitimacy. Who and how many were they representing? We wanted to see some proof of their meetings, acts, any confirmation of their legitimacy. We were incredibly flexible to allow more organizations to participate. We placed announcements on the streets and extended multiple times the deadline to participate. Among the organizations we finally chose we made sure to include vulnerable populations as well as rural communities. Even children were represented in the table, through leaders they selected in school'"<sup>315</sup>.

After almost a year of formalities and deadline extensions, a Resettlement Table was established with eleven groups legitimately representing the community.

### 5.1.2 Level the playing field by building the capacity of communities to participate in negotiations

It is unreasonable to expect that rural communities, living in poor conditions and with limited access to education and other basic services, will have all the capabilities necessary to negotiate an agreement that will shape their lives, and the lives of future generations. As explained by the Environmental Law Institute, information and technical asymmetry at negotiation tables will undermine the stability of a company's long-term social license to operate. "The lack of information, resources, and capacity often hinders the ability of citizens to take maximum advantage of sophisticated legal mechanisms."<sup>316</sup> It is therefore key to ensure that those negotiating on behalf of the community have access to information and the basic tools to hold a fair conversation and reach informed agreements.

Leveling the playing field by building the capacity of communities to participate in negotiations means ensuring that leaders genuinely represent the interest of the communities and have the preparation or support to reach sustainable and beneficial agreements. "For communities to engage meaningfully in consent processes, they may also need education about their rights, training to ensure that they can advocate for themselves, or assistance from civil society organizations."<sup>317</sup> Human Rights Watch has also recommended that communities should participate in all stages of the resettlement process including prior, during, and post relocation.<sup>318</sup>

#### Recommendation 41:

- Ensure that community representatives have the necessary skills and information to participate at negotiation tables. Extractive companies should provide the funds to train community

representatives to hold and participate in fair negotiations.

- Include in contracts with extractive companies a clause that ensures that the company covers the cost of experts accompanying negotiations and working on behalf of the communities. External experts should be able to accompany communities in the negotiation process if necessary.
- Ensure Government representation at all stages of the negotiation process, not only from the Ministry of Natural Resources, but also from other relevant incumbents including the Ministry of Health, Ministry of Education, Ministry of Environmental Coordination, and Ministry of Women and Social Affairs.

### 5.1.3 Ensure fair and holistic compensation, improved livelihoods and standard of living, and poverty reduction strategies

Compensation from resettlement should be based on holistic principles that consider not only economic compensation of physical assets but that also recognizes the loss of intangible assets such as access to services, transportation and cultural sites. Under Mozambican law, affected populations are provided with certain protections for fair compensation prior to their expropriation. Article 82(2) of the Constitution provides that, “expropriation may take place only for reasons of public necessity, utility, or interest, as defined in the terms of the law, and subject to payment of fair compensation”.<sup>319</sup> The Land Law also requires that compensation be fair, cover losses and lost profits, and that such payments should *precede* revocation of land use.<sup>320</sup>

Thus, applying Mozambican Law, populations to be resettled should have the right to compensation *prior* to resettlement in order to minimize disruptions to their quality of life. While the current Resettlement Decree gives some attention to a number of issues that are necessary to ensure a smooth transition for farming and other types of work, it overlooks important elements. For example, the Decree provides for the “consideration” of environmental characteristics such as soil fertility, yet fails to set explicit standards for the type and quality of resettled land, access to water supply and timing of resettlement to minimize farming cycle disruptions,<sup>321</sup> and most importantly, identify which entity makes the final decision regarding the sight for resettlement. The Resettlement Decree should clearly state which Governmental entity holds the ultimate responsibility of this decision.

The Decree also falls short in providing any means of technical assistance for individuals experiencing a change in their livelihoods. In addition, the Decree overlooks the importance of secondary economic activities such as private vegetable gardens, access to transportation and markets<sup>322</sup>. Thus, principles on livelihoods and improved standards of living should ensure that resettled people have adequate land-based or employment-based productivity, while protecting their rights to adequate housing, food and water resources. Resettled populations must have the ability to actually *improve* their livelihoods and standards of living.

The current Resettlement Decree addresses some requirements for housing and access to schools, health facilities and infrastructure. However, these standards must be bolstered, ensuring they are established *prior* to displacement. These standards should also take into account the availability, affordability, accessibility, and quality of health care, housing, and education in the relocation sites<sup>323</sup>. Additionally, the lives of resettled communities should be **better than the standard and quality of living**,

**prior to their resettlement.** Social hardships, such as access to roads, longer commutes to markets, medical facilities and schools, along with traveling longer distances in visiting family members, are factors which must be taken into consideration with respect to holistic compensation. To minimize adverse impacts to communities, UN Habitat recommends that relocation should take place to areas located within five kilometers from original settlements, and this standard should be followed.

#### CASE STUDY: NEPAL

Radon, J., & Shrestha, K. (2012, December 14).

“Hydro Power and Equity – Need to be One!” *Nepalnews.com*.

Nepal’s *Land Acquisition Act of 1977* (“Land Acquisition Act”) takes a holistic approach to compensation and can provide useful guidance for resettlement in Mozambique. Section 16(2) of the Land Acquisition Act provides that the following be taken into consideration in determining the amount of compensation for land acquired by non-governmental bodies or entities:

- a) The price of the land at the time of the publication of the notice of land acquisition;
- b) The value of the crops, houses, walls, sheds, if any, to be acquired along with the land; and
- c) The losses which the concerned person will suffer as a result of the relocation of his/her residence, or the place of his/her business, because of the acquisition of his/her land.

Paragraph (c) is particularly important as it contemplates full social costs of resettlement by setting forth a holistic approach to compensation rather than a narrow buy-sell market approach.

As part of its compensation plans, the Government of Mozambique should consult the IFC’s Performance Standards on Environmental and Social Sustainability and consider the costs of life disruption for resettled communities. The Standards provide that: “Transitional support should be provided as necessary to all economically displaced persons, based on a reasonable estimate of the time required to restore their income-earning capacity, production levels, and standards of living.”<sup>324</sup> Very importantly, “documentation of ownership or occupancy and compensation arrangements should be issued in the names of both spouses or heads of households, and other resettlement assistance, such as skills training, access to credit, and job opportunities, should be equally available to women and adapted to their needs.”<sup>325</sup>

The investor causing the resettlement, whether public or private, should bear the costs related to the resettlement including the establishment of the new location, all moving expenses, and maintaining a long-term dialogue with impacted communities. It is the role of the state to ensure that communities have access to all basic services including drinkable water, sewage systems, electricity, health and education facilities, and roads. These investments should be the responsibility of the company causing the resettlement, but the Government must secure the funds to cover their operational costs.

#### Recommendation 42:

- Livelihoods of resettled communities must be actually improved. If Mozambique is able to do this, it will become a global best practice and a leader in establishing sustainable resettlements.

- Compensation must be established prior to resettlement and all costs related to the resettlement must be covered by the entity causing the relocation.
- All basic services must be in place and their operational costs fully funded by the Government prior to the resettlement.

#### 5.1.4 Minimize negative environmental impacts in resettlement

As the environmental section of this report discusses, extractive activities have major environmental impacts on the communities in which they take place, often with harmful health consequences for resettled communities. This includes air pollution, water contamination and water depletion. Environmental Impact Assessments (“EIA”) for mining projects are in part designed to mitigate these negative impacts and are mandatory under the Environmental Regulations. An EIA undertaken by a licensed MICOA environmental specialist is carried out during the feasibility stage of the project, and technically and scientifically examines the consequences of a mining project on the environment.<sup>326</sup> The EIA report must include an environmental management program that addresses social, economic and cultural aspects, and is scrutinized by MICOA and MIREM.<sup>327</sup> An EIA and a social survey should also identify potentially adverse social effects, such as relocation of communities, family displacement, issues of compensation, including loss of homes, personal assets, agricultural lands, loss of communal resources and access to public facilities including roads, schools and markets. An EIA, when prepared with the active participation of local communities, can help determine more accurate socio-environmental impacts and develop more equitable resettlement and compensatory schemes to address those impacted.<sup>328</sup> For more information on EIAs, see *Section 4: Protecting Mozambique’s Environment*.

Regarding environmental harm, the current Resettlement Decree states that “whoever pollutes or in any other way degrades the environment has always the obligation to repair or compensate the resulting damages”.<sup>329</sup> While many extractive companies have instituted programs to reduce and mitigate the negative environmental effects for their workforce and for all members of local communities, more must be done to protect and promote the health of communities. The current principle on environmental accountability should be expanded beyond preventing and mitigating environmental harm, to include a strict liability standard for companies responsible for causing environmental and health damages arising from mining and other extractive activities (see *Section 6: The Need for Upgraded Mining Laws*).

**Recommendation 43:** Include in the EIA an identification of adverse social effects of extractive operations, including the impacts and losses for resettled communities, prior to the exploration phase. Expand regulations on environmental accountability to include a strict liability standard for environmental and health damage caused by extractive operations (see *Section 6: The Need for Upgraded Mining Laws*).

#### 5.1.5 Constitute an inclusive and legitimate post-resettlement committee that overlooks agreement compliance, progress and accountability

Consultation processes should be held during the exploration, development, and operational phases of

the mining operation and until due closure is performed in accordance with national regulations.<sup>330</sup> After an agreement has been reached between the communities and the mining company conducting operations, it is key to ensure that a legally-binding formal agreement honors the results of the prior informed consent negotiations.<sup>331</sup> The agreement, however, must recognize that communities are dynamic. It is therefore imperative to have a Post-Resettlement Committee that oversees agreement compliance, progress and accountability. This Committee will allow companies to continue or resume consultations at later stages in the mining process, to ensure that rights and interests are properly respected.<sup>332</sup> The Committee should be made up of representatives from the Government and the community, including representation from all ethnic and minority groups affected by the relocation.

*The ability of a community to consult with a mining company at the later stages of the mining process may be critical for ensuring that its rights and interests are properly respected. As mining proceeds, the environmental, social and economic impacts of the operation may change due to unforeseen circumstances. Unless communities have additional opportunities to consult with the company and to amend the terms and conditions for consent, the right to prior informed consent may be ineffective in promoting sustainable development of the resource.*

Laplante and Spears, *Out of the Conflict Zone*<sup>333</sup>

Resettlement agreements must include monitoring and evaluation obligations on the company, and the Post-Resettlement Committee will have the responsibility to follow up on the fulfillment of these obligations. It is important to recognize that “effective monitoring and implementation can only occur where there are clear performance indicators”.<sup>334</sup> Therefore, these need to be established at the beginning of the resettlement process. On the other hand, the Committee should have the responsibility of disseminating information and communicating all decisions regarding the project through all necessary channels based on local traditions or other mechanisms. The Committee should also have the responsibility to periodically update all stakeholders on the fulfillment of commitments established in the agreements. The company must bear the cost of assessments, traveling to proposed resettlement sites, traveling to Maputo and other relevant areas.

An inclusive and legitimate Post-Resettlement Committee that overlooks agreement compliance, progress and accountability is a key component of the resettlement process, particularly for promoting long-term stability.

**Recommendation 44:**

- Resettlement agreements should be legally binding and compensation and other aspects must be respected and enforced.
- A Post-Resettlement Committee must legitimately represent the community, should meet periodically, and its members must have the necessary skills and resources to monitor the terms of the agreement. It must also be granted access to information necessary to make relevant decisions, and counts on the participation of government agents that supervise the fulfillment of agreements.
- Communities and other stakeholders must be kept informed about the project through

established mechanisms for two-way communications.

## 5.2 Gender considerations in extractive industry operations

There is growing consensus that the Right to Development reaches beyond economic development to include the promotion of gender equality, improvement in women's well-being and women's inclusion in all aspects of planning and delivering of the development process. Applying this principle, implementation and legal reforms of Mozambique's existing laws on Resettlement must take into account the importance of gender considerations in the extractive industries. As Mozambique's existing mining legislation undergoes reform, it must address the special needs of women impacted by mining operations and resettlement. Mozambique can meet this challenge by implementing the existing laws and Constitutional provisions that guarantee gender equality, and by amending its Mining Legislation to address issues on resettlement, consultation and compensation, as discussed in the preceding section.

### *International Human Rights and Constitutional Standards in Mozambique*

Gender equality is deemed essential to human development in the fight against poverty and is clearly articulated in the Millennium Development Goals ("MDGs"). The UN Office of the High Commissioner for Human Rights ("OHCHR") set forth the Declaration on the Right to Development which states that the right to development must be applied without discrimination based on race, sex, language or religion. Article 8(1) of the Declaration makes specific reference to women's role in development, stating that "effective measures should be taken to ensure that women have an active role in the development process."<sup>335</sup> It has been widely accepted that in the absence of gender equality, the rest of the MDGs are unlikely to be accomplished.<sup>336</sup>

Mozambique has officially recognized equality between women and men and the principle of non-discrimination since its Constitution of 1975 and its third Constitution of 2004, which states: "Men and women shall be equal before the law in all spheres of political, economic, social and cultural life."<sup>337</sup> The primary international human rights legal instruments calling for equality between the sexes, such as the IICPR and CEDAW, have been ratified by Parliament.<sup>338</sup> Under these international standards, Mozambique has an obligation to ensure that women are not left out of opportunities to participate in and benefit from the country's development through the extractive industries. Accordingly, the Government bears a duty to ensure women's equal access to socio-economic opportunities, reduce disruptions to their standards of living and improve livelihoods.

### *Applying Mozambique's Legal Framework to Women's Land Rights*

According to Mozambique's Constitution of 1990, all land ownership vests in the state. *Mozambique's Land Law of 1997* gives equal rights to both women and men over the land they actually occupy and use. The Land Law specifies the nature and conditions of rights and land access for individuals, communities and corporations. Importantly, Article 12 of the Land Law states that land rights can be acquired by three methods: First, through occupation by individuals and local communities; Second, through occupation by Mozambicans who have been using the land in good faith for at least ten years; and Third, through request to the state by individuals or corporate bodies to authorize 'new' use and benefit rights. Under the third method, foreign companies can gain access to land in Mozambique if they can demonstrate concrete usage and capacity to develop and carry out their plans.<sup>339</sup> This method is also particularly relevant for local communities who are forced to resettle from their lands after the

Government leases land to companies for natural resource extraction.

### *Mining Activity Impacts on Women*

Studies have shown that a strong gender bias exists in the distribution of risks and benefits of extractive projects throughout the world. Mining benefits accrue to men in the form of employment and compensation, while burdens, including socio-economic marginalization, environmental degradation and resettlement fall most heavily on women.<sup>340</sup> Women are typically sidelined from decision-making processes within the mining industry, and as a result, constrained from asserting their rights. The following subsections discuss some of the major impacts of mining activities on women, including the process of resettlement, consultation and compensation, along with social and environmental impacts.

### *Consultation on Matters of Resettlement and Compensation*

When mining resource extraction takes place, surrounding communities frequently lose their agricultural lands and homes, quality of life and sources of livelihoods. Mining operations have led to the conversion of land for new uses, causing the displacement and resettlement of communities.<sup>341</sup> Men are typically consulted on resettlement and compensation issues, whereas women are excluded regarding the consequences of resettlement and the benefits they are entitled to receive.<sup>342</sup> Men are also the ones compensated for loss of land, even when women work the land and are equally impacted by the loss. Women may not see any of the compensation, which reduces their ability to cope from changes and care for family members after resettlement.<sup>343</sup>

### *Gendered Social and Environmental Impacts from Mining Activities*

Evidence from around the world shows that women are placed at greater risks than men due to environmental damage. When extractive operations change or damage the local environment, women face the greatest challenges in collecting water and food.<sup>344</sup> Since women are typically responsible for domestic chores, the destruction of local environments increases their workloads, with women having to walk longer distances in search of water and food.<sup>345</sup> Other social hardships for women include longer commutes to markets, medical facilities and schools. Women may also be denied access to both formal and subsistence agriculture by losing traditional livelihoods and being excluded from new opportunities.<sup>346</sup>

Extractive operations have caused extensive environmental damage, especially in the absence of proper environmental impact assessments and effective oversight. Oil spills, pollution and water contamination have affected many countries around the world, with serious consequences for human and economic activities, including fisheries and agriculture. This has led to a reduction in production, jeopardizing local economic activities, community nutrition and health.<sup>347</sup> Communities in Nigeria struggle to support their families following oil and gas extraction that has destroyed most of their natural resources.<sup>348</sup> Studies from the Philippines, Papua New Guinea and Indonesia also demonstrate the negative impacts of mining on natural resources, with communities facing water shortages following migration-related population expansion and from increased industrial water usage.<sup>349</sup> The seepage of toxic materials into rivers following mining activities has made it particularly dangerous and difficult for local women to find clean water for household usage and consumption.<sup>350</sup> See *Section 4: Protecting Mozambique's Environment*.

### *Recommendations*

As Mozambique's Mining Legislation undergoes revisions, gender considerations should be included in

forthcoming amendments. This section contains recommendations that have been designed to help mitigate and prevent the unique types of harm women living in or near mining communities are likely to encounter. These recommendations aim to provide women with equal decision-making power on issues which impact their basic human rights, including access to safe and adequate housing, health, food, water, markets and dignified livelihoods.

Extractive operations should not only minimize negative impacts of the sector, but actively promote gender equality and women's empowerment through inclusive consultation. Inclusive consultation can help women become more engaged and active participants in their communities, leading to better social, health and economic outcomes.<sup>351</sup> Inclusive consultation may also be transformative, empowering women to overcome the structural disadvantages and inequities that have traditionally excluded and disenfranchised women even before any mining projects have been embarked upon.

**Recommendation 45:** Amend existing mining legislation to improve safeguards for women in matters of resettlement and compensation, ensuring their full participation in the decision-making process.

As Mozambique makes land available to prospecting investors and grants land concessions to mining companies, local communities are losing access to the resources they have depended on for their livelihoods and food security.<sup>352</sup> Under CEDAW Article 2(d), states have a duty to “refrain from engaging in any act or practice of discrimination against women and to ensure that public authorities and institutions shall act in conformity with this obligation.” As the ultimate owner of land and granter of land licenses to extractive companies, the Government of Mozambique bears the duty to safeguard the rights of women impacted by extractive operations. With large-scale mining investments on the rise in Northern Mozambique, women's interests and rights in land as a productive resource are now more urgent than ever.

**Recommendation 46:** Safeguard women's rights to land in concession and leasing arrangements by demanding that documentation of ownership and occupancy is in the name of both heads of households.

From a development perspective, investing in women's economic and social empowerment is a direct investment in the community and economy. Women make up half of the labor-force, hence, discrimination against women in the labor market is a clear barrier to economic growth. The World Bank's Gender Action Plan (“GAP”) draws attention to gender-related risks, concerns and benefits in extractive projects.<sup>353</sup> Applying GAP principles to Mozambique, the Government should require that mining companies implement an equitable, gender inclusion strategy into all levels of the project cycle. This means improving access to direct employment opportunities, providing equal pay for equal work and setting up a safe workplace environment for women. Improving gains from extractive industries for women can help leverage their untapped potential in increasing GDP, reducing poverty and fostering positive conditions for sustainable development.<sup>354</sup> To further this objective, the Government of Mozambique can also provide support to associations that strengthen women's decision-making and to projects that target livelihoods, including adult education and microcredit programs.

**Recommendation 47:** Improve women's economic opportunities and ability to benefit from extractive sector employment by requiring that companies implement a gender inclusion strategy in all stages of projects.

At the present time, there is no institution in Mozambique dedicated to working solely on women's land rights. Accordingly, it is recommended that the Government establish a 'Women's Land Rights Network' initiative, which would take a special focus on women's rights to land use and other property. Such an initiative can help address situations where women have lost their lands or have been resettled due to extractive operations. The Government of Mozambique can consider embarking on a comprehensive campaign to improve implementation of its existing land legislation. To this end, it can widely disseminate information about land laws, placing special emphasis on women's equal rights to land guaranteed under statutory legislation.

**Recommendation 48:** Establish a "Women's Land Rights Network" with a special focus to educate women on their land rights and to address situations where women have been resettled due to extractive operations.

### Conclusion

Approval of any resettlement plan should be conducted through transparent consultation with affected communities, including their full and informed consent regarding the resettlement site, their participation in development of compensation packages and consultation on how best to restore their livelihoods and living standards. Overlooking the importance of inclusive consultation during the initial stages of the resettlement process can fuel community hostility, mistrust and opposition to the project. Human Rights Watch has reaffirmed this principle in their recommendations for Mozambique: "approval of resettlement plans should be agreed in consultation with affected people, including their full and informed consent regarding the relocation site, and their participation in determining other aspects of the compensation package and restoration of their standard of living".<sup>355</sup> Moreover, special effort must be made to incorporate gender considerations in extractive operations, beginning by consulting women in matters of resettlement, compensation and livelihoods.

The Government of Mozambique must establish clear protocols regarding how to incorporate new resettled communities as towns or villages, and what State institutions must bear the cost of establishing basic services and the maintenance and operational costs of new communities. On the other hand, it must be emphasized that, although communities should not be able to veto projects, they must be consulted at all stages of the process, starting during the exploration phase, and must have an important say in the decision of the location of the new town. The areas for resettlement are to be defined with affected communities through participatory processes. The Law must specify which entity of the government bears the ultimate responsibility for the location of the resettlement site and how that entity will be held accountable for such decisions.

One of the greatest challenges for successful consultation and resettlement processes is "ensuring that communities possess a 'genuine capacity to influence the economic and political agendas' surrounding an extractive industry project".<sup>356</sup> It is the responsibility of the Government of Mozambique to ensure that communities are empowered and well-positioned to make decisions that affect their lives, their future, and that of the generations to come. Finally, given the expansive range of community life being impacted by resource extraction, the Resettlement Decree should clearly outline the responsibilities of other government sectors relevant to the resettlement process, including labor, women's affairs, health and education. If managed well, the extraction of natural resources sector can help Mozambique meet its development challenges and lift all its citizens out of poverty.

For additional detail and recommendations on resettlement in Tete Province, also see Human Rights

Watch report released May 2013.<sup>357</sup>

**Recommendation 49:** In order for extractive operations in Mozambique to earn/achieve a legitimate, stable, and sustainable social license, the Government must ensure that all resettlement processes meet the following six conditions:

- Establish early, inclusive, free, and transparent consultation processes. Ensure community participation in all stages of the resettlement process.
- Level the playing field by building the capacity of communities to participate in negotiations.
- Ensure fair and holistic compensation, improved livelihoods and standard of living, and poverty reduction strategies.
- Address the gender impacts in mining operations by taking special measures to include women in consultation matters concerning resettlement, compensation, livelihoods and income generation.
- Minimize negative environmental impacts in resettlement.
- Constitute an inclusive and legitimate post-resettlement committee that oversees agreement compliance, progress, and accountability.

## Notes to Section 5

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<sup>298</sup> Environmental Law Institute. *Prior Informed Consent and Mining: Promoting the Sustainable Development of Local Communities*. Washington D.C.: Environmental Law Institute, 2003. 1.

<sup>299</sup> The Natural Resource Charter is a set of economic principles for governments and societies on how to best manage the opportunities created by natural resources for development, *The Natural Resource Charter*, 2010: <http://naturalresourcecharter.org/precepts>.

<sup>300</sup> *Ibid.*

<sup>301</sup> "Rural poverty in Mozambique" Rural Poverty Portal:

<http://www.ruralpovertyportal.org/country/home/tags/mozambique>.

<sup>302</sup> Human Rights Watch. "What is a House Without Food?" Mozambique's Coal Mining Boom and Resettlements. May 2013. [http://www.hrw.org/sites/default/files/reports/mozambique0513\\_brochure\\_web.pdf](http://www.hrw.org/sites/default/files/reports/mozambique0513_brochure_web.pdf).

<sup>303</sup> Human Rights Watch. "What is a House Without Food?" Mozambique's Coal Mining Boom and Resettlements. May 2013. [http://www.hrw.org/sites/default/files/reports/mozambique0513\\_brochure\\_web.pdf](http://www.hrw.org/sites/default/files/reports/mozambique0513_brochure_web.pdf).

<sup>304</sup> Human Rights Watch. "What is a House Without Food?" Mozambique's Coal Mining Boom and Resettlements. May 2013. [http://www.hrw.org/sites/default/files/reports/mozambique0513\\_brochure\\_web.pdf](http://www.hrw.org/sites/default/files/reports/mozambique0513_brochure_web.pdf).

<sup>305</sup> Republic of Mozambique, "Constitution of the Republic of Mozambique" 1990, Articles 11, 40, 59, 68, 84, 88-91.

<sup>306</sup> *Ibid.* Chapter 3, Article 58: "Everyone shall have the right to claim compensation in accordance with the law, for damages caused by a violation of their fundamental rights. The State shall be responsible for damages caused by the unlawful acts of its agents, in the performance of their functions, without prejudice to rights of recourse available under the law."

<sup>307</sup> Supported by an interview with UN Habitat.

<sup>308</sup> International Covenant on Civil and Political Rights (ICCPR), adopted December 16, 1966, G.A. Res. 2200A (XXI), 21 U.N. GAOR Supp. (No. 16) at 52, U.N. Doc. A/6316 (1966), 999 U.N.T.S. 171, entered into force March 23, 1976, acceded to by Mozambique July 21, 1993; Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted December 18, 1979, G.A. res. 34/180, 34 U.N. GAOR Supp. (No. 46) at 193, U.N. Doc. A/34/46, entered into force September 3, 1981, acceded to by Mozambique April 16, 1997; Convention on the Rights of the Child (CRC), adopted November 20, 1989, G.A. Res. 44/25, annex, 44 U.N. GAOR Supp. (No. 49) at 167, U.N. Doc. A/44/49 (1989), entered into force September 2, 1990, acceded to by Mozambique April 26, 1994; African [Banjul] Charter on Human and Peoples' Rights, adopted June 27, 1981, OAU Doc.CAB/LEG/67/3 rev. 5, 21 I.L.M. 58 (1982), entered into force October 21, 1986, acceded to by Mozambique February 22, 1989.

<sup>309</sup> Republic of Mozambique, "Mozambique Regulations for the Resettlement Process Resulting from Economic Activities. Decree of 31/2012 of 8 August" August 8, 2012.

<sup>310</sup> *Ibid.*, Public Consultation.

<sup>311</sup> *Ibid.*, Principles.

<sup>312</sup> Human Rights Watch, *Human Rights Watch Recommendations for Mozambique's Resettlement Decree*, Human Rights Watch, 2012.

<sup>313</sup> Environmental Law Institute, *Prior Informed Consent and Mining: Promoting the Sustainable Development of Local Communities*, Washington D.C.: Environmental Law Institute, 2003, 2.

<sup>314</sup> *Ibid.* 38

<sup>315</sup> Fred Goytendía Matos, interview by Mariana Costa Checa and Carolina Ocampo-Maya, Mesa de Diálogo para el Reasantamiento de Morococha (February 27, 2012).

<sup>316</sup> Environmental Law Institute. *Prior Informed Consent and Mining: Promoting the Sustainable Development of Local Communities*. Washington D.C.: Environmental Law Institute, 2003.

<sup>317</sup> Laplante, Lisa J., and Suzanne A. Spears. "Out of the Conflict Zone: The Case for Community Consent Processes in the Extractive Sector." *Yale Human Rights and Development L.J.* 11 (2008): 69-116.

<sup>318</sup> Human Rights Watch, 2012.

<sup>319</sup> Constitution of Mozambique, Article 82(2).

<sup>320</sup> Republic of Mozambique. "Land Law, No. 19/97 of 1 October." October 1, 1997. Mozambique. Article 18(1)(b) on the Termination of the right of land use and benefits states, "1. The right of land use and benefit shall be

extinguished.... b) By revocation of the right of land use and benefit for reasons of public interest, preceded by payment of fair indemnification and/or compensation”

<sup>321</sup> Human Rights Watch, 2012.

<sup>322</sup> *Ibid*; Jenik Radon and Kabita Shrestha. "Hydro Power and Equity -- Need to be One!" *Nepalnews.com*, December 14, 2012.

<sup>323</sup> Human Rights Watch, 2012.

<sup>324</sup> IFC, *IFC Performance Standards on Environmental and Social Sustainability*, Washington D.C.: International Finance Corporation - IFC, 2012, 38.

<sup>325</sup> *Ibid.*, 34.

<sup>326</sup> Environmental Regulations for Mining Activities, Article 8, paragraph 2

<sup>327</sup> *Ibid.*, Article 8, paragraph 3 and Articles 9 and 10

<sup>328</sup> Radon and Shrestha, 2012.

<sup>329</sup> Republic of Mozambique, "Mozambique Regulations for the Resettlement Process Resulting from Economic Activities. Decree of 31/2012 of 8 August." August 8, 2012. Principle of Environmental Accountability

<sup>330</sup> Lisa J. Laplante and Suzanne A. Spears, "Out of the Conflict Zone: The Case for Community Consent Processes in the Extractive Sector." *Yale Human Rights and Development L.J.* 11 (2008): 69-116. 38.

<sup>331</sup> *Ibid.* p.37.

<sup>332</sup> *Ibid.*

<sup>333</sup> *Ibid.* 38

<sup>334</sup> *Ibid.* 39.

<sup>335</sup> UN Office of the High Commissioner for Human Rights, Gender and the Right to Development. *Information Note: The Right to Development and Gender*. Geneva: UNOHCHR, 2011.

<sup>336</sup> UNDP. *Towards Empowerment and Equality: Implementation of UNDP Gender Equality Strategy 2011–2013*. 2009 Annual Report. New York: UNDP, 2010.

<sup>337</sup> Republic of Mozambique. "Constitution of the Republic of Mozambique." 1990.

<sup>338</sup> International Covenant on Civil and Political Rights (ICCPR), adopted December 16, 1966, G.A. Res. 2200A (XXI), 21 U.N. GAOR Supp. (No. 16) at 52 (Mousseau & Mittal, 2011), U.N. Doc. A/6316 (1966), 999 U.N.T.S. 171, entered into force March 23, 1976, acceded to by Mozambique July 21, 1993; Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted December 18, 1979, G.A. res. 34/180, 34 U.N. GAOR Supp. (No. 46) at 193, U.N. Doc. A/34/46, entered into force September 3, 1981, acceded to by Mozambique April 16, 1997; Convention on the Rights of the Child (CRC), adopted November 20, 1989, G.A. Res. 44/25, annex, 44 U.N. GAOR Supp. (No. 49) at 167, U.N. Doc. A/44/49 (1989), entered into force September 2, 1990, acceded to by Mozambique April 26, 1994; African [Banjul] Charter on Human and Peoples' Rights, adopted June 27, 1981, OAU Doc.CAB/LEG/67/3 rev. 5, 21 I.L.M. 58 (1982), entered into force October 21, 1986, acceded to by Mozambique February 22, 1989

<sup>339</sup> Frederic Mousseau and Anuradha Mittal, *Understanding Land Investment Deals in Africa. Country Report: Mozambique*, Oakland: The Oakland Institute, 2011.

<sup>340</sup> Sochenda Mong, *Mainstreaming Gender in the Extractive Industries: Lessons for Cambodia*, Phnom Penh: UNDP Cambodia, 2010.

<sup>341</sup> Ward, Bernie, and John Strongman. *Gender-Sensitive Approaches for the Extractive Industry in Peru: Improving the Impact on Women in Poverty and Their Families*. Washington, D.C.: The World Bank, 2011.

<sup>342</sup> Melanie Scaife, *Women, Communities and Mining: The Gender Impacts of Mining and the Role of Gender Impact Assessment*, Carlton: Oxfam Australia, 2009.

<sup>343</sup> Adriana Eftimie, Katherine Heller, and John Strongman, *Gender Dimensions of the Extractive Industries: Mining for Equity*, Washington, D.C.: The World Bank, 2009.

<sup>344</sup> Mong, 2010.

<sup>345</sup> *Ibid.*

<sup>346</sup> Eftimie et. al., 2009.

<sup>347</sup> Mong, 2010.

<sup>348</sup> La'o Hamutuk, *The East Timor - Nigeria Exchange to Study the Environmental and Social Effects of Petroleum Development*, Final Report, Dili: East Timor Institute for Reconstruction Monitoring and Analysis, 2004.

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<sup>349</sup> Mong, 2010.

<sup>350</sup> *Ibid.*

<sup>351</sup> Kuntala Lahiri-Dutt, *Gendering the Field Towards Sustainable Livelihoods for Mining Communities*, Canberra: ANU E Press, 2011.

<sup>352</sup> Randi Kaarhus and Selma Martins, *How to Support Women's Land Rights in Mozambique? Approaches and Lessons Learnt in the Work of Four Main Organizations*, Oslo: NORAD, 2012.

<sup>353</sup> The World Bank, *Gender and EI Work Program: The World Bank Group*, June 2008. <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTOGMC/EXTTEXTINDWOM/0,,contentMDK:22085199~menuPK:5873199~pagePK:210058~piPK:210062~theSitePK:3156914,00.html>.

<sup>354</sup> Adriana Eftimie, John Strongman, and Sheila Shahriari, *Integrating Gender into Extractive Industries (EI) Projects. Draft Guidelines for Task Team Leaders*, The World Bank Group, 2007.

<sup>355</sup> Human Rights Watch, 2012.

<sup>356</sup> Laplante and Spears, 2008, 97.

<sup>357</sup> Human Rights Watch. "What is a House Without Food?" Mozambique's Coal Mining Boom and Resettlements. May 2013. [http://www.hrw.org/sites/default/files/reports/mozambique0513\\_brochure\\_web.pdf](http://www.hrw.org/sites/default/files/reports/mozambique0513_brochure_web.pdf).



## 6 The Need for Upgraded Mining Laws

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The rapid growth of the extractive sector in Mozambique holds great promise for economic and social development in the country. Once riven by civil war for 15 years, Mozambique is poised to become the world's largest coal exporter within the next decade. Corporate investment in the extractive sector is expected to rise to tens of billions of dollars in coal, gas and minerals.<sup>358</sup> With growth in foreign investment, a burgeoning private sector and a growing middle class, there is great potential for the country to reduce poverty and its current dependency on foreign aid. While attracting investment in the extractive sector is a high national priority, mining activities in Mozambique must be conducted in a manner that prioritizes and improves the social and economic well-being of its people.

Estimates of coal reserves, largely in Tete and Niassa provinces, exceed 100 billion tons. The market for Mozambican coal seems guaranteed with a growing demand for steel manufacturers, particularly in India. As coal mining continues to increase, 112 licenses have been granted to 45 national and foreign companies over the past two years. Vale, a large Brazilian mining company, began its investment in 2007 and coal production in 2011. Vale's coal activities in Mozambique subsequently spurred interest among other mining companies, including British company Rio Tinto, which began coal production in mid-2012.<sup>359</sup>

### 6.1 The Current Legislative Framework

Mining activities in Mozambique are regulated by a number of legal instruments. The primary law regulating the mining sector is *Law No 14/2002* of June 26, 2002 (the "Mining Law"), which was intended to create a sound and sustainable legal environment for the development of the industry in a manner that will benefit the people of Mozambique. This objective was expressly set out in the law's preamble as follows: "The mineral resources of the Republic of Mozambique constitute an important factor for social and economic development, when evaluated and utilised rationally."<sup>360</sup> The current Mining Law sets out provisions regarding licensing, environmental monitoring and protection, guarantees and security for investors, transparency and tax stability.<sup>361</sup>

#### 6.1.1 Licensing

Mozambique's mining sector is regulated and administered by the Ministry of Mineral Resources ("MIREM"). Under Mozambique's Constitution, all mineral resources are the property of the State. Under certain conditions, MIREM has the power to grant rights of use and exploitation to Mozambican and foreign persons through the issuance of licenses. The rights of use and enjoyment of mineral resources are allocated through different types of licenses. These are the Reconnaissance License, Exploration License, Mining Concession, Mining Certificate and Mining Pass, with the latter two relevant for small-scale artisanal mining.<sup>362</sup>

Each license carries different terms and conditions, and lasts for a particular term, with options for renewal and extension in some cases. The key aspects of each license are set out in the table in *Appendix Appendix 1A: Existing Mining Contracts under the Mining Law*.

## 6.2 The Case for a New Mining Law

As Mozambique continues at rapid speed on the path of natural resource extraction, it is essential that the current legislation be amended to better protect the interests of its people, particularly with respect to environmental, health, social and transparency considerations. If managed well, Mozambique's mining sector will be an important opportunity for the country to develop its economy and bring prosperity to its citizens.

Provisions of the existing Mining Law should be amended in distinct areas, giving mining activities a modern and adequate regulatory basis to ensure greater competitiveness, guarantee the protection of rights and define the obligations of the holders of mining titles. Its current provisions can also be further clarified to ensure that the burden of regulatory compliance is placed on the holders of mining licenses, not on the Government of Mozambique. While the current *Mining Law of 2002* is undergoing revisions and is expected to be passed by Parliament in 2013, amendments have not been made publicly available.

### 6.2.1 Policy Recommendations to Clarify, Strengthen and Modernize the Existing Mining Legislation

The following policy recommendations are illustrative of the issues and gaps present in the 2002 Mining Law. These recommendations should be considered in order to clarify, strengthen and modernize existing Mining Legislation.

#### *Increase Checks and Balances*

All aspects of regulating the mining industry – from commercial to environmental and public health – fall on MIREM. One-stop shopping, where one governmental ministry carries all responsibility in matters of approving and monitoring licenses, is not advisable from a national administrative point of view. The entity that grants a license is naturally biased towards ensuring its continuance, since a license revocation at a later stage could imply an error in the initial grant. These pressures can be heightened when a national mining company is involved in a project, as that company may stand to lose public image or acceptance in such an event.<sup>363</sup>

Under the current system, there is also a risk that present-day commercial considerations will become the dominant factor in MIREM's decision making due to pressures to increase the budget. Moreover, success in the commercial realm is easier to calculate and measure compared to externalities such as environment, health, safety and cultural considerations.<sup>364</sup>

No single ministry can be expected to carry out all of the functions granted to MIREM and balance them appropriately. To address these considerations, regulating these functions should lie with the most relevant administrators and be granted to co-equal ministries as part of an institutional checks and balances system. This can be done, for example, by institutionally separating the processes of approving, monitoring and enforcement of licensing. The Ministries of Health and Safety, Environment and Social Affairs should be involved in the licensing and oversight process. Mining operations should be subject to such additional ministerial oversight, with MIREM obtaining consent by these ministries prior to making decisions on mining-related licensing matters and operations. To that end, the New Mining Law should call for increased checks and balances, or separation of authorities, to allow for improved licensing, monitoring and enforcement procedures, while ensuring that one department or ministry is not

overloaded.<sup>365</sup> See *Section 8: The Case for Strong and Reliable Institutions*.

**Recommendation 50:** Incorporate checks and balances in mining industry regulation to supplement MIREM’s central role, and to incorporate greater coordination between, and powers for, the Ministries of Environment, Health and Safety and Social Affairs.

### *Use Reference Laws in Adopting Clear Standards for “Best” and “Good” Mining Practices*

The parameters of the current Mining Law with respect to compliance with environmental, health and safety regulations are vague and subjective. For example, Chapter 1, General Provisions, Article 2 requires that the “right to the use of mineral resources shall be exercised in accordance with the **best and safest mining practices** [emphasis added]”<sup>366</sup> but does not provide adequate guidance or make reference to any established best and safest practices. The language on the impact of Reconnaissance Activities on the environment is equally vague. For example, Chapter 2, Section II, Article 9, requires that activities be performed “in accordance with **good mining practices** [emphasis added] and restore the land in case of any damage resulting from reconnaissance activities, in conformity with the appropriate environmental standards.”<sup>367</sup> Similarly here, “good mining practices” are not elaborated upon or clearly defined.

The New Mining Law can improve upon the current law by incorporating the best environmentally sound mining industry practices available and being practiced in the mining sector today, taking into account the geological and environmental circumstances of the operations in question and using state-of-the-art technology. Australia has benefitted greatly from its natural resource boom as reflected by high rates of economic growth, low unemployment rates and increased incomes.<sup>368</sup> Its success in the extractive sector is in part attributable to having a strong National Mine Safety Framework founded on principles of environmental responsibility and sustainable development. For example, the Government of Western Australia Department of Mines and Petroleum (“DMP”) promotes best environmental management practices by delivering environmental regulatory and policy services to maximize the responsible development of the state’s mineral and petroleum resources. The Environmental Division of the DMP assesses, audits and inspects mineral and petroleum activities to ensure that operations are consistent with principles of responsible and environmentally sustainable mining practices and development.<sup>369</sup>

The European Union (“EU”) has also put into place a comprehensive energy policy which covers a full range of energy sources from fossil fuels, including coal, oil and gas, to make energy consumption more safe, secure, competitive and sustainable. In its efforts towards the sustainable use of coal in the future, the EU is aiming for a drastic reduction in carbon emissions from coal-fired power stations through clean technologies like carbon capture and storage.<sup>370</sup>

Mozambique should also give its mining activities a modern regulatory basis in order to ensure strong environmental protections, guarantee the protection of rights of impacted communities and better define the obligations of the holders of mining licenses. This means implementing scientific and technological advances from the global mining industry to prevent and mitigate harmful environmental and health impacts on impacted communities. Importantly, health, safety and environmental concerns must take precedence over all other factors when deciding on which international best practices to implement. Until Mozambique’s Mining Laws are more fully developed, it is recommended that it use the reference laws and standards of more established jurisdictions such as Australia and the EU in matters governing environmentally sound mining practices (see *Section 7.3.1: Clarifying, Modernizing,*

and Strengthening the Gas and Petroleum Legislation for a discussion of how reference laws can be incorporated into Mozambique’s legislation).

#### **Recommendation 51:**

- Clearly define “Best” and “Good” mining practices in the New Mining Legislation.
- In determining best practices, draw upon the scientific knowledge, technology, reference laws, and standards of more established jurisdictions, including Australia and the European Union.

#### **Strengthen Existing Environmental Laws and Regulations to Reduce Harmful Environmental and Health Impacts**

The mining sector offers Mozambique the promise of economic growth and opportunity. However mining activities can also have adverse environmental and health consequences and must therefore be undertaken and regulated in light of those impacts. Environmental risks and damage can be minimized and mitigated, not only by following best international mining practices, but through stronger legislation, regulation and implementation.<sup>371</sup>

#### **Laws Governing Environment**

The *Constitution of Mozambique* guarantees that all citizens shall have “the right to live in, and have the duty to defend, a balanced natural environment” (*Article 90*), “the right to medical and health care, within the terms of the law, and shall have the duty to promote and preserve health” (*Article 89*), and “the right to safe secure and hygienic work conditions” (*Article 85*).<sup>372</sup> Other primary sources of environmental law in Mozambique include *Law No. 20/97* (the “Environmental Law”). The Environmental Law prohibits pollution and activities that lead to erosion, desertification, deforestation or other forms of environmental degradation except as permitted by law.<sup>373</sup> The Environmental Law is regulated by a range of additional instruments that are both general and sector-specific.<sup>374</sup> The Ministry of Coordination of Environmental Affairs (“MICOA”) is the governmental ministry responsible for the protection and preservation of natural resources, environmental licensing and coordination of environmental activities.

#### **Enforce Strict and Joint and Several Liability for Environmental Harm and Health Damages**

Mozambique’s environmental management of mining activities currently does not provide adequate protection to its people from the impact of harmful mining practices. For example, the Mining Law states that:<sup>375</sup>

*mining activity shall be undertaken in conformity:*

- a) *With the laws and regulations in force, relevant to the use and exploration of mineral resources, as well as to the protection and preservation of the environment, including social, economic and cultural aspects; and*
- b) *With the **good mining practices** [emphasis added], in order to minimize waste and the loss of natural resources and protect them against unnecessary damage.*

Once again, the term “good mining practices” referenced in Article 35, Principles, is vague at best, and

must be more clearly defined in the New Mining Law. Particular attention must be given to revising Article 35 to bolster current standards on environmental accountability by including a strict liability rule for companies responsible for causing environmental and health damages arising from mining activities.

South Africa's mining laws can be used as guidance for legislation that calls for a stronger standard of joint and several liability which holds a company and its officers responsible through the following:

"The directors of a company or members of a close corporation are **jointly and severally liable** [emphasis added] for any unacceptable negative impact on the environment, including damage, degradation or pollution advertently or inadvertently caused by the company or close corporation which they represent or represented."<sup>376</sup>

Consideration must also be given to entities owned by foreign companies to avoid the owners of such entities from escaping Mozambican jurisdiction and consequent liability.<sup>377</sup>

### **Health**

Mining and other extractive-related environmental damage, including air pollution and water contamination, can lead to harmful health consequences for communities. Environmental Impact Assessments ("EIAs"), mandatory under environmental regulations for mining projects, are in part designed to mitigate these negative impacts. An EIA undertaken by MICOA technically and scientifically examines the consequences of a mining project on the environment and local communities.<sup>378</sup>

The EIA report, scrutinized by MICOA and MIREM, must include an environmental management program which addresses social, economic and cultural aspects.<sup>379</sup> EIAs, along with social surveys conducted with affected individuals and households, are important not only for environmental reasons, but are vital to having a more informed and holistic understanding of the potential impact of mining activities on local communities.<sup>380</sup> Importantly, an EIA, when prepared with the active participation of communities, can help curtail mining's negative health and environmental impacts.

Companies should be held to the highest international standards in complying with the terms of their EIAs, with strong consequences for breach, including grounds for termination. This policy recommendation demands that Mozambique follow environmental standards of more established jurisdictions such as the EU in mitigating environmental harm. Moreover, the burden of proof should lie on companies to prove that they are abiding by the highest operating practices of more established jurisdictions (see *Section 4: Protecting Mozambique's Environment*).

**Recommendation 52:** Strengthen environmental laws and regulations in order to reduce harmful environmental and health impacts through the following:

- Hold companies strictly liable for environmental and health damage arising from mining activities.
- Hold directors of a company jointly and severally liable for negative environmental and health impacts.

***Amend existing Mining Legislation to bolster safeguards for communities in matters of resettlement, particularly by ensuring procedures for public consultation and expansive, holistic compensation***

The involuntary resettlement of local communities has been among the most harmful consequences of mining and other extractive activities. Gaps exist in the current Mining Law and the 2012 Resettlement Decree with respect to the resettlement process. The 2002 Mining Law fails to provide any guidance on the resettlement process. The 2012 Resettlement Decree (“Resettlement Decree”) does not provide adequate safeguards on matters of involuntary resettlement, namely in the realm of public consultation, ensuring fair compensation and improving livelihoods. Moreover, the Council of Ministers approved the Resettlement Decree without conducting public consultation with civil society groups or extractive companies.

Local communities forced to relocate bear the greatest burden, including financial, health and environmental harm due to resettlement and therefore must be equitably compensated, taking these hardships into consideration. Accordingly, compensation should be expansive to include livelihood considerations, as well as in providing resettled communities with a share of future profits from lucrative mining operations. Incorporating these measures into the resettlement process will not only mitigate social discord, but can lead to greater community buy-in of extractive projects.

In order to ensure that the right to adequate housing, compensation, education, health services and livelihoods of resettled communities are safeguarded, these gaps must be addressed through amended legislation of both the Mining Law and the 2012 Resettlement Decree. For more a more detailed discussion on the Resettlement process of communities, including the impacts of mining activities on women, see *Section 5: Ensuring Social Equity in Extractive Industries-Based Development*.

**Recommendation 53:** Amend the existing Mining Law and the 2012 Resettlement Decree to provide greater protection of land occupancy rights of local communities who are forced to resettle due to mining operations. Amendments include:

- Minimizing involuntary resettlement whenever possible;
- Gaining full and informed community consent by consulting with impacted communities, with particular attention being paid to women and other marginalized groups, at all stages of the resettlement process;
- Improving the impacted community’s standard of living through livelihoods and by ensuring access to markets, education and healthcare facilities;
- Providing resettled communities with a share of future profits from mining operations.

Improve the Current Mining Legislation by Providing for Royalty, Tax and Windfall Profit Provisions, Thereby Reducing the Scope of Negotiations between the Government of Mozambique and Mining Companies

The Current Mining Law is silent on many crucial issues surrounding how contracts with mining companies will be negotiated. This includes establishing a minimum royalty rate payable by companies, income tax, and a windfall profit tax that activates when coal prices increase beyond a stipulated amount. The design of the windfall tax, in particular should recognize that companies choose to invest

on the basis of an assumed or anticipated internal rate of return.

Given that Mozambique is still building its capacity in mining sector regulations, the Government should consider enshrining certain key concepts in legislation, so that they are not bargained away or ignored during negotiations with companies. Benefits of increasing the specificity in the law include that there would be fewer differences in royalties and taxes that need to be calculated, and that all companies would be expected to operate under the same rules for submission of key documents for government approval. More specificity in the law would also make regulation of the mining sector easier for the government.

### ***Fiscal Framework in Mozambique: Royalties, Taxes and Windfall Profits***

The objective for Mozambique in taxing natural resources extraction should be to maximize government revenue while fostering inward investment. “Government take” is the total amount of revenue a government receives from natural resource extraction. A country’s fiscal regime or framework determines the government’s share of the revenue and helps establish a timeframe for the future stream of revenue.<sup>381</sup>

In the mining sector, royalty payments and income tax are among the most important fiscal tools utilized by the government. Royalties and taxes – often referred to as the “heart of the deal” – represent the cash stream for most governments involved in natural resource extraction. Windfall profits are another fiscal tool that can allow Mozambique a better share in natural resource extraction, particularly in cases of commodity price increases. Unlike royalties and taxes, windfall profits allow the government take to increase alongside increasing returns on the companies’ profits. This tool builds flexibility into the tax system enabling it to absorb changes to economic circumstances.<sup>382</sup>

Windfall taxes on mining activities are becoming increasingly popular in many natural resource rich economies, as States readjust their regulatory frameworks to ensure that a fair share of the profit from higher mineral prices benefit the local population. Around 25 countries have recently increased or have plans to increase their tax and royalty regimes for the mining sector, including Australia, Ghana, Guinea, Peru and Zambia. Such regulatory change can inspire similar adjustments in Mozambique’s windfall profit mechanism in order to divert more revenue to the State.<sup>383</sup>

The fiscal framework for extractive sector investments in Mozambique has evolved over the past two decades. During the 1990s, Mozambique sought to establish an investor-friendly reputation by offering large tax exemptions to early entrants, including Mozal aluminum smelter and the Sasol natural gas project.<sup>384</sup> It was held at that time by analysts that substantial exemptions were needed to attract investors to Mozambique, as a post-conflict country that lacked a track record in large-scale foreign investment. However, substantial tax exemptions from early mega-projects meant that these initiatives contributed little to Mozambique’s revenue stream. There are concerns that the same will happen for future developments in the coal sector as well as in contracts being negotiated for gas.<sup>385</sup>

In 2002, Mozambique scaled back its tax exemptions, moving away from a project-specific regime to a legislative one. Tax exemptions were further controlled in a revised code of fiscal benefits in 2009.<sup>386</sup> Yet despite these positive changes, there have been allegations that natural resource contracts continue to give project-specific exemptions above and beyond the legislative framework. However as in many other resource rich countries, mining contracts in Mozambique are currently not publicly available and make such claims difficult to verify.

### **Implications for Government Revenues**

Achieving a fair deal for Mozambique in natural resource revenues ultimately depends on a strong fiscal framework. As the new Mining Law is expected to be passed by Parliament within the next few months, the design of Mozambique's fiscal framework will determine the chances of the country receiving its fair share of revenues from the sale of its natural resources. Accordingly, Mozambique's fiscal regime should establish royalty, tax and windfall profit provisions that are firmly grounded in the Mining Legislation instead of in one-off contracts. Now is time for Mozambique to plan and implement how those revenues should be collected and utilized.

### **Monitoring Corporate Payments to Increase Government Revenue**

One of Mozambique's greatest challenges in the future will be to ensure that tax assessments accurately reflect what companies ought to owe. The following case study from Tanzania provides useful guidance for Mozambique to formalize efforts to address corporate tax minimization strategies. In Tanzania, the collection of natural resource revenues is overseen by a "Minerals Audit Agency". A Minerals Audit Agency can provide support to tax authorities in determining corporate income tax, for example, by verifying the authenticity of revenue, investment and expense claims. As this case study from Tanzania illustrates, close government monitoring can lead to increased corporate payments and actual revenue increases for the country.

#### **TANZANIA'S MINING AUDIT AGENCY<sup>387</sup>**

Excerpt from Don Hubert, "Resources, Revenues and Social Development: Prospects and Challenges for the Extractive Sector in Mozambique" (Initial Draft), Paper prepared for UNICEF Mozambique, September 2012, p. 19.

In 1997, the Government of Tanzania reorganized the mining sector in order to attract greater foreign investment. This resulted in a substantial increase in exploration and mining, including six new gold mines. But there was widespread concern that the growth in mining was not contributing significantly to government revenues.<sup>388</sup> The government undertook a major review of the mining sector and its contribution to the economy and concluded that, in 2006, natural resource exports of nearly \$1 billion had generated royalty payments of only \$26 million. The modest revenue was due in part to tax exemptions including accelerated depreciation of capital investments. But there were also concerns about aggressive tax avoidance strategies adopted by companies. Many large gold mining companies had never paid corporate income tax, claiming losses in each year of operation. A report to Parliament indicated that mining companies had declared losses of \$1.045 billion between 1998 and 2005.<sup>389</sup>

Preliminary conclusions of a confidential government-funded audit of gold mining companies suggested that companies had "over-declared" their losses by \$502 million.

In 2009 the government formalized efforts to oversee the collection of revenues from the natural resource sector with the establishment of the semi-autonomous Tanzania Minerals Audit Agency. In order to ensure accurate rates of royalty tax, the agency independently assesses the quantity and quality of minerals mined and exported through on-site mine monitors, independent mineral sample analysis and a close tracking of market prices. The agency also supports tax authorities in determining corporate income tax by verifying the authenticity of revenue, investment and expense claims, analyzing the legitimacy of company costs through cost-benefit analyses and providing forecasts of expected future revenue.

Since the creation of the agency, revenues have increased substantially. Royalty payments from gold

increased to \$41 million in 2010 and increased to \$57 million in 2011. All major gold mines now pay corporate income tax, with total payments increasing from \$3.2 million in 2009 to \$14.9 million in 2010 and \$30.5 million in 2011. Corporate income tax accounted for 5% of government revenue from large-scale mining in 2009 and 25% in 2011. Growth in corporate taxes is to be expected as depreciation allowances decline, but the correspondence between close government monitoring and increased corporate payments is striking. Importantly, the actual revenue increases are almost certain to be higher than currently reported. The 2011 audits raised discrepancies that are currently being investigated by tax authorities including unqualified expenditure deductions of \$335 million, wrongly claimed losses of \$183 million, over-claimed capital allowance of \$145 million, disallowable expenses of \$34 million, and understated mineral sales of \$18 million.<sup>390</sup>

#### **Recommendation 54:**

- Mozambique's fiscal regime should establish royalty, tax and windfall profit provisions that are firmly grounded in the Mining Legislation instead of in one-off contracts.
- The Mining Legislation should specify minimum royalty rates payable by companies and provide for a windfall profit tax that is activated when mineral prices increase beyond a stipulated amount.
- All such payments should be independently audited, applying international auditing standards, with results and auditing comments made publicly available.

#### ***Prohibit Stabilization Clauses, Except in Limited Circumstances***

Stabilization clauses are clauses in private contracts between host countries and investors that address changes in the law that may occur over the life of the contract. Stabilization clauses are commonly used in long-term investments in the extractive industries and are often integrated into various parts of the contract. Countries vary in their approaches to stabilization clauses.<sup>391</sup>

Australia, Canada and Norway have petroleum regimes that contain no stabilization provisions,<sup>392</sup> and Australia and Canada do not use stabilization clauses in their mining contracts.<sup>393</sup> Chile employs stabilization in applying uniform regulations to the industry for a fixed term. In other words, stabilization for all operations ends on the same date, regardless of when the operation began.<sup>394</sup>

From the investor's point of view, stabilization clauses are a tool to mitigate risk, protecting foreign investments from sovereign risks such as nationalization or unexpected regulatory reform, where the host country imposes new requirements on foreign investors to reflect changes in circumstances. Stabilization clauses that relate to the fiscal terms of an agreement are sometimes considered vital to the financial stability of an investment project, particularly in emerging markets. Host countries have often viewed stabilization clauses as a tool to foster a favorable investment climate.<sup>395</sup>

As Mozambique revises its legal framework regulating the extractives sector, it will find itself in the position of choosing to update its existing contracts under the previous system, particularly if the contract contained a stabilization clause. The New Mining Law should prohibit stabilization clauses, except in very narrow circumstances and for a limited time. For example, such clauses should be allowed in the case of pure fiscal stabilization provisions which are for a prescribed period of time and coupled with a windfall profit tax, for the reason that companies make investment decisions on the basis of an

assumed or anticipated internal rate of return (“IRR”).<sup>396</sup>

Most importantly, Mozambique must not abdicate its sovereign right to pass new legislation by including stabilization clauses in new mining contracts with extractive companies. *United Nations General Assembly resolution 1803 (XVII) of 14 December 1962*,<sup>397</sup> speaks to the issue of national sovereignty and natural resources and is relevant for Mozambique. Parts of that declaration state the following:

- 1) The right of peoples and nations to permanent sovereignty over their natural wealth and resources must be exercised in the interest of their national development and of the well-being of the people of the State concerned.
- 2) The exploration, development and disposition of such resources, as well as the import of the foreign capital required for these purposes, should be in conformity with the rules and conditions which the peoples and nations freely consider to be necessary or desirable with regard to the authorization, restriction or prohibition of such activities.
- 3) In cases where authorization is granted, the capital imported and the earnings on that capital shall be governed by the terms thereof, by the national legislation in force, and by international law. The profits derived must be shared in the proportions ***freely agreed upon***, in each case, ***between the investors and the recipient State***, due care being taken to ensure that there is ***no impairment, for any reason, of that State's sovereignty over its natural wealth and resources*** [emphasis added].

Accordingly, stabilization clauses should never be allowed in a manner that would constrain the ability of the host country to regulate in the areas of labor rights, health, safety, the environment, cultural heritage protection, and other areas that could impact human rights. Apart from a company’s legitimate expectation of investment protection from arbitrary state action, mining companies operating in Mozambique also have a social responsibility to respect human rights, and should not obstruct the state from fulfilling its human rights duties.<sup>398</sup>

Andrea Shemberg, in his paper “Investment Agreements and Human Rights: The Effects of Stabilization Clauses” expresses the concerns and basis for criticism of stabilization clauses by human rights advocates and civil society groups, particularly with respect to British Petroleum’s oil contracts.

#### **STABILIZATION CLAUSES AND HUMAN RIGHTS<sup>399</sup>**

From Andrea Shemberg, “Investment Agreements and Human Rights: The Effects of Stabilization Clauses,” Corporate Social Responsibility Initiative Working Paper No. 42. Cambridge, MA: John F. Kennedy School of Government, Harvard University, 2008, pages vi-vii.

Concerns about stabilization clauses and human rights arose in earnest in 2003 when the oil company BP published its private investment contracts relating to a major cross-border pipeline project. Subsequently, some civil society groups criticized BP for various aspects of the contracts, including the stabilization clauses. These groups claimed that the clauses—by exempting an investment project from new laws aimed at protecting human rights, or by requiring host states to compensate the investor financially for compliance—limited the host states’ action to implement their obligations under international human rights law. The objective of these groups was protection of human rights in such areas as nondiscrimination, health and safety, labor and employment, cultural heritage, and the

environment.

This criticism signaled a heightened social expectation that investors have a responsibility to respect human rights, and—notwithstanding the legitimate expectation of protection of the investment from arbitrary action by the state—should not place obstacles in the way of the host state’s action to implement its human rights duties.

BP subsequently amended the contracts to avoid some of the problems identified by human rights advocates. The amendments, called the “Human Rights Undertaking,” were designed in part to avoid the potential negative impact that stabilization clauses were alleged to have on the protection of human rights in the host states.

Civil society criticism of stabilization clauses has expanded beyond oil pipelines to include other contracts and industries. Human rights advocates have expressed concern that the protection of investor rights in contracts and international agreements is not being balanced with 1) the state’s own duty to regulate investors to protect human rights, and 2) the investors’ responsibility to respect rights.

These groups are concerned that failure to balance these interests either can make foreign investments exempt from bona fide social and environmental laws that come into force after the effective date of the agreement, or can require the host state to compensate the investor for compliance. They argue that this perceived imbalance denies the state its proper role as legislator, with powers different and greater than those of companies, and creates a financial disincentive for the host state, thus chilling or hindering the application of dynamic social and environmental standards over the life of a long-term project. Human rights advocates claim that the negative effects of stabilization clauses are exacerbated in developing countries, where the need is for rapid legislative development and implementation—not for obstacles to the application of new laws.

**Recommendation 55:** Stabilization clauses must only be allowed in narrow circumstances and for a prescribed period of time. Stabilization clauses should never be allowed to limit the host country’s ability to regulate or impose stricter standards in labor, health, safety and the environment.

### *Improve Transparency of Contracts and Make Mining Contracts Publicly Available*

Contracts are a critical component of natural resource development. Each stage of natural resource development, from the decision to exploit natural resources, to exploration, exploitation and revenue collection, offers opportunities to improve or frustrate the benefits of extractive operations for the people. Contract transparency is particularly vital in the furtherance of responsible resource management for long-term growth and economic development.<sup>400</sup>

#### ***Benefits of Full Contract Transparency and Published Contracts***

Contract transparency has the ability to bring stability to an industry that is prone to high levels of contract renegotiation. Full contract transparency means the Government of Mozambique would make all its contracts in the extractive industries – past and present – free of charge and publicly accessible to all Citizens without fear of harassment or intimidation.<sup>401</sup>

Full transparency can also help alleviate the disadvantaged position that governments may find themselves in when negotiating with powerful extractive companies. The asymmetry of power, which

frequently exists in extractive negotiations, can often lead to suboptimal deals, thereby undermining the best interest of the country and its citizens. Contract transparency can help level this unequal playing field, leading to more equitable deals for countries and their people in natural resource exploitation.<sup>402</sup>

Publicly available contracts can also provide key incentives for governments and companies to refrain from entering into deals that may be the product of undue influence or corruption. By narrowing the gap of asymmetry that currently exists in Mozambique between the government and mining companies, contract transparency in the long term will enable the Government to negotiate more equitable deals for the country and for its people.

### International Policies and Best Practices on Contract Transparency

The World Bank, IMF and IFC are beginning to encourage contract transparency, with the IMF endorsing transparency as a central tenet to good governance in the extractives industry.<sup>403</sup> East Timor, Peru and Ecuador have made contracts from their extractive sectors publicly available. The Afghan government has also made landmark advancements in contract transparency in the extractive industries by publishing the 2011 Amu Darya oil contract and more than 200 small mine contracts.<sup>404</sup>

As the following case study demonstrates, Liberia explicitly supports contract transparency in managing its extractives sector and can provide valuable guidance for Mozambique in its efforts to reform the current Mining Legislation.

#### **CASE STUDY – LIBERIA: CONTRACT DISCLOSURE TO LEVERAGE BARGAINING POWER AND GAIN INVESTOR INTEREST<sup>405</sup>**

From Resource-Based Sustainable Development in the Lower Zambezi Basin, a draft for consultation, Vale Columbia Center on Sustainable International Investment, Columbia University, June 1, 2011, p. 139.

In Liberia, the Ellen Johnson-Sirleaf Administration quickly stated that one of its immediate priorities was the renegotiation of contracts signed by the previous transitional government. The first contract renegotiated was the 2005 Agreement signed with Mittal Steel for the former Lamco iron ore mine. The government sought and achieved return of control of key infrastructure, such as the rail line from the Lamco mine to the port of Buchanan and the port itself. The government also increased its financial take from the contract, eliminated tax holidays, and closed tax loopholes that could have allowed the company to transfer offshore the returns to the Government in the original contract.

One of the drivers of this successful renegotiation was the disclosure of the original contract with Mittal Steel. Groups in Liberia as well as abroad criticized the contract for being out of line with good practice in the mining industry. It significantly bolstered Liberia's ability to renegotiate the contract since it had national and international support, including the support of the international donors, who have historically been reluctant to support renegotiations. A group of experts from various disciplines was put together to review all contracts and make recommendations about whether they needed to be renegotiated, cancelled, or kept in the current form.

Following this successful renegotiation, which included provisions for many best international practice standards on transparency, social, and environmental standards, the Government passed new legislation and regulations for the mineral sector using the renegotiated contract as a model.

Today, the Government of Liberia publishes all of its contracts in all natural resource sectors—oil, gas, mining, timber, agriculture, and others. It has not deterred investment. Since renegotiating its contract

with Mittal Steel, several more multi-million dollar mining contracts have been concluded. The Johnson-Sirleaf administration has concluded US\$16 Billion dollars in investment since taking office and beginning to publish the investment contracts.

Given the magnitude of extractive projects in Mozambique and their direct impact on people's livelihoods and living conditions, contract disclosure is critical for ensuring democratic accountability.<sup>406</sup> Most importantly, the citizens of Mozambique will benefit from published contracts by better understanding the complexity of extractive agreements when they are out in the open. By presenting a more comprehensive picture of this industry, contract publication would better inform Mozambique's citizens of their rights and can encourage more meaningful participation. Finally, transparent and publicly available contracts, combined with improved governmental management and corporate responsibility, can help mitigate human rights abuses such as environmental degradation, negative health impacts and community displacement.<sup>407</sup>

**Recommendation 56:** Promote transparency in natural resource extraction by making all mining contracts publicly available.

## Notes to Section 6

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<sup>358</sup> Don Hubert, “Resources, Revenues and Social Development: Prospects and Challenges for the Extractive Sector in Mozambique (Initial Draft),” Paper prepared for UNICEF Mozambique (September 2012) 3.

<sup>359</sup> *Ibid.*

<sup>360</sup> Mozambique Mining Law No. 14/2002 of June 26, 2002.

<sup>361</sup> *Ibid.* Other instruments on mining are Decree No. 62/2006 implementing regulations for the Mining Law; Law No. 11/2007 updating the taxation structure for mining activities; Law No. 13/2007 establishing tax incentives for mining activities; Decree No. 5/2008 regulating specific taxes for mining activities; Decree No. 26/2004 regulating environmental matters for mining activities; Decree No. 20/2011 approving the Regulation for the commercialization of mineral products; Decree No. 63 approving the regulation for contracting of foreign citizens in the petroleum and mining sectors; and Diploma Ministerial No. 189/2006 establishing the rules for the environmental management of mining activities

<sup>362</sup> Sal & Caldeira, Advogados E Consultores, LDA, “Introduction to the Legal Framework for Mining in Mozambique,” (April 2010).

<sup>363</sup> Jenik Radon, Esq., Laixa Lizardo, Samira Nikaein, Christine Lio Capilouto, Esq. and Dionisio Nombora, “Comment Letter on the Revision of the Petroleum Legislation of Mozambique,” Maputo, Mozambique, June 19, 2012.

<sup>364</sup> Jenik Radon, Esq. and Julius Thaler, “Resolving conflicts of interest in state-owned enterprises,” *International Social Science Journal* (2009): <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-2451.2009.00702.x/abstract>.

<sup>365</sup> Jenik Radon, Esq., “Comments on the Proposed Mining and Minerals Act of Malawi,” specifically Chapter 61:01, Mines and Minerals, of the Laws of Malawi (“Mining Law Draft”), April 26, 2010.

<sup>366</sup> Mozambique Mining Law 2002, Chapter 1, General Provisions, Article 2, Objectives.

<sup>367</sup> *Ibid.*, Chapter 2, Section II, Article 9, Title-Holder Obligations 1.d.

<sup>368</sup> Australian Government: Department of Resources, Energy and Tourism, National Mine Safety Framework: <http://www.ret.gov.au/resources/mining/framework/Pages/default.aspx>.

<sup>369</sup> “Government of Western Australia, Department of Mines and Petroleum, Environmental Regulations”: <http://www.dmp.wa.gov.au/17191.aspx>.

<sup>370</sup> “European Commission – European Energy Policy,” [http://ec.europa.eu/energy/coal/index\\_en.htm](http://ec.europa.eu/energy/coal/index_en.htm).

<sup>371</sup> Jenik Radon, Esq., “Comments on the Proposed Mining and Minerals Act of Malawi,” specifically Chapter 61:01, Mines and Minerals, of the Laws of Malawi (“Mining Law Draft”), April 26, 2010.

<sup>372</sup> Constitution of Mozambique, Chapter V: Economic, Social and Cultural Rights and Obligations.

<sup>373</sup> Environmental Law No. 20/97 of 1 October, Article 9, paragraph 1.

<sup>374</sup> Law No. 10/88 of December 22 (the “Legal Protection of Mozambique’s Cultural Heritage Law”); Decree No. 32/2003 of 12 August (the “Regulation on the Process of Environmental Audit”); Decree No. 26/2004 of 20 August (the “Environmental Regulations for Mining Activities”).

<sup>375</sup> Law No 14 /2002, of June 26, Chapter V, Environmental Management of Mining Activities, Article 35, Principles.

<sup>376</sup> South Africa Mineral and Petroleum Resources Act of 2002.

<sup>377</sup> Jenik Radon, Esq., “Comments on the Proposed Mining and Minerals Act of Malawi,” specifically Chapter 61:01, Mines and Minerals, of the Laws of Malawi (“Mining Law Draft”), April 26, 2010.

<sup>378</sup> Environmental Regulations for Mining Activities, Article 8, paragraph 2.

<sup>379</sup> *Ibid.*, Article 8, paragraph 3 and Articles 9 and 10.

<sup>380</sup> Jenik Radon, Esq. and Kabita Shrestha, “Hydro Power and Equity – Need to be One,” *Nepal News*, December 14, 2012, [www.nepalnews.com/contents/2012/englishweekly/spotlight/dec/dec14/article.php](http://www.nepalnews.com/contents/2012/englishweekly/spotlight/dec/dec14/article.php).

<sup>381</sup> Don Hubert, “Resources, Revenues and Social Development: Prospects and Challenges for the Extractive Sector in Mozambique” (Initial Draft), Paper prepared for UNICEF Mozambique (September 2012) 13.

<sup>382</sup> *Resource-Based Sustainable Development in the Lower Zambezi Basin*, a draft for consultation, Vale Columbia Center on Sustainable International Investment, Columbia University, June 1, 2011.

<sup>383</sup> Allen & Overy, “Guide to Extractive Industries Documents – Mining,” *World Bank Institute Governance for*

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*Extractive Industries Programme*, January 2013.

<sup>384</sup> Mozal is reported to be exempt from all taxes save 1% on gross exports. Before 2007, companies received a 50% reduction in corporate income tax. Income tax rates for the first phase of the Sasol Project are reported to be 17.5%. See *Mozambique: Study of the Impact of Tax in Mozambique*, Foreign Investment Advisory Service, 2006, 36.

<sup>385</sup> Hubert, 2012.

<sup>386</sup> On the evolution of Mozambique's fiscal regime, see PARPA II Review—The Tax System in Mozambique, Volume II: Appendices, USAID, 2009.

<sup>387</sup> Hubert, 2012, 19.

<sup>388</sup> Mark Bomani, "Report of The Presidential Mining Review Committee to Advise the Government on Oversight of The Mining Sector," *Committee to advise the Government on Oversight of Tanzania's Mining Sector*, April 2008.

<sup>389</sup> Comments by Chairman of Public Accounts Committee following the release of a 2007 report to Parliament. See Mark Curtis and Tundu Lissu, "A Golden Opportunity? How Tanzania is Failing to Benefit from Gold Mining," 2008, 21.

<sup>390</sup> Annual Report 2010, Tanzania Mineral Audit Agency, 2011.

<sup>391</sup> Andrea Shemberg, "Investment Agreements and Human Rights: The Effects of Stabilization Clauses." *Corporate Social Responsibility Initiative Working Paper No. 42*. Cambridge, MA: John F. Kennedy School of Government, Harvard University (2008) 37.

<sup>392</sup> Peter Cameron, "Stabilisation in Investment Contracts and Changes of Rules in Host Countries: Tools for Oil & Gas Investors," *ACI Arb, Final Report* (2006) 17.

<sup>393</sup> Robert Conrad, "Zambia's Mineral Fiscal Regime," Working Paper 12/0653, *International Growth Centre*, (2012) 8.

<sup>394</sup> *Ibid.*

<sup>395</sup> Andrea Shemberg, "Investment Agreements and Human Rights: The Effects of Stabilization Clauses," *Corporate Social Responsibility Initiative Working Paper No. 42*. Cambridge, MA: John F. Kennedy School of Government, Harvard University (2008) 5.

<sup>396</sup> Jenik Radon, Esq., Laixa Lizardo, Samira Nikaein, Christine Lio Capilouto, Esq. and Dionisio Nombora, "Comment Letter on the Revision of the Petroleum Legislation of Mozambique," Maputo Mozambique, June 19, 2012.

<sup>397</sup> Office of the High Commissioner for Human Rights, General Assembly resolution 1803 (XVII) of 14 December 1962, "Permanent sovereignty over natural resources":

<http://www.ohchr.org/EN/ProfessionalInterest/Pages/NaturalResources.aspx>.

<sup>398</sup> Andrea Shemberg, "Investment Agreements and Human Rights: The Effects of Stabilization Clauses," *Corporate Social Responsibility Initiative Working Paper No. 42*. Cambridge, MA: John F. Kennedy School of Government, Harvard University (2008) 1.

<sup>399</sup> Andrea Shemberg, "Investment Agreements and Human Rights: The Effects of Stabilization Clauses," *Corporate Social Responsibility Initiative Working Paper No. 42*. Cambridge, MA: John F. Kennedy School of Government, Harvard University (2008) vi-vii.

<sup>400</sup> Rosenblum and Maples, 2009.

<sup>401</sup> Ted Moran, "Harnessing Foreign Direct Investment: Policies for Developed and Developing Countries," in *FDI in Extractive Industries and Infrastructure*, (Institute for International Economics, 2011) 76.

<sup>402</sup> Rosenblum and Maples, 2009, 16.

<sup>403</sup> IMF Guide on Resource Revenue Transparency, 2007.

<sup>404</sup> EITI, Afghanistan publishes mining revenues and contracts, October 19, 2012: <http://eiti.org/news-events/afghanistan-discloses-mining-revenues-contracts#>.

<sup>405</sup> From *Resource-Based Sustainable Development in the Lower Zambezi Basin*, a draft for consultation, Vale Columbia Center on Sustainable International Investment, Columbia University, June 1, 2011.

<sup>406</sup> Rosenblum and Maples, 2009, 59.

<sup>407</sup> *Ibid.* 17.

## 7 Gas and Petroleum Laws

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Mozambique's legal framework will be an important tool in the effort to ensure that recent discoveries of gas can be transformed into a sustainable and positive driver for development. It is crucial that government, industry, donors and civil society work together to formulate the best possible regulations and institutional frameworks *before* production of these new reserves begins on a large scale. Getting the legal framework right will help set Mozambique on the path to economic growth and prosperity, without sacrificing the country's unique cultural and environmental treasures, or threatening its hard-won social stability.<sup>408</sup>

This section outlines the current and proposed legal framework for Gas and Petroleum extraction in Mozambique, and provides a number of recommendations to strengthen the relevant legal rules and processes. In addition, detailed commentary and analysis is set out in Appendix 1: Law.

### 7.1 Overview of the current Framework

#### 7.1.1 Laws and Regulations

Mozambique's first law to regulate the oil industry was enacted in 1981, and was extensively revised in the early 2000s. The current law in effect is the *Petroleum Law 3/2001*, which provides a basic scheme of licensing and regulation for petroleum exploration. The act was reviewed in 2007 to establish new administrative and fiscal conditions for oil and gas production. More detailed obligations are set out in the Petroleum Regulations, and in other laws relating to the fiscal regime, environment, health and safety.<sup>409</sup> An overview of the current law follows.

##### *Ownership and basis for activities*

The Constitution and the Petroleum Law both provide that all natural resources in the soil and sub-soil, interior waters, territorial sea<sup>410</sup>, on the continental shelf and in the exclusive economic zone are the property of the State of Mozambique. In order for a person to conduct activities in relation to petroleum or gas, the state must grant that person a contract (a "concession contract").<sup>411</sup> While both foreign and domestic entities can apply for a concession contract, "under equal circumstances" preference is given to Mozambican<sup>412</sup> businesses or their affiliates.<sup>413</sup> Importantly, the State reserves the right to participate in any operations conducted by the holder of petroleum or gas operation rights (the "concessionaire") under a concession contract. Currently, it does this through the national oil and gas company, National Enterprise of Hydrocarbons ("ENH").<sup>414</sup> For a more detailed outline of these contracts and their key terms, see *Appendix Appendix 1C: Existing Gas and Petroleum Contracts under the Petroleum Law 2001*.

##### *Fiscal regime*

The current fiscal regime is set out in the Petroleum Law, the Petroleum Tax Law, the Fiscal Incentives Law, and specific terms for each concessionaire are set out in the relevant concession contract. Generally, royalties between 2-15% must be paid on petroleum,<sup>415</sup> with an additional petroleum production tax of 10% for crude oil and 6% for natural gas.<sup>416</sup> Fiscal benefits are available only after a discovery, for a period of five years from the date of approval of a development plan.<sup>417</sup> These benefits

include exemption from customs duties, VAT and the Specific Consumption Tax for certain equipment used in petroleum operations.<sup>418</sup> Deductions from income tax are specified in the concession contract.<sup>419</sup> In addition, any profit or gain arising on transfer of an interest under the contract is treated as a capital gain that is subject to corporate income tax. A more detailed discussion of the current fiscal regime, is discussed in *Section 1.2.2: Financing Liquefied Natural Gas Development*.

### *Local content, community and government support*

The Petroleum Law includes only a general local content obligation whereby concessionaries are required to give preference to Mozambican products and services, provided that those goods and services are “competitive in terms of price and comparable in terms of quality and supply”.<sup>420</sup> This is a comparably soft obligation, as there are no standards or mechanisms to guide the concessionaire in making that assessment of “competitiveness”.<sup>421</sup> The Model EPCC contains a more detailed (but still soft) obligation in relation to the preferential employment and training of Mozambicans.<sup>422</sup>

The Model EPCC sets out provisions for the concessionaire to provide unspecified amounts of financial contributions specifically for:

- institutional support to Mozambique government entities involved in promoting and administering Petroleum activities, to be paid within 30 days of the Effective Date of the Contract;
- training support programs within the government, to be paid annually for the period of exploration; and
- social support programs in the local communities where operations are carried out, to be paid annually for period of exploration.<sup>423</sup>

### *Environment, Health and Safety Obligations*

The Petroleum Law contains a general provision stating that the granting of rights for petroleum exploration, development and production activities “shall always respect national interests in respect of defence, navigation, research and conservation of marine resources and the environment in general”.<sup>424</sup> Article 23 of that law states that all holders of exploration and production rights must carry out their operations in accordance with:

- “Good Oilfield Practice”, discussed further below at *Section 7.3.1: Clarifying, Modernizing, and Strengthening the Gas and Petroleum Legislation*
- environmental and other local legislation;<sup>425</sup> and
- the terms of the individual Concession Contract.

The article goes on to identify a number of specific objectives that the concessionaire must satisfy, such as to prevent and mitigate ecological damage, to control and prevent oil spills, protect health and safety, and to restore the environment once operations are decommissioned.<sup>426</sup> The concessionaire is also required to prepare an environmental impact assessment (“EIA”) in accordance with “internationally acceptable standards”.<sup>427</sup> EIAs are discussed in more detail in *Section 4: Protecting Mozambique’s Environment*.

### 7.1.2 The Model Contract

Because of the rapid growth of Mozambique’s petroleum and gas industry, many issues that were not fully addressed in existing legislation have instead been included within the Model EPCC. The fiscal regime is perhaps the most important example of this. In other cases, the rules set out in the Model EPCC may restrict the powers and processes set out in legislation. Two examples, relating to regulatory stabilization and dispute resolution are mentioned here, and are discussed in further detail elsewhere in this report.

#### *Stabilizing the economic benefits of the Contract*

“Stabilization clauses” are a particular type of guarantee often sought by companies to manage “regulatory risk”. Regulatory risk is the risk that a change in laws or regulations (made by the government) will materially impact the business. For example, if a state decides to impose a carbon tax on polluting activities, this makes those activities less profitable. Stabilization clauses provide investors with a measure of security at the outset of a project. The Model EPCC includes a stabilization clause to ensure that the economic benefits represented by the Contract at the time it was agreed cannot be eroded or reduced by operation of other laws or regulations. It states that:

- if any tax is introduced that affects the economic value derived by the concessionaire from petroleum operations; or
- if there is any change in legislation concerning petroleum operations that has a serious adverse effect on the economic benefits of either the concessionaire or the government,
- the parties agree to meet as soon as possible to try to agree changes to the EPCC to restore, as closely as possible, the economic benefits that would have been enjoyed had the legislation not been implemented. This means, essentially, that if the government introduces new laws (such as more strict environmental regulations) it may have to cover the concessionaire’s cost of complying with those laws. While we are in favor of limited *fiscal* stabilization guarantees in contracts, we do not think that a general stabilization commitment should be made in any circumstances. For more detail, see the discussion in *Section 7.3.1: Clarifying, Modernizing, and Strengthening the Gas and Petroleum Legislation*.

#### *Arbitration as the default for dispute resolution*

The Petroleum Law states that disputes between the parties relating to contracts should be addressed first by negotiation, and if that fails, then in judicial proceedings or arbitration. Four alternative mechanisms for arbitration are listed, including arbitration under the rules of the International Centre for Settlement of Investment Disputes (“ICSID”). The Model EPCC, by contrast, specifies that there are only two mechanisms for dispute resolution – expert determination (for technical matters) or ICSID arbitration (for all other matters). This means that neither party can bring a dispute relating to the Concession Contract to the Mozambican court.<sup>428</sup>

Arbitration provisions are common in many investment agreements, and arbitration itself can be a useful tool for states without a strong judicial system, or where projects are very politically sensitive. But there are also downsides. Arbitral decisions in relation to the extractives industry have caused significant concern in some jurisdictions. For example, a dispute between Chevron and Ecuador over pollution in the Lago Agrio oilfield has become an ongoing battle, played out in arbitral panels and in

domestic jurisdictions. The dispute has “stretched the boundaries of arbitral authority” and cost both parties a fortune in legal fees.<sup>429</sup>

It is important for Mozambique to weigh the benefits and disadvantages of arbitration over other forms of dispute resolution, such as mediation or litigation in the domestic courts. Because arbitration takes place outside of the state, it may be more removed from the “public interest” considerations that a domestic judge would often take into account when adjudicating a dispute between the government and a private company. There is a perception that ICSID Arbitration, especially, tends to favor private investors over state interests.<sup>430</sup>

The costs of arbitration can be significant for any country – but for a country such as Mozambique, the threat of arbitration may be so strong that the government will choose not to make the regulations at all. This is referred to as a “chilling” effect on the government’s ability to regulate.<sup>431</sup> For more detail see *Section 7.3.3: International Investment Protection and Arbitration*.

If the government seeks to resolve issues such as the ones mentioned above, it can be helpful to include the clarifying provisions within the legislation itself, rather than agreeing to different terms for each company that obtains a contract. The following section explains why we favor including details in legislation and not in contracts.

## 7.2 What works best, legislation or contract?

One common issue for countries that are in the early stages of developing their extractive resources is whether to focus the details of each deal in the contract itself, or whether to provide a more rigid framework in legislation. There are several considerations to keep in mind:

- **Flexibility:** A contract-by-contract approach allows the government to adapt its requirements and its rights to suit the particular features of each project, and to suit the characteristics of each counterparty.
- **Uncertainty:** However, as a result of this flexibility, there can also be considerable uncertainty for investors when they start the negotiation process.
- **Complexity:** When important provisions are contained in the contract, and not in the legislation, any variations in the deal cause complexity for regulators as they monitor the implementation of each project.
- **Costs:** While legislation can be time-consuming to draft and to change, a more complete legal framework can significantly reduce the time and cost involved in negotiating each contract.
- **Transparency:** So long as negotiations and contracts remain confidential between the Government and the concessionaire, legislation is a far more transparent and democratic way to regulate extractives projects.

Overall, we think that the benefits of certainty, transparency, and consistency provided by the legislative framework outweigh its disadvantages.

**Recommendation 57:** The Government of Mozambique should standardize and set out in legislation as many details of the deal as possible. This will provide greater transparency for investors, and a more accountable democratic process.

### 7.2.1 Balancing Confidentiality and Freedom of Information

Why is it so important to align legislation and contractual provisions? One illustration of the problems that can arise is related to the publication of concession contracts, of information obtained about the gas and petroleum operations themselves, and the confidentiality provisions of the contracts themselves. Article 19 of the Petroleum Law states that all data obtained pursuant to any contract is the property of the Mozambican state. However, at present, the Petroleum Regulations guarantee that, “[u]nless otherwise agreed, all data gathered under ... Concession Contracts shall be kept confidential”.<sup>432</sup> The Government does reserve to itself the right to make general statements on the Petroleum Operations conducted under a Concession Contract, and the probabilities of discovering petroleum,<sup>433</sup> but there are no other exceptions to this general rule set out in the regulations.<sup>434</sup>

#### *Freedom of information – balancing public and private interests*

While it is important that investors are able to keep commercially sensitive information out of the public domain, there are also legitimate and competing interests for the public to know about the activities carried out under concession contracts. This could become an important issue if Mozambique decides to publish its concession contracts, or to pass legislation on “freedom of information”.<sup>435</sup> Freedom of information laws have become increasingly common in the last decade, with India, Bangladesh, Chile and Indonesia all enacting new legislation. Mexico was the first Latin American state to pass a freedom of information law in 2002, and it has since become a model worldwide.<sup>436</sup> The law, and the institution it established (IFAI – Instituto Federal de Acceso a la Información), has helped the government to become more efficient. It has also helped citizens, media and businesses to engage more effectively on a range of issues such as environmental protection, public services, and revenue management. A constitutional reform was passed in 2007 to ensure the right to information for generations to come.<sup>437</sup>

Often, freedom of information laws will require the government to weigh the public interest and the commercial interest when deciding whether to disclose information. On the one hand, the government may refuse to disclose information if its disclosure would unreasonably prejudice the commercial position of the person who provided the information.<sup>438</sup> Such protections encourage companies to continue to deal with the government, and to be open and honest about their activities. On the other hand, the government should choose to disclose the information if other considerations make it more desirable, in the public interest, to make that information available (such as health, safety or environmental considerations). This balancing exercise is an important, and difficult one.

#### *Leaving the detail to the contract creates uncertainty*

If Mozambique were to enact a freedom of information law, it could conflict with the existing Petroleum Regulations, and potentially with the terms of the Concession Contracts already agreed by the Government. This is because the regulation leaves it up to the Contract to set out when reports or plans submitted by a concessionaire can be disclosed. The 2010 Model EPCC confirms the guarantee of confidentiality set out under the Regulations. It also goes further, and provides that the Contract itself is confidential. The Model EPCC does provide an exception to its confidentiality provisions if the disclosure

is reasonable and “is required by any applicable law.”<sup>439</sup> This would appear to allow the Government to disclose information in accordance with a freedom of information law. However, the Model EPCC goes on to state that this exception will only apply if the Government can ensure that the person who receives the information will treat it as confidential. This means that media or investigators who sought information would not be able to publish it or pass it on. Finally, even if the government tried to pass legislation to resolve the conflict, it could be liable under the Concession Contract (see, e.g. the discussion of “Stabilization Clauses” above).

In the latest version of the draft Petroleum Law, the government has clarified its right to inventory revenues from a gas or oil operation, and to publish those revenues periodically. This is a step in the right direction, but it should be expanded to cover other important issues.

**Recommendation 58:** The Petroleum legislation itself must contain an exception from confidentiality provisions of future Concession Contracts for appropriate situations where there is a strong public interest in disclosure, particularly in respect of health, environment and social impacts. The government should also seek to agree with existing concessionaires appropriate guidelines for disclosure of information to the public.

## 7.3 Important Developments in the Legal Framework

The Mozambique Government is currently undertaking two very important reforms in relation to Petroleum and Gas:

- First, it is **reviewing the Petroleum Law 2001** to modernize its provisions, and to incorporate gas exploration, production and facilities within its scope. At the time of writing, the revised draft law had been approved by cabinet, and is awaiting debate by Parliament.<sup>440</sup>
- Second, the government is also **reviewing the fiscal framework** for Petroleum and Gas, as set out in the 2007 Law.<sup>441</sup>

The following section sets out a number of our recommendations in relation to these two very important reform projects.

### 7.3.1 Clarifying, Modernizing, and Strengthening the Gas and Petroleum Legislation

Mozambique is currently reviewing its Petroleum Legislation to take into account developments in the industry, the large discoveries of gas, and institutional changes to manage its resources. Since the Government now considers natural gas, instead of oil, as the primary source of its future income in this sector, this reform is essential to ensure that the development of gas-related infrastructure, particularly Liquefied Natural Gas (“LNG”), has a robust legal framework.<sup>442</sup> The government, private sector, and civil society have made considerable efforts to modernize and improve the legislation, and those efforts should be commended. The latest version of the revised legislation contains several helpful amendments intended to make the law “more clear and predictable for investors and make the country more attractive for investment in the petroleum industry.”<sup>443</sup> For example:

- **“Facility” contracts for infrastructure:** As part of incorporating gas into the regulatory

framework, the draft law introduces the concept of a “facility” or infrastructure Concession Contract (in addition to the existing pipeline contract).<sup>444</sup> The concessionaire must also establish a fund that will finance the closure and decommissioning of infrastructure, so that the land can be restored.<sup>445</sup> This is an important development in the legislative framework, since the construction and operation of gas infrastructure is a crucial component in the development of Mozambique’s gas resources, and should be subject to the same rigorous and competitive bidding process as the exploration and production concession contracts.

- **Obligation to report discoveries:** The draft law clarifies the requirement that the concessionaire must report to the Government any discovery in the area of the Concession Contract, by stating a time limit, namely within twenty-four hours.<sup>446</sup>

The draft law also includes a number of important changes to empower the government to regulate effectively, and to manage the potential downsides of oil and gas extraction and development:

- **Transparent ownership:** The new law stipulates that the foreign legal entities that directly or indirectly own or control entities that hold rights under a Concession Contract must be established, registered and administered from a transparent jurisdiction.<sup>447</sup> That means that the [government of Mozambique/that state] must be able to independently verify the ownership, management and control and tax status of the foreign person. In addition, applicants that are legal entities must submit proof of incorporation along with their application, including documents that certify the identity of shareholders, and the amount of shares held by each.<sup>448</sup>
- **Revenue-sharing with communities:** The new law will also provide that part of the revenue from petroleum operations will be allocated in favor of communities that live in the areas around oil and gas developments, although the percentage of total revenue to be allocated has not yet been set.<sup>449</sup>
- **Greater powers of oversight, inspection and publication:** New provisions allow the government to inspect facilities or locations where petroleum operations are being carried out, and to inventory the revenues from petroleum operations and publicize them periodically. This will give the government firm legal authority to disclose information on revenues in accordance with its EITI obligations (see discussion in *Section 8: The Case for Strong and Reliable Institutions*).
- **Third party access to facilities:** The draft law allows the government to determine the rules and approve contracts relating to third party access to infrastructure.<sup>450</sup> The government can also fix a methodology to calculate tariffs for such access, and approve the transfer of ownership or right to use infrastructure.<sup>451</sup>
- **Environmental protection:** The draft law also includes measures that provide greater protection to the environment and to local communities, comprising an assurance that companies pay compensation to any persons who are injured due to loss or damage arising from the petroleum operations, in accordance with law.<sup>452</sup> It sets out that if the concessionaire damages crops, soils, buildings, wireless network equipment, or other improvements on the land in the course of carrying out the petroleum operations, the concessionaire must indemnify the holders of such property in accordance with applicable law.<sup>453</sup> Most significantly, it also provides for strict liability of the concessionaire if the oil operations cause environmental damage or pollution.<sup>454</sup>

However, there are also some gaps remaining that must be addressed before the legislation is approved

by Parliament and, importantly, before the next round of concessions is completed. The most important recommendations are set out below.

### *Strengthen “good practice” by referring to model laws*

The current law requires that contract holders comply with “good practices” of the petroleum industry. This term is defined by reference to “practices and procedures that are commonly used in the international petroleum industry”. While the revised draft law has improved this definition by upgrading it to “best practices” and introducing a reference to health, further clarity must be provided. As discussed above in relation to mining, the law could set out more specific standards itself, and could incorporate more complete rules by reference to another jurisdiction or to international standards (see *Section 6.2.1: Policy Recommendations to Clarify, Strengthen and Modernize the Existing Mining Legislation*).

An argument is sometimes made that, since oil and gas are capital-intensive industries, and Mozambique is a less-developed country, it *can’t afford* to impose the highest standards. It should seek to maximize its profits and to tolerate “reasonable standards” by oil and gas companies. That is, a “reasonable standard” of environmental protection, safety, and risk-management, taking into account the costs. The argument continues that, over time, companies will be able to “upgrade” their practices and standards once the investments are profitable or once the technology is available at lower cost.

This is a flawed, and dangerous argument. Mozambique can, should, and must demand the highest standards of safety, environmental protection, and risk mitigation from every oil and gas company operating on its land or in its waters. It can’t afford *not* to. Cleaner technology, safer practices, and good management can be effective in Mozambique just as it has been effective in Norway, Australia, and Canada. For the companies, it is far more efficient to invest in good technology upfront than it is to upgrade later on in the lifecycle of a project. For the government, it is easier to agree on high standards at the outset than it is to ratchet up regulations later on. For communities, environmental damage can be irreversible, and its health impacts can be devastating. The legal framework is an essential part of ensuring that the oil and gas companies operating in Mozambique create wealth an opportunity instead of destruction.

First, the definition should be amended to refer to the “best practices” of the petroleum industry by reference to “practices and procedures that meet the highest standards of the international petroleum industry”. Second, regulations should ideally set out the precise rules, guidelines and minimum standards to be met by concessionaires. However, since Mozambique is still developing its extractives industry and its expertise, a good option is to include references to international standards (where they exist) or to a foreign jurisdiction’s rules or standards as a “backstop” or default in the absence of relevant Mozambican rules.

By way of example, the Draft Petroleum Law places new restrictions on gas flaring, permitting it only in circumstances where alternative measures for disposing or storing gas are unsafe or environmentally unsound. This marks a departure from the current regime under which commercial factors are decisive in deciding whether to allow flaring.<sup>455</sup> Still, whenever the legislation asks the company to weigh two disposal processes, there will be a strong drive for the company to justify utilizing the cheaper option. The legislation could be strengthened by developing regulations in accordance with the guidelines set out by the World Bank as part of the Global Gas Flaring Reduction (“GGFR”) partnership.<sup>456</sup> As an interim measure, the legislation could refer to the laws of the Canadian province of Alberta, which has been recognized by the World Bank as having one of the most comprehensive and transparent gas flaring and

venting regulatory regimes in the world.<sup>457</sup>

Incorporation by reference is a drafting technique that gives legal effect to legislative text (which I refer to as the “model law”) without reproducing the model law in its entirety.<sup>458</sup> References can be more specific (e.g. referring to a particular legal provision or regulation) or more general (e.g. referring to the laws in force in relation to a particular subject or situation). They can be static (i.e. referring to the model law as it was at a particular time) or ambulatory (i.e. referring to the model law as it is amended and updated from time to time). In addition, the reference can be entire (i.e. where the model law is incorporated as a whole), or conditional (i.e. where the model law applies subject to certain amendments or exclusions). Each of these options has benefits and disadvantages.<sup>459</sup> An example in the context of flaring might be:

*Except to the extent expressly provided by regulation under Article 28, the flaring of natural gas shall only be permitted in Mozambique if such flaring would be permitted in accordance with the laws applicable to flaring in force in Alberta, Canada, from time to time.*

Researching, drafting and promulgating regulations are time-consuming and expensive. By referring to standards developed internationally, or in foreign jurisdictions, regulators can establish a legislative framework quickly, learn from its successes and mistakes, and save resources. Reference laws can be useful for both regulators and companies because the model jurisdiction can provide examples of how those laws have been applied, complied with, and enforced.

However, reference to a model law or standard is not a “quick fix”. It is important that the Mozambique regulators are comfortable with the provisions and implementation of the model law, and have the capacity to enforce it, see Recommendation [x] below.

**Recommendation 59:** To define “good practice” or “best practice” the amended Petroleum Law should refer to the highest international standards of the oil and gas industry, and should include specific rules and standards, either in regulations, or by incorporating references to “model laws”. These model laws can be drawn from the best available international standards or from the laws of foreign jurisdictions.

### *Stabilization clauses should be limited*

As discussed above, the current stabilization clause set out in the Model EPCC is very broad – it is an “economic equilibrium clause” that essentially guarantees a “freeze” in the economic effects of all regulation. This means that if Mozambique chooses to upgrade its environmental or health regulations, for example, the Government must agree to “restore, as closely as possible, the economic benefits that the concessionaire would have derived if the change in the legislation had not been effected”.<sup>460</sup> Essentially, if the law changes, the Government pays.

In addition, the clause goes on to provide a more complete “stabilization” guarantee. The second paragraph states that the clause should “not be read or construed as imposing any limitation or constraint on the scope, or due and proper enforcement, of Mozambican legislation”, so long as the legislation: (i) does not discriminate or have the effect of discriminating against the concessionaire; (ii) provides for the protection of health, safety, labor, the environment or for the regulation of property or any activity carried on in Mozambique; and (iii) that any measures taken for the protection of health, safety, labor or the environment “are in accordance with standards that are **reasonable and generally accepted** in the international petroleum industry”. This final condition (along with Article 28.1) suggests

that the Government would not be permitted to change the Petroleum legislation or other legislation affecting petroleum operations if that change would impose standards that are not “reasonable” or are not “generally accepted”, that is, if they are higher than the general standards of the international petroleum industry.<sup>461</sup>

Stabilization clauses can be a useful tool to give investors certainty about the regulatory costs of their project or activities. Generally, they apply if the government *changes* some regulatory framework or rule in a manner that incurs a cost on the investor (or the government) greater than what was in place at the time of the contract.

This helps to assure the investor about the government’s support for the project, and can help them to plan ahead and make provisions for the crucial beginning phase of an investment. However, they can also cause problems, especially when:

- there is a significant change in the commercial or financial situation of the country or the government;
- an unforeseen impact on the environment, or on the health or safety of workers and communities arises;
- the government wishes to upgrade its regulatory framework, for example to provide for greater transparency and accountability;
- social unrest or disruption from the project requires a response from the government and/or the company.

We recommend that stabilization clauses should apply *only* to fiscal regulations, and only for a limited period of time.

There are mixed views about the usefulness of stabilization clauses, and about their enforceability under domestic and international law.<sup>462</sup> It may be argued that the commitments set out in Article 27.13 and 28.1 of the Model EPCC, or commitments of that type, are ineffective to restrain the Mozambican Government’s sovereign right to regulate as a matter of law.<sup>463</sup> In any case, testing such a proposition would be an expensive and drawn-out exercise. For this reason, the revised petroleum legislation must take a cautious approach to providing stabilization guarantees, with a long-term perspective. We recommend that the legislation be amended to restrict the type of stabilization clause that can be included in any Concession Contract, and the duration of any contract.

**Recommendation 60:**

- Set out clear limits on stabilization clauses in the petroleum legislation so that they never extend to non-fiscal regulations, such as environment, health, or labor.
- Stabilization clauses should be limited to apply in respect of changes in the fiscal regime for the first five years of the project, and no longer.
- Stabilization clauses should either ensure that the fiscal regime agreed in the concession contract will remain in effect for the time period, or should provide for an “economic equilibrium”.

- If the stabilization clause provides for an “economic equilibrium”, the clause should require the concessionaire to mitigate the costs of compliance with the new fiscal regime and ensure that the cost of compliance is determined or verified by an independent expert before payment.

### *Access to facilities must be strengthened*

Competition or antitrust law can play an important role in counteracting the commercial and political power of large companies. To be effective, however, it requires clear and sophisticated rules, a skilled regulator, and consistent enforcement. Given the challenges faced by Mozambique’s legal system, a truly effective competition law may be several years in the future. Yet, as the extractives industry quickly grows in size and influence, the need to curb unfair business practices and exploitation of market power will become crucial.

Article 19 of the Petroleum Law currently provides that the owner of a facility must provide access to a third party to use that facility on reasonable commercial terms. This is an important provision, which could help to improve the competitiveness and viability of Mozambique’s gas and petroleum production. In addition, as noted above, the Draft Petroleum Law gives the Government powers to determine the rules and approve contracts relating to third party access to infrastructure,<sup>464</sup> to fix a methodology to calculate tariffs for such access, and approve the transfer of ownership of or right to use infrastructure.<sup>465</sup> Nevertheless, in order to be effective and implementable, these access requirements should be strengthened with clear and detailed regulations. In particular, the new Article 20.3 of the Draft Petroleum Law states that any dispute between the owner of the infrastructure and a third party concerning the use of that infrastructure should be settled in accordance with regulations.<sup>466</sup> Mozambique already has an example of effective access-sharing within the electricity industry, which it can draw on here.<sup>467</sup>

**Recommendation 61:** Amend the Petroleum Law to provide more specific obligations and guidelines about access to infrastructure. The legislation must ensure access to infrastructure on fair and reasonable terms to promote competition, increase efficiency, and accelerate the development of Mozambique’s extractive industry.

### *Penalties must be clear and significant to deter bad behavior*

The Petroleum Law is lacking two important features to make it a strong and effective law. First, the obligations it places on concessionaires are vague and incomplete. As discussed above, many of the details of compliance have been left to regulations and to the concession contracts. Those details sometimes conflict with the overall purpose and general provisions of the Petroleum Act itself. Second, and related, the Petroleum Law lacks clear and significant penalties for a breach by the concessionaire. The draft petroleum law removes all existing provisions in relation to offences, and refers instead to regulations to be promulgated. Until these regulations are decided, the only “leverage” which the government has over a concessionaire is the threat to terminate a concession contract, and whatever penalties are set out in other legislation (such as environment or health and safety laws). The clarity and design of the penalty system will be crucial to ensuring that the new petroleum law is effective and workable.

Research has shown that the size of legal penalties imposed for a breach of environmental regulation is correlated to a loss in the market value of the offending company. Where penalties are small, shareholders pay little attention to the misconduct of the company.<sup>468</sup> Thus, Mozambique cannot

depend on the “voice of the market” to discipline investors who have a bad environmental track record, and a slap on the wrist will not be enough to make shareholders (or management) pay attention. Ideally, the penalty should be so large that it is cheaper for the company to comply with the standards (and to take measures to prevent accidents) than it would be to pay the penalties. In other words, the company cannot decide to make an “efficient breach”. In addition, there should be substantial penalties for failing to report an accident or breach to the relevant government institution, or for providing false or misleading information about gas and petroleum operations.

**Recommendation 62:** Prescribe clear and significant penalties for breaches of the gas, petroleum and environmental legislation and regulations, including for breaches of reporting obligations.

### *Environmental protections must be strengthened*

As discussed above, the draft petroleum law does provide that concessionaires will be liable for environmental harm and damage caused by petroleum operations, on a no fault basis. The legislation can go further than this, however, and ensure that management of extractives entities is personally liable for the acts and omissions of the company. As discussed in relation to mining, above, South Africa has provisions which hold directors of a company jointly and severally liable for the detrimental environmental impacts advertently or inadvertently caused by the company or its affiliates (*Section 6.2.1: Policy Recommendations to Clarify, Strengthen and Modernize the Existing Mining Legislation*).<sup>469</sup> Such provisions are especially important as Mozambique expands its activities in a new area – natural gas.

Since most of Mozambique’s gas production is likely to occur offshore, it may be seen as a “cleaner” or “less disruptive” industry than mining. However, as discussed in *Section 4.3: Environmental Concerns in the Offshore Extractive Industry*, offshore natural gas production may still have significant and long-term environmental impacts. Seismic surveying may have detrimental effects on marine life, including fisheries. Floating production storage and offloading vessels, used to process and transport hydrocarbons, can carry risks of pollution. Drilling and production can also impact the marine environment, and emit “produced water” that contains carcinogenic pollutants. Once onshore, LNG facilities may also have serious environmental and health impacts for local communities.

One of the biggest challenges facing Mozambique in regulating its offshore natural gas production will be that its environmental and health impacts are still somewhat unknown. As a result, there are only a few jurisdictions that Mozambique can look to as “models” for regulation, and their laws may not cover all the risks. Rather than waiting for adverse effects or pollution to occur, and then enacting laws to hold companies accountable, the Government of Mozambique should take a “precautionary approach” and shift the burden of the unknown onto the companies themselves. This means that companies should be responsible for conducting baseline studies, taking appropriate care in their activities, monitoring the effects of their activities, and reporting to the Government. These provisions should be enforced by way of significant penalties and strict liability rules.

**Recommendation 63:** Shift the regulatory burden for environmental monitoring and reporting onto the companies. Ensure that penalties for environmental damage and pollution are significant enough to act as a deterrent. Hold companies strictly liable, and hold directors of the company jointly and severally liable for the actions or omissions of the company.

### *Holistic Resettlement Provisions must be included in the legislation*

Although its impact is not likely to be as significant as for mining, private investors and government will require access to large areas of land in order to construct LNG facilities, and to develop the manufacturing industry that utilizes natural gas as an energy source. Inevitably, communities will be impacted by these developments – whether through the physical location of buildings and infrastructure, or through their environmental impacts. The draft petroleum legislation does require that some of the proceeds from petroleum operations be dedicated to the local community, nevertheless, that proportion has not yet been agreed on.<sup>470</sup>

A holistic approach to resettlement and compensation is essential to ensure that communities are adequately consulted and compensated for these impacts. Recommendations on how to improve the current regulatory framework for resettlement are discussed in further detail in *Section 6.2.1: Policy Recommendations to Clarify, Strengthen and Modernize the Existing Mining Legislation* and in *Section 5: Ensuring Social Equity in Extractive Industries-Based Development*.

**Recommendation 64:** Amend the existing Petroleum Law and the 2012 Resettlement Decree to provide greater protection of land occupancy rights of local communities who are forced to resettle due to gas and petroleum operations. Amendments include:

- Minimizing involuntary resettlement whenever possible;
- Gaining full and informed community consent by consulting with impacted communities, with particular attention being paid to women and other marginalized groups, at all stages of the resettlement process;
- Improving the impacted community's standard of living through livelihoods and by ensuring access to markets, education and healthcare facilities.
- Providing resettled communities with a share of future profits from mining operations.

### *Work with existing investors to renegotiate contracts in line with new regulations*

Mozambique has already signed numerous concession contracts with companies to survey, explore and produce gas and petroleum. Assuming that each of these concession contracts contains a “stabilization clause” similar to that found in the Model EPCC, the government will not be able to change regulations affecting those companies without paying their compliance costs. Alternatively, the government could seek to agree with those companies that they will bring their operations into line.

Article 28 of the draft petroleum law sets out that existing contracts signed governing petroleum operations in Mozambique will be subject to the new regulations, except where the contract and the regulations conflict.<sup>471</sup> It is understandable that the government would hesitate to amend regulations in a way that might be contrary to the contractual provisions. However, this approach leaves significant gaps and differences in the regulatory framework for several mega-projects that are currently underway. Among these differences will be the concessionaires' liability for environmental damage and pollution. The government must attempt to work with existing holders of concession contracts to identify the conflicts between contracts and the new laws, and to agree on a plan to “bridge” those gaps.

**Recommendation 65:** Engage concessionaires to agree on a timeline and work program to bring their operations into line with the new environmental, health, labor, and other regulatory standards.

### *Archaeological Heritage Protection*

History, culture, and archaeological heritage are an essential part of understanding a country's current society and values. It can help to generate understanding and national identity. For Mozambique, efforts to preserve and study archaeology became especially important following independence in 1975.<sup>472</sup>

There are numerous examples around the world of archaeological discoveries made by geologists and other workers during the first phases of extractives prospecting and exploration: ancient settlements, weapons and arms, tools, prehistoric bones, and so on. These discoveries have become so important that some operators now organize information seminars with the help of archaeologists prior to engaging in survey and exploration. Their objective is to inform workers and engineers about the history of their regions and on the emergency measures used to protect archaeological discoveries. When an ancient object or building is discovered, the authorities are always informed and meetings are usually organized with specialists to decide if a systematic excavation of the site is necessary or not. In some countries, the examination of an eventual "archaeological risk" is necessary during the Environmental Impact Assessment.<sup>473</sup>

Mozambique should take these steps into account when reviewing its Petroleum Law, to ensure that discoveries are reported, investigated and protected.

**Recommendation 66:** Include in the Petroleum Law an unconditional "stop work" order whenever a company finds archaeological materials. Appoint an independent agency to assess the finds and to delay work in the relevant area, and/or to approve continuance.

## **7.3.2 Reforming the Fiscal Regime for Gas and Petroleum**

Tax revenue from extractive industries is the major potential benefit for Mozambique from gas, oil and mining. In its current review of the fiscal regime, the Government of Mozambique has been advised by donors, consultants, and by international organizations such as the IMF. Mozambique's existing fiscal arrangements for oil, gas and mining are discussed briefly in Section 1.2.2: Financing Liquefied Natural Gas Development, Section 6.2.1: Policy Recommendations to Clarify, Strengthen and Modernize the Existing Mining Legislation, and Section 7.1: Overview of the current Framework. We understand that a recent version of the draft oil and gas regime has been released for comment. The current draft regime appears to be a codification of the existing fiscal framework included in the Model EPCC – it incorporates a production tax, a corporate income tax, and a variable "production sharing" arrangement.

Rather than negotiating tax rates for each individual concession, this new regime will create a level playing field for investors. The Government should be commended for taking this important step towards providing certainty, clarity, and transparency. However, the new law doesn't go as far as it could. While its provisions need careful revision (to clarify definitions, tighten processes, and ensure that the tax base for each different component is reasonable), there also places where the regime could be simplified to improve its effectiveness. This section outlines some of the key considerations for Mozambique while reviewing its fiscal regime, in preparation for the next round of concession bidding.

Sunley, Baunsgaard and Simard, in a 2002 paper for the IMF, explained the objective of a fiscal regime:<sup>474</sup>

*In designing fiscal instruments, the government will need to weigh its desire to maximize short-term revenue against any deterrent effects this may have on investment. This will require a balanced sharing of risk and reward between the investor and the government. The aim should be for fair and rising government share of the resource rent, without scaring off potential investors.*

In a recent paper, the IMF set out the analytical framework that underpins its fiscal advice to specific countries.<sup>475</sup> The paper emphasizes that a wide range of tools are used by different countries, but that on average, governments retain at least one third of mining revenue, and between 65-85% of gas and petroleum revenue. They state, that “[f]iscal regimes that raise less than these benchmark averages may be cause for concern, or – where agreements cannot reasonably be changed – regret. A share at the lower end of the scale may be appropriate if reserves have not yet been proven, since investors take on considerable risk in prospecting and exploration. However, now that Mozambique’s reserves have been established, it is appropriate for that share to increase.

One way to assess “fairness” is to benchmark the country’s fiscal regime against its peer group in the relative industry. This report does not include a detailed comparison of the government take in comparable jurisdictions – such analysis has already been carried out by the IMF.<sup>476</sup> Their models found that Mozambique sat roughly in the middle of the range, with an average effective tax rate of almost 70% for an illustrative oil field project.<sup>477</sup>

However, such “benchmarking” is not always helpful. In Africa, extractive industries have been systemically under-taxed.<sup>478</sup> Comparisons like these are retrospective – they cannot show what other countries might do in the future. And, as emphasized by the Vale Center in its report on Zambezi River Valley Development, the “government take”, in itself, is not enough to assess the fairness of a deal.<sup>479</sup> The appropriate fiscal regime will depend on:

- The development needs of the country (which may demand front-loaded revenue to finance public investment);
- The political economy (which may affect the time value of revenue flows);
- The stage of development of the extractives industry (including whether there is sufficient competition);
- The value of the resources available;
- The method of extraction;
- The available infrastructure;
- The risk profile of the project; and
- The overall business environment of the country.

It is therefore useful for Mozambique to consider the range of tools available to tailor a fiscal regime that is appropriate for Mozambique, taking into account the current investment climate and the

country's development needs. In Appendix 1D: Fiscal Tools for Mining and Hydrocarbon Revenue we set out a basic outline of the key advantages and disadvantages of a range of different fiscal tools, including corporate income tax, capital gains tax, royalties, and bonuses. However, even with the ideal fiscal regime, Mozambique could risk losing millions of dollars worth of revenue each year without diligent oversight and transfer pricing controls.

### *Tackling Transfer Pricing – a gradual approach to regulation*

As many extractives companies operate at different points of production (across the *value chain*) there are many opportunities for *transfer pricing*. That is, a company can artificially inflate or deflate the price of a good or service in order to make one arm of its business appear more or less profitable than it really is. In practice, this means that companies are able to show accounting “profits” in parts of the business that are subject to a lower tax rate, and show accounting “losses” in other parts of the business, subject to a higher tax rate. In this way, the company can pay far less tax worldwide than it would if it were transacting at *arms-length* in each jurisdiction. This lost revenue can have significant development impacts – particularly for countries with a low income tax base like Mozambique.<sup>480</sup> In its recent report, the Africa Progress Panel estimated that, in Africa, around \$38.4 billion US is lost per year through trade mispricing, which it defines as “losses associated with misrepresentation of export and import values”.<sup>481</sup> This amounts to significantly more than the continent receives in FDI flows, at \$32.7 billion US.

- **One way to manage transfer pricing is to regulate *transfer prices***, and require that companies pay arms-length prices for goods and services provided by an affiliate. This is referred to as the **arms-length standard (ALS)**, and it is increasingly being adopted across Africa.<sup>482</sup> The OECD has agreed principles and methods for regulating transfer pricing in this way.<sup>483</sup> However, this is a complex and expensive form of regulation.<sup>484</sup> It requires time, resources, and expertise to monitor each company's affiliate transactions, and to determine the appropriate arms-length price for a wide range of goods and services. Sometimes the transactions between affiliates cannot easily be compared to a “market transaction”.<sup>485</sup> In addition, these sorts of adjustments can undermine the efficiencies that motivate businesses to *invest* in a country and establish an affiliate in that jurisdiction.<sup>486</sup>
- **Mozambique's current transfer pricing law is weak:** The provision governing transfer pricing in Mozambique is contained in the Mozambican Corporate Income Tax Code (CIRPC, in Portuguese).<sup>487</sup> This rule gives the Tax Administration Authority the right to make corrections for determining taxable profit when the transactions between related parties are not at arm's length.<sup>488</sup> The application of this rule is very weak, with no implementation methods or special penalties for companies who engage in transfer pricing.<sup>489</sup> One estimate suggests that Mozambique lost more than US\$ 23 million in tax revenue between 2005 and 2007 due to transfer pricing across its economy.<sup>490</sup>
- **An alternative, interim, approach is to cap the amounts that companies can claim for certain items:** In the long run, as its administrative capacity develops, Mozambique may choose to implement the OECD methods to manage transfer pricing. This will provide certainty for businesses operating across different jurisdictions, and will help to ensure that a fair share of tax is collected. In the meantime, Mozambique should consider a simpler method to manage transfer pricing, such as placing a cap on the amount that each country can claim for its “home office” expenses. This is the approach taken in the recent draft fiscal regime for oil and gas, although the precise rules need further detail to provide the necessary certainty.

**Recommendation 67:** Mozambique should take a phased approach to strengthening its current transfer pricing rules. First, a simplified mechanism should be imposed, such as a cap on intra-company costs for tax purposes. Second, the Government should work with the OECD and other international organizations or donors to formulate a comprehensive transfer pricing strategy that will help to ensure a fairer share of revenue for Mozambique.

### 7.3.3 International Investment Protection and Arbitration

Mozambique has made various international commitments to protect the investments of foreign companies and persons who choose to do business within its borders. These commitments come in a range of forms, but the most important are contained in international conventions (such as the ICSID Convention), international investment agreements (including bilateral investment agreements (*BITs*) and the investment provisions of some free trade agreements (*FTAs*)), and in contracts agreed directly with foreign investors, including concession contracts (*Investment Contracts*). While issues arising from Investment Contracts are broadly discussed above, this short section focuses on the standards of investment protection offered to investors, and to the form of dispute resolution most commonly preferred – investor-state arbitration.

#### *International Centre for the Settlement of Investment Disputes*

The International Centre for Settlement of Investment Disputes (*ICSID*) is an autonomous international institution that provides a forum and framework for the conciliation and arbitration of international investment disputes. Disputes may be brought to ICSID under the authority of an international investment agreement (such as a BIT or under the Investment provisions of an FTA), or in accordance with the provisions of an investment contract between a private party and a state relating to a particular project or activity.

Mozambique is Contracting State under the ICSID Convention, which means that it has agreed to be bound by the provisions of the ICSID Convention, Regulations and Rules. Its key features are:

- A dispute may be brought against a Contracting State by an individual or company that qualifies as a national of another ICSID Contracting State.
- Arbitration and conciliation under the Convention are **voluntary**, but once the parties have given their consent (in writing), neither party can withdraw without the other's consent.
- An arbitral award granted pursuant to the Convention may not be set aside by the courts of any Contracting State. All Contracting States (whether or not they are parties to the dispute itself) are required to recognize and enforce ICSID Convention arbitral awards in their domestic courts.

#### *Concerns with Investor-State Dispute Settlement generally*

As discussed above, concession contracts, and potentially other agreements concluded between Mozambique's government and individual investors, refer to ICSID arbitration as the required dispute settlement process for non technical matters. This raises several issues. In particular, the availability of investor-state dispute settlement (*ISDS*) within these agreements poses a restraint for domestic policy-making. As clearly outlined by Joachim Karl in a recent note, the increase in the number of investor-state disputes, along with the increasing complexity of those disputes, has led to an exponential increase in

the potential risks and costs of ISDS as a mechanism.<sup>491</sup> Even where a state can successfully defend a claim by an investor, the resources, time and cost of arbitration (as well as its potentially detrimental reputational effects) are significant. For this reason, the mere presence of BITs with ISDS provisions can have a “chilling” effect on government policy-making: if a proposed regulation could violate the investor protections included within a BIT, the government may be less likely to pursue that policy objective. This “deterrent” effect is positive when the regulation has “protectionist” intention (i.e. a policy that is designed to favor domestic producers or investors over foreign ones), but it has much broader influence (e.g. discouraging the adoption of a policy to introduce more stringent environmental or health standards). For example, recent and controversial disputes have arisen in relation to Australia’s laws for plain packaging of cigarettes, and threats have been made by investors to challenge South Africa’s “Black Economic Empowerment” policies.<sup>492</sup> As a result, both Australia and South Africa are moving away from the use of ISDS, and towards alternative mechanisms such as state-state dispute settlement (as is currently used for trade disputes in the WTO) or strengthened domestic remedies.

In other cases, successful claims by investors under BITs have led to significant monetary awards being made against states – For example, in the case of *CME v Czech Republic*, the arbitral tribunal awarded US\$ 269.8 million, plus 10% interest and costs, to the plaintiff;<sup>493</sup> the (October 5, 2012) award in *Occidental v. Ecuador* of US\$1.76 bn (plus interest) is the highest to date. South American jurisdictions have borne the brunt of the large arbitral awards made since ISDS cases began to accelerate in the 1990s: It has been calculated that, as of February 2011, the sum of all awards against Argentina amounted to US\$ 430 million (after two committees had annulled awards amounting to over US\$ 200 million), with the country currently facing approximately \$US 65 billion in outstanding ICSID claims.<sup>494</sup> There are concerns by some states, civil society, and by the public that the system (and the arbitrators appointed to decide disputes) has exhibited bias towards the investor in these decisions – and that not enough discretion has been allowed for states to pursue legitimate policy objectives.<sup>495</sup>

### *Responses and a way forward for Mozambique*

Different states have responded to these concerns in different ways. Some, like Australia and South Africa, have focused on avoiding BITs or ISDS generally. In South America, there have been efforts to create a *regional* alternative to ICSID – a forum for resolution of investment disputes that would be based in, and governed by, members of UNASUR (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Peru, Paraguay, Suriname, Uruguay, and Venezuela). This would be a significant development, especially given that Brazil currently is not signatory to any BITs and does not consent to ISDS in any Investment Contracts.

Mozambique should consider aligning future negotiations for international investment agreements and domestic investment policy with sustainable development objectives, through using a tool such as UNCTAD’s *Investment Policy Framework for Sustainable Development*.<sup>496</sup> In particular, Mozambique should consider:

- removing investor-state dispute settlement from its BITs, and favoring state-state dispute settlement mechanisms;
- providing clear policy space for regulation relating to environment, health, social impacts, human rights, and resource management;
- reserving the highest levels of investor protection for only those investors who meet certain criteria of sustainable practices, and corporate social responsibility.

## Notes to Section 7

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<sup>408</sup> Jenik Radon, Esq., Laixa Lizardo, Samira Nikaein, Christine Lio Capilouto, Esq. and Dionisio Nombora, “Comment Letter on the Revision of the Petroleum Legislation of Mozambique,” Maputo, Mozambique, June 19, 2012.

<sup>409</sup> Freshfields Bruckhaus Deringer LLP, March 2013, “Mozambique” Couto, Graca and Associates:

[http://www.freshfields.com/uploadedFiles/SiteWide/News\\_Room/Insight/Africa\\_ENR/Mozambique/Mozambique%20oil%20and%20gas.pdf](http://www.freshfields.com/uploadedFiles/SiteWide/News_Room/Insight/Africa_ENR/Mozambique/Mozambique%20oil%20and%20gas.pdf)

<sup>410</sup> The “territorial sea” includes waters of 12 nautical miles, measured from the baseline.

<sup>411</sup> Further details on the types of contracts available are set out in Appendix 1C.

<sup>412</sup> A company is a “Mozambican legal entity” if more than 50% of its share capital is held by another Mozambican legal entity.

<sup>413</sup> This obligation applies where all relevant features of the application (or bid) are the same.

<sup>414</sup> The functions and activities of ENH are discussed in *Section 8*.

<sup>415</sup> The Petroleum Law provides that royalties shall be set between 2-15%, and the precise level of the royalty must be decided by the Council of Ministers (Article 25).

<sup>416</sup> Petroleum Tax Law, see *Appendix 1B* for details of relevant laws and regulations.

<sup>417</sup> The requirement to prepare and submit a Development Plan following a commercial discovery is set out in the Petroleum Law, Article 17(c).

<sup>418</sup> Fiscal Incentives Law, see *Appendix 1B*. The benefits are transferable while in force, with the approval of the Minister of Finance.

<sup>419</sup> Corporate income tax is payable by the concessionaire(s) at the rate of 32 per cent of net profit. Under the Model EPCC, deductions can be made for depreciation from the later of the year an expenditure is made and the year commercial production starts, at a rate of 100% for exploration and 25 % for development and production expenditures. Losses may be carried forward for up to five years.

<sup>420</sup> Petroleum Law, Article 17(g). No additional guidance is given on how this “competitiveness” should be measured or benchmarked.

<sup>421</sup> Local Content is discussed in more detail in *Section 2*.

<sup>422</sup> Model EPCC, Article 18.2. This provision sets out that the concessionaire “shall endeavour to utilise citizens of the Republic of Mozambique having appropriate qualifications to the maximum extent possible at all levels of its organisation, as Sub-Contractors or employed by Sub-Contractors.” The concessionaire is required to consult with MIREM and propose and carry out an “effective training and employment programme for its Mozambican employees in each phase and level of operations, taking account of the requirements of safety and the need to maintain reasonable standards of efficiency in the conduct of the Petroleum Operations.”

<sup>423</sup> *Ibid.*, Article 18.

<sup>424</sup> Petroleum Law, Article 5(2).

<sup>425</sup> Regulations for resource management, safety, health and environmental protection may also be drafted and are approved by the Council of Ministers, Petroleum Law, Article 28(1)(b).

<sup>426</sup> Petroleum Law, Article 23(1)(a)-(g).

<sup>427</sup> *Ibid.*, Article 23(1)(a).

<sup>428</sup> The seat of arbitration is negotiable and Mozambican law applies.

<sup>429</sup> Lise Johnson, “Case Note: How Chevron v Ecuador is Pushing the Boundaries of Arbitral Authority” *Investment Treaty News*, April 13, 2012: <http://www.iisd.org/itn/2012/04/13/case-note-how-chevron-v-ecuador-is-pushing-the-boundaries-of-arbitral-authority/>.

<sup>430</sup> The Secretary General of ICSID, Meg Kinnear, has argued that an analysis of the disputes brought to and decided by arbitration panels actually show that they have found in favor of state parties in just over 50% of cases. Meg Kinnear “The Present and Future Challenges of ICSID” (January 31, 2013) Presentation at the Vale Columbia Center for Sustainable International Investment, Columbia University, New York.

<sup>431</sup> Robert Howse, “Freezing Government Policy: Stabilization Clauses in Investment Contracts” *Investment Treaty News*, April 4, 2011: <http://www.iisd.org/itn/2011/04/04/freezing-government-policy-stabilization-clauses-in-investment-contracts-2/>.

<sup>432</sup> Petroleum Regulations, Article 5(1).

<sup>433</sup> *Ibid.*, Article 5(3).

<sup>434</sup> The time period for that confidentiality is three years for Survey Concession Contracts, but no time limit is set for Exploration and Production or Oil or Gas Pipeline Concession Contracts, see Petroleum Regulations, Article 5(2).

<sup>435</sup> “Mozambique: Calls for Parliament to Debate Freedom of Information” *All Africa*, October 1, 2012, <http://allafrica.com/stories/201210020206.html> (accessed April 28, 2013).

<sup>436</sup> Mexico’s law is the Lalanath de Silva, “Freedom of Information Laws Spreading Around the World” (September 26, 2010).

<sup>437</sup> National Security Archive, “Mexico Freedom of Information Program”:

<http://www.gwu.edu/~nsarchiv/mexico/transparency.htm>.

<sup>438</sup> See, for example, the New Zealand *Official Information Act 1982*, section 9(2)(b)(ii).

<sup>439</sup> Petroleum Regulations, Article 23.3(f).

<sup>440</sup> “Mozambique Cabinet Backs Oil Law” *Business Report* (April 10, 2013):

<http://www.iol.co.za/business/international/mozambique-cabinet-backs-oil-law-1.1498179#.UZKVqCvwlwx>.

<sup>441</sup> Lei do Imposto sobre Producao Petroleo Lei 12 de Junho de 2007.

<sup>442</sup> Danielle Beggs, David Tennant and Humphrey Douglas. “Mozambique petroleum update,” (February 11, 2013) *Lexology*:

<http://www.lexology.com/library/detail.aspx?g=aaffa7d9-63f8-42df-9263-826d0c25a1f8>.

<sup>443</sup> “Mozambique Cabinet Backs Oil Law” *Business Report* (April 10, 2013):

<http://www.iol.co.za/business/international/mozambique-cabinet-backs-oil-law-1.1498179#.UZKVqCvwlwx>.

<sup>444</sup> Draft Petroleum Law, Article 11(d).

<sup>445</sup> *Ibid.*, Article 18(d).

<sup>446</sup> *Ibid.*, Article 18(b).

<sup>447</sup> *Ibid.*, Article 9.2.

<sup>448</sup> *Ibid.*, Article 9.3.

<sup>449</sup> Draft Petroleum Law, Article 7.2, and Article 7.3. William Felimao & Paul Burkhardt, “Mozambique Cabinet Backs Oil Law That Clarifies Investor Rules” *Bloomberg* (April 10, 2013) available at: <http://www.bloomberg.com/news/2013-04-10/mozambique-cabinet-backs-oil-law-that-clarifies-investor-rules.html>.

<sup>450</sup> Draft Petroleum Law, Article 10(i), (“Compete ao Governo: ... (i) determinar as regras, aprovar os contratos relativos ao acesso de terceiros às infra-estruturas e a metodologia para a fixação de tarifas”).

<sup>451</sup> *Ibid.*, Article 10 (“Compete ao Governo: ... (m) Aprovar a transmissão da propriedade das infra-estruturas ou o direito de uso de infra-estruturas”).

<sup>452</sup> *Ibid.*, Article 18. <http://www.bernama.com.my/bernama/v7/wn/newsworld.php?id=941119>

<sup>453</sup> *Ibid.*, Article 23.4 (“O titular do direito de exercício de operações petrolíferas que, por força do exercício dos seus direitos na área abrangida pelo contrato, cause danos às culturas, solos, construções, equipamentos ou benfeitorias incorre na obrigação de indemnizar os titulares dos referidos bens nos termos da legislação aplicável.”) Note that a similar provision is included in Article 27.7 of the Model EPCC.

<sup>454</sup> *Ibid.*, Article 23.5 (“Se as operações petrolíferas, causarem dano ambiental ou poluição, o titular de direitos para o exercício de operações petrolíferas, incorre na obrigação de indemnizar a parte afectada pelo prejuízo ou dano causado, independentemente da culpa.”).

<sup>455</sup> Beggs et. al., 2013.

<sup>456</sup> World Bank *Regulation of associated gas flaring and venting: a global overview and lessons from international experience*. Global gas flaring reduction - a public-private partnership: No. 3. Washington D.C. - The Worldbank, 2004: <http://documents.worldbank.org/curated/en/2004/04/4946514/regulation-associated-gas-flaring-venting-global-overview-lessons-international-experience>.

<sup>457</sup> *Ibid.* 6. Joe Gurowsky “Gas Flaring back in the Spotlight” November 9, 2012, available at: <http://foreignpolicyblogs.com/2012/11/09/gas-flaring-back-in-the-spotlight/>.

<sup>458</sup> John Mark Keyes, “Incorporation by Reference in Legislation” *Statute Law Review* 25(3), (2004), 180-195.

<sup>459</sup> For a good outline of these approaches, and sample legislative wording, see *Ibid.*

<sup>460</sup> Model EPCC, Article 27.13.

<sup>461</sup> Article 28.1 of the Model EPCC states: “The Government will at all times during the life of the Petroleum Operations ensure in accordance with this Article, that measures taken in the interest of safety, health, welfare or the protection of the environment are in accordance with standards generally accepted from time to time in the international petroleum industry and are not unreasonable.”

<sup>462</sup> See, for example: David Clinch and James Watson “Stabilisation clauses – issues and trends” (Herbert Smith Freehills, 2010) available at: <http://www.lexology.com/library/detail.aspx?g=c5976193-1acd-4082-b9e7-87c0414b5328>; Piero Bernadini “Stabilization and adaptation in oil and gas investments” 1 *Journal of World Energy Law and Business* (2008) 98-112.

<sup>463</sup> *Ibid.* See also the discussion in Margarita T.B. Coale, “Stabilization Clauses in International Petroleum Contracts” 30 *Denver Journal of International Law and Policy* (2001-2002), 217.

<sup>464</sup> Draft Petroleum Law, Article 10(i), (“Compete ao Governo: ... (i) determinar as regras, aprovar os contratos relativos ao acesso de terceiros às infra-estruturas e a metodologia para a fixação de tarifas”).

<sup>465</sup> *Ibid.*, Article 10 (“Compete ao Governo: ... (m) Aprovar a transmissão da propriedade das infra-estruturas ou o direito de uso de infra- estruturas”).

<sup>466</sup> *Ibid.*, Article 20.3 (“Qualquer disputa entre o proprietário da infra-estrutura ou o titular do direito do uso da infra- estrutura ao abrigo da Lei e terceiros, relativo ao uso da infra-estrutura, será resolvida nos termos a regulamentar.”)

<sup>467</sup> Based on discussions with stakeholders in Mozambique.

<sup>468</sup> Jonathan M Karpoff, John R Lott, and Graeme Rankine, “Environmental Violations, Legal Penalties, and Reputation Costs” The Law School, The University of Chicago, Working Paper available at: [http://www.law.uchicago.edu/files/files/71.Lott\\_Environment.pdf](http://www.law.uchicago.edu/files/files/71.Lott_Environment.pdf).

<sup>469</sup> South Africa Mineral and Petroleum Resources Act of 2002, section 38(2).

<sup>470</sup> Draft Petroleum Law, Article 7.2, and Article 7.3.

<sup>471</sup> *Ibid.*, Article 28 (“Os direitos adquiridos ao abrigo de contratos e contratos de concessão em execução celebrados ao abrigo da Lei n.º 3/2001, de 21 de Fevereiro, relativos às operações petrolíferas continuam válidos, passando a ser regidos pela presente lei, em tudo o que não contrarie o clausulado contratualmente.”).

<sup>472</sup> PJJ Sinclair, JMF Morais, L Adamcowicz & RT Duarte, “A perspective on archaeological research in Mozambique” in Thurstan Shaw, ed., *Archaeology of Africa: Foods, Metals and Towns* (Routledge, 1993) 409.

<sup>473</sup> Dr. F. Brodkum, *Good Environmental Practice in the European Extractive Industry: A Reference Guide*, (Belgium: 2000).

<sup>474</sup> Emil M. Sunley, Thomas Baunsgaard and Dominique Simard “Revenue from the Oil and Gas Sector: Issues and Country Experience” Background paper prepared for the IMF conference on fiscal policy formulation and implementation in oil producing countries, June 5-6, 2002. Post-conference draft, (June 8, 2002), 1.

<sup>475</sup> IMF *Fiscal Regimes for Extractive Industries: Design and Implementation* (August 15, 2012) 27.

<sup>476</sup> *Ibid.*

<sup>477</sup> *Ibid.*

<sup>478</sup> Africa Progress Panel *Africa Progress Report 2013: Equity in Extractives* (2013) available at: <http://www.africaprogresspanel.org/en/publications/africa-progress-report-2013/apr-documents/>.

<sup>479</sup> Lisa Sachs, Perrine Toledo and Susan Maples. “Resource-Based Sustainable Development in the Lower Zambezi Basin: A draft for consultation,” (New York: VCC, 2011).

<sup>480</sup> For a discussion of the development impacts of transfer pricing, see the following article by the UN Assistant Secretary-General for Economic Development: Jomo Kwame Sundaram, “Transfer Pricing is a Financing for Development Issue” February 2012, (Friedrich Ebert Stiftung): [http://www.globalpolicy.org/images/pdfs/Jomo\\_-\\_Transfer\\_Pricing.pdf](http://www.globalpolicy.org/images/pdfs/Jomo_-_Transfer_Pricing.pdf), 1.

<sup>481</sup> Africa Progress Panel, 2013.

<sup>482</sup> PWC has prepared a report on the transfer pricing landscape in Africa, which discusses the spread of ALS regulation. Anthony Curtis & Ogniana Todorova, *Spotlight on Africa’s Transfer Pricing Landscape*, Transfer Pricing Perspectives: Special edition (PWC) available at: <http://www.pwc.com/gx/en/tax/transfer-pricing/management-strategy/assets/pwc-transfer-pricing-africa.pdf>.

<sup>483</sup> OECD Guidelines on Transfer Pricing for Multinational Enterprises and Tax Administrations (2010, Paris).

<sup>484</sup> See Sundaram, 2012.

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<sup>485</sup> For example, when one affiliate pays another for the use of intangible property, like intellectual property rights. See Sundaram, 2012, 4.

<sup>486</sup> Companies now locate different parts of the value chain in different jurisdictions, seeking different types of efficiency (e.g. access to markets, labor, resources or technology).

<sup>487</sup> Article 49 of the CIRPC provides that adjustments may be made when, “by virtue of special relations between the taxpayer and the other entity, different conditions were established from those that would normally be agreed between independent entities resulting in non-arm’s length profits.” Article 52.2 sets out when “special relations” may exist between a resident and non-resident entity. See discussion in PWC, op. cit., at 19.

<sup>488</sup> The CIRPC does not set out any regulations on implementation or methods for calculating what is an arm’s length transaction, see PWC, 19.

<sup>489</sup> PWC, 19; see also Sachs et. al., 2011, reporting comments of accountants in Maputo at 129.

<sup>490</sup> McCaughey, Sorley. *Tax of Life: How Tax Dodging Undermines Irish Support to Poor Nations*. Christian Aid (May 2010), cited in Sachs et. al., 2011, at 129.

<sup>491</sup> Joachim Karl, “Investor-state dispute settlement: A government’s dilemma” *Columbia FDI Perspectives* (: Vale Columbia Center for Sustainable International Investment, February 12, 2013)

<sup>492</sup> IIAPP (2011) *Foresti v South Africa* (Italy-South Africa BIT), available at:

[http://iiapp.org/media/uploads/foresti\\_v\\_south\\_africa.rev.pdf](http://iiapp.org/media/uploads/foresti_v_south_africa.rev.pdf) discussed in CEO & TNI *Profiting from Injustice* (2012), 13, available at: [www.tni.org/profitfrominjustice.pdf](http://www.tni.org/profitfrominjustice.pdf).

<sup>493</sup> *CME v. Czech Republic*, Final Award, March 14, 2003, available at: [http://italaw.com/documents/CME-2003-Final\\_001.pdf](http://italaw.com/documents/CME-2003-Final_001.pdf), 161, paras. 1-2. On May 16, 2003, the Czech Republic paid the amount awarded. Peter S. Green, “Czech Republic Pays \$355 Million to Media Concern,” *New York Times*, May 16, 2003, available at: <http://www.nytimes.com/2003/05/16/business/czech-republic-pays-355-million-to-media-concern.html>.

<sup>494</sup> Luke Eric Peterson, “Argentina by the Numbers: Where Things Stand with Investment Treaty Claims Arising Out of the Argentine Financial Crisis,” *International Arbitration Reporter*, 1 February 2011:

[http://www.iareporter.com/articles/20110201\\_9](http://www.iareporter.com/articles/20110201_9); “Argentina Faces 65bn Dollars in Claims; Plans to Abandon International Litigations Court,” *MercoPress*, November 28, 2012:

<http://en.mercopress.com/2012/11/28/argentina-faces-65bn-dollars-in-claims-plans-to-abandon-international-litigations-court>. It should be noted, though, that tribunals seldom award the full amount to claimants even when arbitration claims are successful.

<sup>495</sup> George Kahale, III summarized the issue as follows: “In truth, the problem goes beyond the question of whether bias in the system actually exists. On this issue, perception matters as much as reality. States are not likely to continue to play in a game they sense, justifiably or not, is rigged against them. Since it takes two to tango, the growing dissatisfaction of states with the international arbitral process looms as a major problem in investor/state relations and requires a critical assessment of the future of international arbitration as a means of settling investment disputes.” George Kahale, III, “A Problem in Investor/State Arbitration,” 6(1) *Transnational Dispute Management* (2009), 1.

<sup>496</sup> UNCTAD, *Investment Policy Framework for Sustainable Development* (New York and Geneva: UNCTAD, 2012).

# 8 The Case for Strong and Reliable Institutions

## 8.1 Overview- Mozambique’s Institutional Landscape

Mozambique’s young Presidential Republic has been on a positive trajectory of GDP growth despite the global financial crisis. Its government is composed of a strong Executive Branch headed by a democratically elected President of the Republic of Mozambique (“PoM”) and a PoM appointed Council of Ministers (“CoM”). It has a constitutionally independent Judicial Branch – with the PoM appointing the Supreme and Administrative Court’s Presidents and Vice Presidents, and an independent democratically elected legislative branch, the National Assembly—with the president having dissolution power over this entity. Since the 2004 Constitution, growth in participative democracy has included the expansion of the multi-party system through the removal of the 5% voter minimum<sup>497</sup> on National Assembly Deputies (“MoP”). Under the stewardship of President Guebuza, Mozambique has taken positive steps in the development of its extractive industries by joining the Extractive Industries Transparency Initiative (EITI)<sup>498</sup>, reaching compliance in October of 2012.<sup>499</sup>

While Mozambique has been actively strengthening its governance capacities, there are still weaknesses in critical legal frameworks, implementation and capacity. The 2007 Global Integrity Report (see Figure 2), an international tool prepared by local researchers, academics and journalists to rate governance and anti-corruption mechanisms, illustrates the need for strengthening Mozambique’s governance system. Mozambique scores 72% on legal frameworks, 40% on actual implementation. Key issues include governance and anticorruption; Government accountability and the civil service were both cited as issues within the Global Integrity Report on Mozambique.<sup>500</sup>

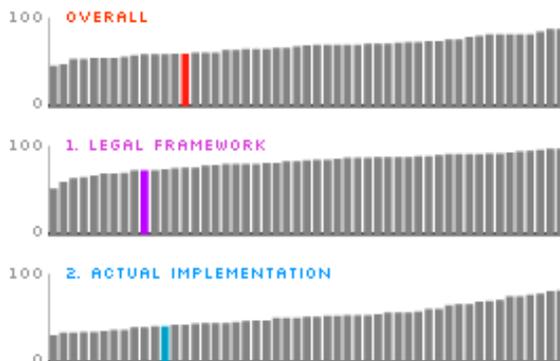
Figure 1: Global Integrity Index (2007 Ratings)

**Overall rating: Very Weak (59 of 100)**

Estimated margin of error: +/- 2.1

- 1. Legal framework: **72** of 100
- 2. Actual implementation: **40** of 100
- 3. Implementation gap: **Very Large (31)**

### Comparison to 50 diverse countries



Source 2: [to insert]

Moreover, Mozambique lacks independent institutions, and must overcome the threat of petty and grand corruption, which many blame for exacerbating problems such as Mozambique’s continued lack of trust in the police and judicial system<sup>501</sup>, and corruption within the education and medical systems. Indeed, corruption

unfortunately remains a common occurrence in Mozambique, as Figure 1 shows.

Without establishing and implementing strong frameworks for addressing corruption, the development of natural gas and coal industries will only provide more opportunities for corruption at the expense of the Mozambican people. The success of these a strong framework will require government officials and range of government intuitions sharing the different responsibilities of management of Mozambique’s natural gas and coal industries: some will ensure resettlement is done properly while others will provide oversight over financial misconduct by reviewing money transfers and expenditures. “As such, it is imperative that government officials be sheltered from any attempt to corrupt them.”<sup>502</sup>

In general, transparent and reliable decision making through government at all levels provides business interests with a clear path to start develop and expand their operations. Their continued investment and development in the country will increase access to capital markets, foreign investment and spur positive competition. If structured with the appropriate right checks and balances, Mozambique’s Institutions can actively monitor extractive industry stakeholders and provide oversight of other governmental institutions. The following case studies demonstrate that institutions can dramatically change the outcome of extractive industry impacts.

#### **CASE STUDIES: NIGERIA, BOTSWANA AND GHANA**<sup>503</sup>

From the Uganda Report

##### **Nigeria – Cursed by the Lack of Institutions**

Nigeria is the largest crude oil producer in Africa and the tenth largest producer in the world. Nigeria’s economy depends heavily on the oil sector, as it accounts for 95% of export revenues, 76 % of government revenues, and about a third of GDP. Nigeria was one of the world’s richest 50 countries in the early 1970s, but became one of the 25 poorest countries by the 21st century, 22 mainly as a result of the poor management of its oil development. Nigeria is thus considered a classic example of the resource curse.

One of the major reasons for this was institutional weaknesses. Although powers were separated among the executive, legislative and judicial branches of government, these institutions proved to be too weak to conduct effective checks on the executive and the decision made as to how to distribute resource rents. In short, they were unable to prevent the government’s poor policy choices, such as the dramatic increase in the size of public service, or its corrupt practices.

##### **Botswana – Institutions before Diamonds**

Economically, Botswana was not that different from Nigeria after independence – low literacy, and a per-capita GDP of only \$70 dollars a day. However, Botswana was blessed with relatively strong institutions post-colonialism, and supplemented those with sound revenue management and parliamentary oversight. Together, these have helped Botswana become one of the few countries to avoid the resource curse, and experience phenomenal growth. Today, Botswana is a middle-income country with relatively high levels of literacy, human development, and low corruption.

##### **Ghana – Transparency and Stakeholder Involvement before Oil**

Ghana is Africa’s leading democracy, with high freedom and anti-corruption rankings. When it discovered offshore oil in 2007, it chose to convene a national discussion involving all stakeholders. Institutions, including the press and civil society, were all able to contribute and play a role in shaping oil policy. Ghana has publicly released its PSAs, and is a leader in complying with the Extractive Industries Transparency Initiative (“EITI”) not only in Africa, but globally. Although it may be too soon to evaluate the success of these measures on increasing Ghanaians’ living standards, Ghana’s policy development process is a good model for Uganda to follow so that it may use its strengths to build institutions capable of managing oil’s challenges.

These case studies highlight the difference strong institutions regulating the extractive industries can make in a countries’ future. As Mozambique continues to restructure its institutions it can create the conditions to follow Botswana or Nigeria’s trajectory. This section will highlight how good governance, strong institutions, transparency, and international cooperation will create a framework for a path that will benefit all Mozambicans. These recommendations are informed by research on international best practices and the strengths and weaknesses conveyed by in country stakeholders.

## 8.2 Strengthening Checks and Balances

Mozambique’s extractive legal framework includes commendable objectives from the President, the Council of Ministers and the National Assembly that include “...stimulating the socio-economic development of the country...” while maintaining “...promotion of the citizens’ quality of life and the protection of the environment.”<sup>504</sup> However, the primary extractive industries – coal and petroleum – require policy and institutional augmentations as well as clarification of responsibilities to create an effective system. Building strong and internationally accepted systems of checks and balances between extractive industry management institutions and the government can ensure that government objectives are aligned with the interests of all Mozambicans.<sup>505</sup>

### 8.2.1 Establish clear division of decision-making powers across multiple ministries/agencies.

The current legal framework that governs Mozambique’s primary extractive industries and their impacts are articulated for coal through *Mining Law No. 14/2002*<sup>506</sup> and its regulations<sup>507</sup> and for Natural Gas through the *Petroleum Law No. 3 /2001*, of 21 February<sup>508</sup> and its regulations.<sup>509</sup> These legislative frameworks concentrate too many conflicting responsibly within Ministry of Mineral Resources (“MIREM”) and its coal and Natural Gas Agencies: The National Director of Mines<sup>510</sup> (“DNM”) and National Petroleum Institute (“INP”). As the following case study demonstrates, a lack of checks and balances can lead to disastrous consequences.

#### CASE STUDY: The United States and the Deepwater Horizon Disaster

“In the United States, the Mineral Management Service (“MMS”) was in charge of both regulating the safety of oil drilling and maximizing revenues from drilling, despite the obvious conflict of interest between both missions. As a result, numerous instances of collusion between

government officials and oil company executives were reported, including allegations that MMS staff allowed oil companies to fill out their own safety assessment reports.<sup>511</sup> A United States Government report chastised the agency for lax oversight and cozy ties to industry.<sup>512</sup> This, among others factors, is considered to have prevented authorities from foreseeing and avoiding the explosion of BP's Deepwater Horizon rig in 2010, resulting in billions of dollars of economic losses along one of the Americas "most ecologically sensitive regions with effects still being felt today." Only after the Deepwater disaster did the United States split the MMS into three separate agencies with stricter oversight. The disaster could perhaps have been prevented had a better separation of powers been in place earlier."<sup>513</sup>

In order to avoid conflicts of interests between regulation of the industry and revenue maximization, the functions of licensing, monitoring and enforcement should be structurally separated.<sup>514</sup> First, the entity that grants a license is naturally biased towards ensuring its continuance, as to revoke the license at a later stage implies error in the initial grant. Second, these pressures are more acute when national companies (EMP or CARBOMOC) overseen by the same institution MIREM are involved with record profits as those companies will lose public image or acceptance in such an event. Third, monitoring that leads to revocation or suspension of a license would stop revenue generation, requiring the fulfillment of the responsibility to monitor and enforce to come at the cost of revenue generation. Finally, private companies (or institutions) and their monitoring and enforcement counterparts do not naturally facilitate open information sharing and collaboration, something critical to developing the extractive industry. For these reasons, monitoring and enforcement of regulation and license conditions must be conducted by separate entities with true independence to carry out their functions.<sup>515</sup>

The Mining Law and Petroleum Law concentrate powers of licensing concessions and the power to monitor and enforce within MIREM with its agencies DNM and INP as the day-to-day operators. This creates all of the conflicts of interest mentioned earlier. The power of license revocation and suspension could create tension between MIREM and the businesses as withholding information could help avoid penalty or production halts. To mitigate the effects created by the agencies' competing interests, as well as to shield officials from potential criticism from failing to perform either task and maintaining an open and trusting atmosphere between MIREM and businesses, additional ministries should be brought in to provide monitoring and enforcement. Furthermore, the classic separation of responsibilities, particularly for structurally conflicting interests, is an internationally accepted standard.

The Mining Law's requirement for environmental licenses and land use permits in conjunction with Ministry of Coordination for Environmental Affairs' ("MICOA") mandate<sup>516,517</sup> make MICOA the appropriate candidate to monitor and enforce compliance with environmental standards. The Mining Law's provisions already require that "Title Holder Obligations", individuals holding various concessions, including mandatory environmental licenses, land use permits and safety requirements of "...which failure shall lead to revocation of the concession."<sup>518</sup> However, to become a co-equal ministerial check and balance, a clear legal mandate stipulating that concessions will be suspended and revoked if there is a failure to obtain or *maintain the active status of* these licenses and permits<sup>519</sup>, and that MICOA has the power of determination of licenses status. This structural check and balance would address the conflict of interest created by the dual mandate placed on MIREM and allowing it to better serve and work with the business community while MICOA for improved monitoring and enforcement to occur in expert

ministries.

The adjusted Mining Law framework could then be used as a template for the Natural Gas Industry by providing the same separation of responsibilities between MIREM's INP and MICOA. The Petroleum Law's framework similarly requires environmental compliance, but lacks a mechanism to ensure that MICOA has the ability to act on its findings. Furthermore Natural Gas corporations are currently assigned the role of self-monitoring their negative impacts.<sup>520</sup> Again, this creates a structural conflict of interest between a company's objective to maximize revenue and its designated responsibility towards reporting negative social and environmental impacts. An external agency such as MICOA, separate from the licensing agency, should be mandated to provide monitoring and compliance.

Mozambique has the opportunity to strengthen its legal and institutional framework regarding the extractive industry through adoption of internationally accepted checks and balances. As the most authoritative form of legislation, National Assembly laws can ensure structural conflicts of interest are removed and maximize the performance of all ministries and their agencies.

**Recommendation 68:** (Strengthen Checks & Balances) Ensure structural separation of powers through establishment of MICOA as a co-equal ministry mandated to provide oversight and monitoring empowered through an articulated enforcement tool: the ability to fine, suspend and revoke Concessions through EIA, ESIA and Environmental License non-compliance.

**Recommendation 69:** (Strengthen Checks & Balances) Involve additional co-equal ministries parallel to MIREM and MICOA able to regulate other extractive impacts including Social Impacts on Local communities, possibly through the Ministry of State Administration which already works at the district, provincial and Federal level (MAE) to administer governance, or the Ministry of Women and Social Action whose mandate could provide strong stakeholder representation, and health and safety regulations, possibly through the Ministry of Labor whose mandate already covers these functions.

### 8.2.2 Strengthen the oversight and implementation role of Parliament

The National Assembly, Mozambique's Parliament, should establish a full Parliamentary Committee and be mandated to provide oversight of the extractive industries. Mozambique has experienced tremendous amounts of law reform but suffers from a large implementation gap<sup>521</sup> critical for ensuring a functional extractive industry system. The Extractive Industries Committee would be an additional mechanism to both assist in implementation while creating oversight and thus accountability to the public. As Mozambique's largest representative body the National Assembly their review of the system will help provide assurances to the public that Mozambique's interests are being promoted.

The National Assembly is mandated with legislative responsibilities but also implementation and monitoring responsibilities of new laws through the Parliamentary Committee<sup>522</sup> system. The scope of at least three of the current Committees<sup>523</sup> includes oversight of extractive industry

issues.<sup>524</sup> However no committee is mandated with a scope specific to the extractive industry. A new committee with a clear oversight mandate would have the appropriate scope to provide oversight. Ministries, agencies and national corporations such as EMP and CARBOMOC would be required to report to the committee and make information transparent to this body.

The information learned from active oversight could assist in guiding the National Assembly to create stronger and more robust frameworks to regulate and monitor the extractive industries. As the entity able to create the highest authority of legislation, the NA could also be part of the solution in clarifying laws, creating stronger checks and balances and ensuring business, institutional and individual stakeholders in Mozambique are subject to review.

**Recommendation 70:** Create an Extractive Industry Parliamentary Committee and mandate it to provide oversight through direct reporting, optional audits and appropriate expert staff.<sup>525</sup>

**Recommendation 71:** Increase the technical expertise and staff within Parliamentary Committees.

### 8.2.3 Strengthening the auditing role of the Administrative Court and Ministry of Finance

Outside of the Ministries directly responsible for extractive industries, the Administrative Court and the Ministry of Finance are mandated to provide oversight for Extractive Industry Revenues.

The Administrative Court, or the Administrative Tribunal (“AT”), is mandated with oversight by serving as the auditor of public revenue and expenditure<sup>526</sup> in the court’s Third Section (Terceira Secção). As part of a semi-independent branch of Government – from the Executive, there is a potential for the administrative court to provide strong oversight of fiscal management. However, factors that minimize the court’s current capacity to act as an independent oversight mechanism include underfunding,<sup>527</sup> the need for technical skill development, the lack of independence, reported corruption and the need for stronger enforcement mechanisms<sup>528</sup> – see the case study below.

#### **Case Study: The Administrative Court’s Minimized Enforcement Capacity**

The Administrative Court takes cases involving public entities and Mozambican administration. The Court has a limited enforcement capacity once its initial ruling has been made. If the applicants re-apply their cases for judgment, the Court can then impose specific penalties on public entities. At this point, public entities still have the ability to “gain exemption from providing full compensation by demonstrating either that the complete restitution would be damaging to public interests or a lack of public funds to meet the payment”. At this point if rulings are not observed, “...the court can then charge individual officers within the public administration with a ‘disobedience crime’....”<sup>529</sup>

In 1998 the problem became apparent with the case of Maria José Teixeira Catarino Petiz v Prime Minister of the Republic of Mozambique. Maria, the complainant, accused the government of illegally nationalizing her factory. The Administrative courts agreed with the complainant and ruled in her favor. However the court was only able to issue a condemnation and recommendations of restitution. Furthermore the court ruled that it did not have the ability to restore the applicants' financial rights of the factory. "Invoking article 7 of the Organic Law of the Administrative Court and article 217 of the General Statute of Public Servants (EGFE)"<sup>530</sup>

An additional issue facing the TA is the lack of independence. In 2004 Constitution advanced the framework for independence of the Judiciary through separation of powers. However, the PoM still appoints the court's Presidents and Vice Presidents to without confirmation.<sup>531</sup> To properly perform its mandate of issuing judgments over administrators and officials in the executive and legislative branches, the leadership of the TA should be afforded maximum independence. By mandating confirmation hearings of leadership appointments through the National Assembly, candidates would be subject to further scrutiny to maximize independence.

**Recommendation 72:** Increase independence of the Administrative Court through mandatory Parliamentary Ratifications of Presidential nominations to the court.

Allowing the TA to issue mandatory decisions against administrators and administrative institutions will assist the court in creating accountability within the government. Its current inability to penalize offers efficiently strips the administrative court of its mandated judicial power and thus jeopardizes its oversight ability.

**Recommendation 73:** Give the Administrative court the ability to make mandatory decisions during first round decisions for all Administrative court hearings.

The Ministry of Finance ("MoF"), through the Inspector-General of Finance (Inspecção Geral das Finanças or "IGF"), has the mandate of oversight of Mega Projects (see *Section 1: The Economic and Commercial Implications of Natural Gas and Coal*), tax collection and the state budget. The IGF currently works through the *Integrated System for State Financial Management law ("SISTAFE")* that regulates public financial management. During interviews with various stakeholders the need for increased auditing expertise was needed to increase the MoF's monitor revenues and collect taxes from both State owned Enterprises ("SOE") and from Mega Projects.

As articulated in the Economic and Legal Sections above, a need for clear oversight of revenue collected is critical to ensuring that high-level corruption is being minimized (see *Sections 1.2.2, 6.2.1, and 7.3.2*). Mandating that the appropriate agencies from the MoF and the TA have access to information on Extractive Industry Stakeholders will increase the likelihood of accountability.

## 8.3 Increase transparency initiatives that ensure independence of policy and decision-making from outside influences

The Government of Mozambique has taken steps to enhance independence in policy making through adopting the *Law on Public Probity* in November 2012. The Law on Public Probity includes provisions that define conflicts of interest for public officials, establishes an independent Ethics Commission that investigates and sanctions conflicts of interests, and forms a declaration of assets procedure for all public officials. These principles provide a framework that enhances independence in policymaking through defining codes of conduct for public officials. If these codes are implemented at the individual level, they will in turn develop government institutions that will operate transparently and independently. The development of such an institutional environment has the potential to create a more transparent system that will ensure natural resources are utilized by the government for the long-term development of the country. The section below provides an overview of the *Law on Public Probity*, and suggests a set of recommendations to strengthen the implementation of the law.

### 8.3.1 Conflicts of Interest

The Law on Public Probity defines conflict of interest principles that promote governance, transparency and accountability among persons who are vested with public powers and ensures that they are responsible for resources under them.<sup>532</sup> The law defines that all public officials, as well as all individuals who work for a state owned enterprises and individuals who work for private entities that are entrusted with public powers are subject to its provisions.<sup>533</sup> Further, Articles 3 and 4 of the *Law on Public Probity* provide a list of all offices that the law applies to, which extends from the President of the Republic of Mozambique to local chiefs.<sup>534</sup>

The definition of conflict of interest terms under the *Law on Public Probity* are benchmarked against international transparency standards that Mozambique is a party to.<sup>535</sup> Some key points of the law are found in Article 9 where public officers are restricted from receiving any offer that can challenge the liberty of their action, the independence of their judgment and the credibility or authority of the public administration, its organs and services;<sup>536</sup> and Article 19 which also prevents civil servants from taking part in decision making processes where their personal interests might impair their capacity to act as an independent and impartial representative.<sup>537</sup> Further, Article 36 establishes that conflicts of interest extend to family relationships.<sup>538</sup>

These provisions are particularly relevant to the extractive sector as they provide clear restrictions on receiving broad “compensations” from any individual or entity, including the state owned hydrocarbon company, the Empresa Nacional de Hidrocarbonetos (“ENH”). This will help create independence within the public service and government agencies. This will specifically help create independence in ENH, since it will restrict political patronage that could potentially hinder the amount of revenues directed towards the company’s technical development (see the case study on “Developing Strong State Owned Enterprises” below). Also, the fact that the Law on Public Probity extends conflict of interests to family members is an important development. However, consideration must be given to the fact that Mozambique is a developing country with few educated professionals. If there is a broad application of the

conflict of interest provision, it may lead to harming legitimate business interests of family members, and therefore the development of Mozambican nationally owned businesses. The Central Public Ethics Commission should therefore take this into account when investigating conflicts of interest among Public Officials.

### **Developing Strong State Owned Enterprises In The Hydrocarbon Sector<sup>539</sup>**

The global energy market is dominated by state owned enterprises. Over 80% of the world's oil and natural gas supplies are controlled by state owned enterprises, and these enterprises comprise 15 of the world's 20 largest energy companies.<sup>540</sup> State owned enterprises like Saudi Aramco, Statoil (Norway), Petronas (Malaysia) and Petrobras (Brazil) have all developed into industry leaders. However, other state owned enterprises in Mexico, Nigeria, and Venezuela have failed to utilize their natural resources and remain constrained by political interests. The natural gas resources that Mozambique possesses has the potential to turn its state owned enterprise, ENH, into a global leader that can promote Mozambican investments around the world. However, ENH needs to solidify its institutional role as a competitive business and overcome political interests to become a successful enterprise.

Research on state owned enterprises have shown that incorporating the following principles will likely lead to a successful enterprise. These principles include (1) clearly defining non-profit objectives, (2) avoiding political appointments to managerial positions (3) providing a transparent accounting system and (4) creating a dedicated regulatory agency, among others.<sup>541</sup>

State owned enterprises ("SOE") are often mandated to provide social programs. This is seen as causing potential conflicts of interest because the SOE may focus more attention on programs like community education, development, and employment at the expense of developing technical expertise. Though it is good to provide such mandates, researchers recommend minimizing social mandates and clearly defining them in order of priority.<sup>542</sup> An example of poor practice occurred in Venezuela where the SOE spent 2/3rds of its budget on social programs and in Mexico where a broad social mandate has left a small budget for technical development.<sup>543</sup> Neither SOE has developed into being an industry leader, despite a wealth of natural resources.

Researchers have also often found that political appointments to managerial positions tend to harm the growth of an SOE.<sup>544</sup> The main reason to avoid this practice is to limit the government's ability to maximize revenues from the SOE for ensure short-term political interests. In Saudi Aramco and Petrobras, managerial positions are largely insulated from government intervention, allowing these SOE's to develop long-term agendas that focus on profitability and technological development.<sup>545</sup> Conversely, in Mexico, Nigeria, and Venezuela top managerial positions are appointed, and can be removed, by the president. While it may be necessary to involve government intervention in the early phases of ENH's development, such involvement should be transparent and appointments can follow the model discussed in *Section 8.3.5* Obtain approval or ratification for key nominations from the National Assembly. Further, managers should have a measure of job security that provide strict guidelines for firing, so as to ensure that the managers are fired for poor management and not for political reasons.

A crucial problem that SOE's must overcome is the "principal-agent" issue. A common belief is that since SOE's are not operated by their owners, they will not operate as efficiently as a

private company. A way to resolve this issue is by providing greater information so that the principals (the public) can better monitor the activities of the agents (SOE managers).<sup>546</sup> Forming a transparent accounting system and a specific supervisory agency will help address the principal agent issue. Providing documents allows the public to monitor the SOE and a sole regulatory agency will ensure that regulatory powers are not dispersed across multiple agencies.<sup>547</sup>

With all the resources in Mozambique, ENH has the potential to become an industry leader. However, these issues must be addressed if it is to become a successful enterprise. Further examination of Petronas, Petrobras, and Statoil can provide models that ENH can use in its development.

While gaps certainly remain in regulating conflicts of interest, the Government of Mozambique has demonstrated its commitment to enforcing the conflict of interest articles by identifying parliamentarians who were found to be in violation of its principles. In March 2013, 30 deputy parliamentarians from the FRELIMO party were found to be in violation of the conflict of interest policy, and therefore took the initiative to address these conflicts through either resigning from parliament, or relinquishing positions they held in state affiliated companies.<sup>548</sup> Of these 30 parliamentarians, 27 resigned from their positions in companies, and three resigned from parliament.

The commitment to enforcing conflicts of interest is commendable, however the parliamentarians were not fined for their violations and it is not known if the parliamentarians relinquished assets, such as vehicles and other property, which may have been provided to them from their previous positions. While it is positive that these FRELIMO parliamentarians took the initiative to address conflicts of interest internally, it is the duty of the Central Ethics Commission to regulate and sanction conflicts of interest as stated in the Law on Public Probity. It is therefore necessary to promote the Central Ethics Commission's regulatory role and ensure that conflicts of interests are enforced across all political parties in Mozambique.

The legal obligations provided under the Law on Public Probity provide the framework of a bill that will promote independence in policy making and regulating conflicts of interest. The following recommendations can contribute to supplementing the implementation of the law.

**Recommendation 74:** Ensure that Conflicts of Interest are regulated and sanctioned by the Central Public Ethics Commission. Ensure legitimate enforcement extends to family members.

### 8.3.2 Central Public Ethics Commission and Ethics Commission

The Central Public Ethics Commission ("CCEP") was established under the Law on Public Probity as the central body to monitor, prevent, and resolve conflicts of interests among public officials. The body was formed in January 2013 through an inclusive selection process, where the executive, judiciary, and parliamentary branches of government each selected three representatives for the nine-member body.<sup>549</sup> The members were selected on the basis of "high moral standing" and are said to be committed to their roles in the CCEP.<sup>550</sup>

The CCEP has begun forming its offices and clarifying its roles to Mozambique. However, there is much work that needs to be done to support the proper implementation of its numerous functions. The CCEP was not the primary organ to resolve conflicts of interest in FRELIMO, and there has been no indication that other political parties have resolved potential conflicts of interest that may exist among its members (see *Section 8.3.1: Conflicts of Interest*). The CCEP must promote itself as the primary regulatory body for conflicts of interest to ensure that issues are resolved transparently, impartially, and that sanctions are provided when necessary.

Among its other functions, the CCEP is also tasked with coordinating the inter-institutional ethics bodies called the Central Ethics Commissions (“CEP”). The Central Ethics Commissions are ethics bodies that will be established within the main agencies of government.<sup>551</sup> The CEPs are composed of three individuals. Members of the CEPs are employees of the agency they oversee, and two of these members are selected to their post by nomination from other employees, while the highest official in the agency appoints the third member of the CEP.<sup>552</sup> The roles of the CEPs include monitoring gifts and gratuities, and ensuring that the Codes of Conduct and Conflicts of Interest principles are properly enforced.

The CCEP and CEP are integral in implementing the conflict of interest policy. In order to achieve full implementation, these bodies must address the following constraints. The CCEP currently meets one day a week, and while this may be acceptable after the work of the body is institutionalized, the CCEP must first make progress in defining its various roles in Mozambique and developing its capacity to meet the demands of those roles. A key factor in achieving this is effective intra-institutional communication that defines where the CCEP’s roles are, and how they complement other institutions like the Central Office for the Fight Against Corruption (“GCCC”).<sup>553</sup> The CEP must also be promoted, especially in key ministries, like the National Enterprise for Hydrocarbons (“ENH”), MIREM, and INP. If these institutional bodies are properly implemented they will in turn strengthen organizational oversight and incentivize internal oversight within the government agencies.<sup>554</sup>

#### **Recommendation 75:**

Central Public Ethics Commission (“CCEP”):

- Promote role as institute to regulate conflicts of interest.
- Harmonize communication with other anti-corruption institutions
- Provide transparency and strengthen sanctions for violations.

Central Ethics Commission (“CEP”):

- Begin formation of CEPs in key ministries

#### **Combating Corruption**

Mozambique has made significant progress forming a transparency framework that will support the fight against corruption. However, the legal and regulatory institutions established under the Law on Public Probity, and other transparency bills, will not alone end corruption in

Mozambique. In fact studies have found that the creation of anti-corruption legislations and institutions, like Mozambique's Central Office for the Fight Against Corruption ("GCCC"), have often failed to decrease corruption in the state.<sup>555</sup> The following section will provide some examples of how the Democratic Republic of Georgia combated corruption throughout a 10-year period (2003-2012).

Following its independence from the Soviet Union in 1991, Georgia was plagued with corrupt institutions that mishandled revenues, budgets, and failed to provide adequate services to the general public. Early post-independence governments put little focus on combating corruption and so the practice persisted. As of 2005, Transparency International ranked Georgia 130/158 in its Corruption Perception Index and the World Bank ranked it 112<sup>th</sup> in its ease of doing business ranking.<sup>556</sup> Following the implementation of a robust anti-corruption framework, Georgia was ranked 51/174 in the Corruption Perception Index and 12<sup>th</sup> in the ease of doing business ranking in 2012.<sup>557</sup> The improvement in these indicators has contributed to attracting large-scale investments across multiple sectors, improving public service delivery, citizen's perception of the government, and poverty reduction.

In a 2012 report, the World Bank identified 10 reasons for the success Georgia had achieved in combating corruption during the period of 2003-2012.<sup>558</sup> The reasons most applicable to Mozambique are (1) Strong Political Will, (2) Establishing Credibility Early (3) Launching a Frontal Assault (4) Attracting New Staff and (5) Coordinating Closely.

President Armando Guebuza of Mozambique made combating corruption a cornerstone of his 2004 and 2008 Presidential Campaigns, and he has achieved a measure of success in promoting the Law on Public Probity. However, the majority of the country remains dissatisfied with progress. A key factor that can support President Guebuza's will, is establishing credibility early. Although Mozambican Parliamentarians had to address conflicts of interest, in Georgia, President Mikheil Saakashvili took immediate action prosecuting six parliamentarians for corruption and began actively promoting corruption policies to the public. Stronger action in Mozambique can signal an increased willingness to address the issue, and create larger public support.

Georgia also recognized that adopting a piecemeal approach to implementing its anti-corruption policies would not work, because parliament could block certain bills and the framework would not function coherently without full adoption. Through implementing reforms in a "full frontal assault," Georgia was able to take immediate action in fighting corruption. Passing the Law on Public Probity was a success for Mozambique, however, Mozambique has not yet incorporated corruption into its Penal Code, and other aspects of the anti-corruption package have also yet to be passed.

Georgia was also aware that its country possessed low human capacity to implement these reforms effectively, and therefore recruited non-Georgians to work in key ministries. The new staff allowed for Georgia to push forward implementation with the necessary technical expertise. Further, the policy-making committee that addressed implementation was small and coordinated and allowed for the country to develop a coherent implementation program. Although Georgia and Mozambique are starkly different countries, the development of Georgia's anti-corruption framework could provide an effective model for Mozambique to follow.

### 8.3.3 Declaration of Assets

The *Law on Public Probity* also includes provisions that require all public officials to submit declaration of assets throughout the period they hold public office. The practice of declaring assets is a central tenet in a transparency regime, as it provides baseline information that can be measured to assess income growth during an official's time in office.<sup>559</sup> Declaring assets also contributes to ensuring greater independence in policy making, since it allows investigators to identify income growth as a function of yearly salary, and potentially identify illicit revenue streams where they exist. Although Mozambique established an asset declaration practice in 1990 under *Law 4/1990*, implementation was uncoordinated and therefore led to weak enforcement. The *Law on Public Probity* addresses some of these deficiencies, though not all.

A declaration of assets form is to be written by the CCEP, and is currently in the drafting phase. The *Law on Public Probity* provides a basic structure for the declaration of assets, which requires officials to submit documentation of all assets, such as real estate, ownership in companies, and bank accounts that hold amounts substantially greater than the official's salary.<sup>560</sup> These provisions also extend to the assets of spouse(s) and dependents of the official.<sup>561</sup>

The *Law on Public Probity* provides a broad range of agencies that collect the declarations, which range from the Administrative Tribunal to the Provincial Prosecutor Generals Office.<sup>562</sup> Within these collection bodies, a Commission for Receipt and Verification ("CRVP") will be formed to collect the declarations. Though collection is centralized within agencies, the plurality of agencies that collect declarations could affect the overall effectiveness of the system.<sup>563</sup> A further hindrance to developing a cohesive structure is that the declarations are to be hand written, making it more difficult to form a centralized database. Developing a unified collection system will take considerable effort, but such a system is necessary to ensure compliance and facilitate investigations.

Agencies that receive declarations have the authority to initiate investigations. Investigations can be undertaken if the collection agencies believe there are indications that an individual is in violation of the *Law on Public Probity*, or if public entities request that the collection agencies undertake audits of an individual. Although agencies can investigate individuals, the process of beginning an investigation is not entirely transparent. Often, the Attorney General will decide to undertake an investigation and then the Central Office for the Fight Against Corruption ("GCCC") will open an investigation.<sup>564</sup> This process is not entirely transparent, and through public entities can request investigations, significant barriers exist for the general public to request investigations.

The declaration forms contain two parts, one that provides basic personal information of the public official, and the other that includes a full documentation of assets that "provides rigorous evaluation."<sup>565</sup> The CRVP and other investigative bodies, like the GCCC and judicial authorities, have full access to the full declarations. However, the general public only has full and unfettered access to the first part of the declaration. If an individual wants to see the second part of the declaration, they must first submit a statement of interest to the Attorney Generals Office for review. If the statement is denied, the individual can take their request to the Constitutional Council, for a final decision. This process creates barriers for the public to access information and hold officials accountable. To ensure that a declaration of assets policy creates greater transparency, the public should have full access to information and the ability to request

investigations of potential violations.

**Recommendation 76:**

- Coordinate the collection of Declaration of Assets.
- Provide transparency when investigations are initiated.
- Provide mechanisms for the public to access all information quickly and with minimal transactions.

### 8.3.4 Implement strict penalties for ethical breaches

The *Law on Public Probity* establishes penalties for ethical breaches committed by public officials and non-compliance of the declaration of assets policy. If an individual is found to be in violation of the principles established in the Law on Public Probity they can face dismissal from office, imprisonment, and fines. Strict penalties provide incentives for cooperation. However, a further complement to the violations contained in the Law on Public Probity, will be to include rules on corruption, illicit enrichment and rules on investigation procedures in the Mozambican *Criminal Code and Criminal Procedure Code* that are currently under revision.<sup>566</sup>

A weakness in the penalties established under the *Law on Public Probity*, are that the violations are not explicitly defined. A number of the articles only state that an individual can be imprisoned and fined for violations, but the exact length of a prison term and the amount of a fine is only defined in a select few articles. Providing clear definitions of the consequences for violating ethics principles will further incentivize cooperation. Also, many of the articles refer to punishments that will be defined under the revised Criminal Code. While this is acceptable, the Government of Mozambique should promote the need for the National Assembly to adopt the criminal code as a matter of priority.

**Recommendation 77:**

- Provide explicitly defined penalties for violations.
- Prioritize the adoption of the Mozambique Criminal Code and Criminal Procedure Code.

### 8.3.5 Obtain approval or ratification for key nominations from the National Assembly

It is critical to ensure that the most qualified candidates are selected to appointments in key government agencies.<sup>567</sup> Furthermore, the appointment of individuals to government agencies should proceed in a manner that promotes transparency in the selection process and minimizes potential appointments through favoritism.<sup>568</sup> To achieve this, the proposed Petroleum and Mining Legislations can incorporate the following recommendations that provide selection criteria and a transparent confirmation processes.

The Petroleum and Mining Legislations should include selection criteria for appointments to key posts, such as the Minister of MIREM, the National Directorate of Mining and members to the board of directors for the INP and ENH. These institutes should also disclose how nominees meet the criteria for these positions.<sup>569</sup> Selection criteria that are codified into law can provide transparency in the appointment process and limit appointments based on favoritism.

The National Assembly of Mozambique can have an increased role that will enhance transparency in the nomination process. The National Assembly currently has eight permanent working committees that provide a level of oversight to thematic issues that are important to Mozambique's national agenda.<sup>570</sup> The *Economic Issues and Services Subcommittee* is the permanent working committee that includes natural resources as part of its operational mandate. However, natural resources are only one part of an extensive mandate.<sup>571</sup> Given the importance of natural resources to the development of Mozambique, the creation of a permanent subcommittee that focuses exclusively on natural resources can create a method to institutionalize the National Assembly's role promoting effective natural resource governance.

A committee that focuses on natural resources can also be involved in the nomination and appointment process for positions in MIREM, INP, and ENH. This process could work in the following way. First, the committee makes a list of selected candidates. Following this, the President further selects qualified persons to be nominated as board members. The committee then gives the final approval to the President's selection and ensures that all members are independent and qualified.<sup>572</sup>

The second policy option is to have the committee confirm nominations. If institutions like MIREM, INP, and ENH are to be independent, approval from a parliamentary committee should be a requirement for appointees. A good example of such a procedure already exists in the way that the National Assembly selected members to the Central Public Ethics Commission (as discussed in *Section 8.3.2: Central Public Ethics Commission and Ethics Commission*) and the appointment of the Ombudsman. The increased oversight that will come with a committee will provide more independence and impartiality to key regulatory institutions, which will nurture confidence in the Mozambican people and international investors in these institutions and the regulatory landscape.

**Recommendation 78:** Form a committee in the National Assembly that oversees all matters related to the extractive economy and regulatory structure and which also has the authority to be involved in the nomination and appointment process.

### 8.3.6 Protect appointees

In both the mining and hydrocarbon sectors, the Minister of MIREM has the ability to remove the National Directorate of Mining and the board of directors of the INP. This authority undermines the ability of each body to properly regulate their respective industry independently. The independence of these institutions is central to effective regulation (see *Section 8.2.1: Establish clear division of decision-making powers across multiple ministries/agencies*). Therefore a new appointment system should be developed that incorporates independence and job tenure into the institutions' main positions. Such examples currently exist in Mozambique's governance structures. For example, members to the Constitutional Council are appointed for

renewable five-year terms that guarantee independence and security of tenure, among other provisions.<sup>573</sup> Another example exists in the Administrative Tribunal (“AT”), where the President of the AT is designated by the government and approved by the National Assembly for five-year terms. Further, the President of the AT cannot be removed from their office unless it is proved that their behavior has violated their duties.

Mozambique should develop mechanisms that allow officials in key ministries to be appointed through a transparent process that promotes the independence of their position, which will further reinforce transparency and checks and balances. Dismissals from office should also be incorporated in a way that provides transparency and not dismissal for political reasons.

**Recommendation 79:** Guarantee appointees’ independence by giving them greater security of tenure and establish an independent appointment process. Encourage parliament to confirm appointments in key ministries.

### 8.3.7 Protect whistleblowers and encourage them to come forward

In order to promote transparency and accountability, whistleblowers wishing to reveal information related to alleged abuses of power, corruption or other illegal acts should be properly protected and encouraged to come forward.<sup>574</sup> *The Law on Public Probity* includes a protection of whistleblowers that report conflicts of interest to the Central Ethics Commission under Article 50. The protection of whistleblowers is important as whistleblowers are recognizing the broad interest of all citizens, and therefore should be protected from fear of reprisals.<sup>575</sup>

The Mozambican National Assembly also passed a witness protection bill in March 2012 that creates a protection program that is in compliance with the international treaties Mozambique is a party to.<sup>576</sup> Under the legislation, the Central Victim Protection Office (“GCPV”) is responsible for administering the Mozambican witness protection program.<sup>577</sup> The GCPV is under the Ministry of Justice and is tasked with coordinating witness protection with the police and other relevant authorities, as well as executing functions that are necessary to provide support to any witness.

The creation of the GCPV and CCEP as institutions that provide protection to whistleblowers is a welcomed achievement. However, these institutions are newly created and do not have the resources, technical experience, or communication linkages to ensure whistleblowers are protected in practice. In 2008, it was reported that 60% of public officials do not denounce acts of corruption out of fear of reprisals, and that 49.9% of companies, and 46.8% of households, also did not report corruption for the same reasons.<sup>578</sup> During interviews conducted with various agencies in Maputo, most observers related that the CCEP and GCPV witness protection programs were slow to develop and were constrained by financial and technical resources. It is therefore likely that most Mozambicans are not aware of, or confident in, the protection programs that exist, and therefore continue to fear reprisals if they denounce corruption.

**Recommendation 80:** Work with international donors to get more funds for developing protection programs and conduct an awareness campaign to raise visibility of the new institutions. Develop stronger communication links between the GCPV, CCEP, GCCC and other relevant agencies to ensure protection of whistleblowers

### 8.3.8 Develop Private Sector Transparency Regulations

Mozambique is currently drafting a law that provides a transparency framework that will regulate the private sector. If the law follows international best practice, it will further harmonize transparency initiatives included in the Law on Public Probity, and provide for a more competitive business environment. An example of international best practice can be found in the European Union's Accounting and Transparency Directives and the United State's Dodd-Frank Act. Further, as Mozambique revises its Criminal Code and Criminal Procedure Code, private sector corruption should also be included as a way to harmonize sanctions.

The EU and U.S. laws require extractive companies, based on their jurisdiction, to disclose payments to both foreign and domestic governments, as well as include other initiatives that promote transparency in the private sector. The laws state that companies must disclose payments to governments that include those made to further their commercial interest, which are over \$100,000 USD, as well as payments for taxes, royalties and infrastructure development. As Mozambique develops its own framework, such a policy should be included, since it will enhance transparency in the extractive sector for Mozambican companies and will also allow foreign companies to be tried in domestic courts for any violations.

A private sector regulatory framework, like the Dodd-Frank Act and European Union Directive, will also enhance business competitiveness. Mozambique currently ranks 138<sup>th</sup> out of 144 countries surveyed on the 2013 World Economic Forum's Global Competitiveness Report.<sup>579</sup> Businesses cited that a major hindrance to doing business in Mozambique was corruption. Corruption, by virtue, favors companies that can leverage large cash reserves in exchange for preferential treatment from government officials. If the proposed private sector transparency framework requires companies to disclose payments that are in line with international best practice, it can provide a mechanism that will allow Mozambican companies to develop in a level and transparent business environment that does not favor companies who can influence investment decisions through bribery.

Mozambique will also need effective institutional capacity and mandates to regulate the proposed law. The Mozambique EITI office should include all payments required under the proposed law in its monitoring and reporting. The EITI office can also develop linkages with the GCCC to investigate any potential discrepancies found in the EITI reporting. Further, the GCCC requested that a department that monitors the private sector be included in their organizational structure, and that it receives specific training on investigating private companies. Such institutional developments can ensure that the proposed law is effectively regulated and monitored in Mozambique.

**Recommendation 81:**

- Develop a private sector transparency initiative that requires extractive companies to report payments to the government in line with international best practices.
- Include rules on corruption in the private sector in the revised Criminal Code and Criminal Procedure Code.
- Increase institutional linkages between EITI and the GCCC.
- Increase training for monitoring private sector practices in GCCC.

## 8.4 Strengthen oil watchdog agencies enforcement powers

Enforcement Agencies must have investigative powers to ensure that mining and petroleum companies are complying with the appropriate regulations. The two main factors that must be addressed for agencies to effectively regulate mining and petroleum operations are discussed in this section.

### 8.4.1 Give agencies broader investigation powers

Broader enforcement powers would give agencies and ministries in charge of implementing mining and petroleum regulations greater effectiveness in monitoring activities and investigating suspected violations of license conditions.<sup>580</sup> Agencies like MIREM, INP, and MICOA should have the power to initiate investigations on their own accord. Likewise the third section of the TA and Inspector General of the Ministry of Finance should have dedicated teams able to perform audits and issue suspensions of extractive industry actors.

The Petroleum and Mining Legislations should provide agencies that are in charge of enforcing regulations the power to conduct unannounced audits and inspections of industry actors to ensure that they are operating in compliance with all applicable laws. For this purpose, the Inspector General in the Ministry of Mineral Resources, and the National Petroleum Institute, as well as other regulatory agencies, should be given the power to compel companies to produce copies of certain documents or reports in the hope of identifying violations quickly before any permanent damage is done.<sup>581</sup> Failure on the part of oil companies to comply with such requests on a timely basis should lead to the automatic suspension of their license.<sup>582</sup>

**Recommendation 82:** Give agencies the right to conduct unannounced audits and inspections, including to right to compel the production of documents, and facilitate cooperation and information sharing across agencies.

### 8.4.2 Give agencies the power to impose sanctions or suspend operations

If agencies that are mandated to monitor extractive industry actors cannot penalize extractive

industry operations, their findings will not have enforcement power. Enforcement mechanisms include the ability to determine fines, penalties, suspensions and cancelations of licenses and other forms of accountability measures. The agencies with regulatory and oversight responsibilities should work closely together with other government agencies and institutions, as well as private corporations and government-owned businesses working in the extractive industries to develop clear rules for sanctions. Specific recommendations have been included below in descriptions of individual agencies.

## 8.5 Conduct capacity building in key institutions

*Corruption and the lack of transparency ... impede effective resource mobilization and allocation and divert resources away from activities that are vital for poverty reduction and sustainable economic development*

*The Paris Declaration*

Strong and effective institutions are essential to ensure that Mozambique can benefit from the country's extractive resources, and manage its economic, social and environmental risks. Because of the rapid development of the extractive industry within Mozambique, the government and other actors must respond with focused capacity building within those critical institutions. This will require a balancing the need for external consultants to provide expertise specific to the extractive industry, with the long-term development of Mozambican capacity for the needs of the country itself; including the enhancement and expansion of existing human resources in all sectors.

### 8.5.1 Encourage donors to redirect aid to build capacity and promote transparency

The project team's time in Mozambique revealed a small but active civil society community, and an engaged international community, with donors, NGOs, UN organizations and the international banking community coordinated through multiple platforms. These platforms include the IMF's Republic of Mozambique Poverty Reduction Action Plan 2011-2014 ("PARP")<sup>583</sup>, the G-19<sup>584</sup> and the Nordic Partners<sup>585</sup> to name a few. Through these structures, in partnership with the Mozambican government, the organizations continue to work across multiple sectors on poverty reduction projects and towards the development of strong good governance policies and institutions.

Their support of good governance was demonstrated in 2009, following an African Peer Review Monitor (APRM) report critical of that year's parliamentary elections, in the form of a "donor strike" that delayed funding releases. This forced the Mozambican government to address donor concerns through an action plan. The action plan was kept confidential but resulted in the opposition party MDM being granted a parliamentary bench that it had originally been denied.<sup>586</sup> The coordinated effort by donors was effective in supporting and maintaining the democratic purpose of the legislature. This community, including the USA, the Group of 19 Partners for Programme Aid ("G 19")<sup>587</sup> and the UN, among other substantial contributors<sup>588</sup>, had leverage through its over 50% contribution to the Mozambican budget.

Since 2009, the percentage of budget contributions from the international community have gone down as Mozambique's tax revenue has increased. In the "...2012 budget, 39.6% of expenditure was covered by foreign grants and loans. The figure was 44.6 per cent in the 2011 budget, and 51.4 per cent in 2010.<sup>589</sup> The decline of the international community's financial leverage corresponds with continued the growth in Mozambican tax revenue from Mega Projects and potentially the extractive industry. This is a positive development but it creates a limited time frame for donors to exert its leverage in the development strong governance frameworks.

The donor community should continue to focus on good governance policies related to the extractive industries. For example, The African Development Bank, funded through bi-lateral donations from Japan<sup>590</sup>, assisted the Mozambican Government in becoming EITI<sup>591</sup> compliant. The Nordic Partners held a Nordic-Mozambican Conference in 2012 highlighting issues of economic transformation, taxation, accountability and natural resource management. The World Bank and the IMF partnered with MIREM's INP to develop a "Gas Master Plan"<sup>592</sup> for Mozambique. This includes technical assistance for the extractive industries and is part of the Country Partnership Strategy,<sup>593</sup> coordinated under Republic of Mozambique Poverty Reduction Action Plan 2011-2014 (PARPII).<sup>594</sup> When Mozambique's government institutions are given a robust structure and their capacity has been developed, it is very possible that Mozambique could create a governance scheme similar to The Norwegian Model

To help build capacity in Mozambique's institutions, donors and other agencies should establish partnerships and provide financial support for direct near term consultants—expert staff who work within agencies and responsible to those agencies. There is also a need to re-examine existing resources and partnerships, such as the European Development Fund's (EDF) "Portuguese Colonies in Africa and Timor-Leste"<sup>595</sup> program. A partnership with Timor-Leste could provide Mozambique with lessons learned and technical skills since it experienced similar obstacles and opportunities with its own extractive industries. These types of direct partnerships could help provide further technical knowledge that could be facilitated into formal relationships. Finally, the international community should continue to work on transparency and accountability measures, in partnership with the government, to ensure Mozambique's mineral wealth is used to develop the country—utilizing its current leverage to assist Mozambique when possible.

**Recommendation 83:** Donors, NGOs, Bi-Lateral Partners and UN Agencies should continue to coordinate and use their leverage to ensure media, civil society and governance institutions can hold each other accountable.

**Recommendation 84:** Governments and Donors should examine their current technical support programs and develop partnerships and offer support through direct placements pending government approval.

## 8.5.2 Focus capacity building on key institutions

Many of Mozambique's governance strategies face a critical implementation gap due to the lack

of human capital. The country is only twenty years out from two decades of civil war, faces an HIV/AIDS epidemic and nearly half of primary school aged children leave school before completing grade 5.<sup>596</sup> Furthermore the country is still undergoing the process of developing a civil service structure that can deliver adequate governmental staff, faces competition for talent from private companies, International Organizations and NGOs.<sup>597</sup> While this hasn't prevented the development of technical expertise in some key Ministries, for governance to be successful all institutions providing checks and balances must all be fully capable of carrying out their responsibilities and must be adequately staffed.

### *Specific Recommendations for Government Agencies*

**Anti-corruption agencies** such as the Central Office for Combating Corruption (“GCCC”) and The Financial Intelligence Unit (“GIFIM”) should be assessed, possibly from the UN or donor countries familiar with their technical requirements, then provided with adequate resources to carry out their mandate of investigation, prosecution and witness protection. This would require additional staff training and/or the addition of expert staff or consultants from prosecutorial and law enforcement programs-GCCC. Similarly, accountants, lawyers and regulatory experts should be provided for GIFIM.<sup>598</sup>

**MICOA** currently coordinates multiple ministerial directorates,<sup>599</sup> manages the Environmental Impact Assessment (“EIA”) process and provides environmental licensing for the extractive industries. MICOA requires experienced staff to effectively audit and monitor the environmental impacts of the extractive industries. Their mandate also includes a social component, and a joint task force with other ministries is recommended to ensure the proper expertise is available. Finally an external company should be provided to assist MICOA with digital services for EIA management to ensure online access during review periods.

**The National Oil Company (“ENH”)/National Mining Company (“ENM”)** should develop technical capacities beyond license management and into Natural Gas and Mineral extraction. This could develop Mozambique as both an operational partner for extractive companies investing within Mozambique and allow Mozambique to compete for bids within the global energy markets.

**Ministry of Finance, Tax Agency:** Provide the Tax Authority with expert legal staff familiar with extractive industry contract design, fiscal tools, as well as expert auditors familiar with issues such as transfer pricing and with extractive industries.

**The National Assembly (Parliament)** should be supported in building up their professional staff (civil service) and acquire and develop their technical capacities to ensure that they are able to create legislation and provide oversight and implementation of laws, in accordance with the National Assembly’s constitutional mandate. Currently the decree-laws have been the primary source of legislation, minimizing the critical role of a separate and independent legislature.

**MIREM, INP and DNM** should be provided adequate technical capacity to regulate and should be augmented with professional staff relevant to the extractive industries as well as professional auditors and regulators familiar with Mozambican and international extractive industry laws/regulations.

### 8.5.3 Professionalizing the Civil Service

To create a sustainable solution, the civil service must address multiple political and technical obstacles before it will be able to deliver a professionalized stream of government employees and administrators. First, civil service professionalization requires a legal mandate that ensures individuals entering the civil service are qualified, have passed rigorous testing and are given appropriate training. While political appointments are important for maintaining democratic accountability and carrying out positive change, these appointments should be focused at high-level policy roles. The majority of staff should earn their positions through merit-based placement systems. This will ensure that each institution has the political leadership to align with government strategy, and maintains the technical skill to carry out administrative functions and provide continuity between political transitions. Second, the civil service must ensure that compensation for staff reflects each individual's responsibilities, skills and qualifications. Civil servants should be encouraged to develop their careers through further training. This can be incentivized through clear career advancement paths (promotions) based on responsibilities and requirements and evaluated through ongoing assessment.<sup>600</sup> This will ensure there is a clear path for career advancement based on performance incentives, as well as quality control of civil servants. The March 2013 Doctors' strike is an example of the need for readjusted pay-scales that reflect civil servants' training and education.<sup>601</sup>

#### Recommendation 85:

- Professionalize the core of the civil and administrative service to create a competent administrative staff.
- Hire experts to help assess, structure and develop the current civil service program.

### 8.5.4 Reversing the Brain Drain and Increasing Expert Administrators

Additionally, the government and its partners must find solutions to address the issue of internal "brain-drain" between potential civil servants and Mozambican corporate interests, foreign corporations, NGOs, embassies and International Orgs as they compete for top talent. If it is feasible, ensuring matching pay scales, or additional forms of compensation, could help prevent "poaching" of talented Mozambicans; however the budget may prove to be a constraint. Working with partners may provide a solution through the development of another strategy, a 1-to-1 program. This would require external entities to provide the government with equal funding for a matching salary and benefits to a state employee for each Mozambican they hire. While this method does have any available case studies it should be considered as a potential strategy<sup>602</sup> By allowing the civil administration to "...contract some of the best experts to deal with reform, modernization and policy recommendations, and ensure proper implementation, monitoring and evaluation, and accountability of decisions",<sup>603</sup> robust structures can be created.

However, the pressing need for qualified staff within the extractive industry requires an increase in the number of effective employees now. While there could be advantages in delaying the start of extractive industry production, the reality is that it would be extremely difficult (politically and practically) to stop the existing megaprojects in their tracks. Rather than wait, Mozambique must move swiftly to find expertise and professional staff to augment their current

administrators and technicians. Mozambique appropriately has protective laws ensuring that employment priority is given to qualified Mozambican candidates; however gaps must be filled in a timely manner.

As recommended in Uganda, another country faced capacity gaps in the development of its extractive industry regulatory framework, “Donors ... can provide some of this capacity, but consultants, NGOs and IGOs should be allowed to provide staff under strict guidelines set forth by Parliament. Moreover, part of any contract for foreign assistance should include requirements for training of Mozambican’s to fill those positions in the future. This should also be the system for sectors related to overall development, including the hiring of foreign teachers and healthcare workers until local staff can fill the role.”<sup>604</sup>

The Overseas Development Institute’s (ODI) strategy provides a near term solution, one that address gaps in staff capacity, by partnering with countries, including Mozambique, through the placement of fellows “to provide governments of developing countries with high caliber junior professional economists where gaps in local expertise exist”<sup>605</sup> A similar program could be created in Mozambique through legislation that sets out guidelines to allow expert placements in Government institutions. These experts should be qualified and experienced to help provide guidance and training in extractive industry monitoring, regulation, environmental impact assessments, contract design and any other specific needs within government agencies. This program model could further enhance value for the Mozambique government if it included a training program to help develop domestic capacity. This could come in many forms including an in country program provided by placement facilities or an exchange program where a Mozambican learns and works in a partner institution or country.

The development of specific skills related to the extractive industries should be jointed with a cross-governmental sector approach.

**Recommendation 86:** Collaborate with bi-lateral donors, NGOs, and companies to bring expert knowledge into various agencies to bridge the administrative skill gaps and developing domestic capacity across all sectors.

**Recommendation 87:** Create policies to ensure Mozambican and foreign talent is recruited into the civil and administrative services. This can include salary matching, civil service placements of foreigners and other creative solutions.

Finally, Mozambique should look to its diaspora for technical expertise and provide incentives for the return of technocrats. Over 45% of University Educated Mozambican’s live abroad—particularly in Portugal and South Africa<sup>606</sup> and the diaspora as a whole sends 40 million dollars annually<sup>607</sup> in remittances. This is a resource that should be further investigated.

## 8.6 Increase transparency in all institutions and over all gas and mining activities

### 8.6.1 Bolstering Extractive Industry Transparency Standards

The 2013 Resource Governance Index ranks Mozambique 46th out of 58 countries with extractive resources. The analysis, done through the Revenue Governance index (RGI) framework examines four areas of transparency and accountability “...based on more than 30 external measures of accountability, government effectiveness, rule of law, corruption and democracy.”<sup>608</sup>

Mozambique’s partial score of 58/100 for “Institutional and Legal setting components” is due to its lack of critical governance in tracking and disclosing extractive revenues. Revenue generated by the extractive industry is collected directly by INP, bypassing the treasury, and lacks any public information or oversight. Furthermore, Empresa Nacional de Hidrocarbonetos (“ENH”), which is entirely state-owned, provides limited information on its revenue streams including special taxes and dividends.

Detailed declarations and proper oversight are required to ensure funds are being properly handled. The Resource Governance Index recommends the following actions to help ensure proper revenue monitoring and transparency for Mozambique:<sup>609</sup>

- Disclose contracts signed with extractive companies;
- Ensure that regulatory agencies publish timely, comprehensive reports on their operations, including detailed revenue and project information;
- Extend transparency and accountability standards to state-owned companies and natural resource funds;
- Make a concerted effort to control corruption, improve the rule of law and guarantee respect for civil and political rights;
- Accelerate the adoption of international reporting standards for governments and companies.

### 8.6.2 Transparency through E-Governance and Information and Communication Technology

Because its extractive discoveries have occurred only recently, Mozambique has the distinct advantage that it can employ and benefit from the very best technology – not only for the physical extraction and production process, but also for the management and governance of the business of natural resource extraction. E-governance refers to the use of information and communication technology (“ICT”) to provide public services, improve managerial effectiveness, and to promote democratic values and mechanisms.<sup>610</sup> And this technology is not exclusively the domain of OECD countries – in developing and transition economies such as Estonia,

investments in e-governance tools have helped to establish a new way for ministries and other state entities to conduct public policy and provide public services.

Mozambique's extractive industries could become more accountable and transparent through the implementation of an integrated ICT e-governance system. Mozambique has the technological capacity but needs to implement the right accountability and transparency measures within its ITC systems. Even then, ICT projects and programs are not a guaranteed solution. The success of government initiatives can be dependent on managerial leadership and political support.<sup>611</sup> They are also undoubtedly affected by culture and administrative compliance as illustrated in the case study on Cameroon.

In 2002 Mozambique became one of the first African countries with an ICT policy and implementation plan.<sup>612</sup> With various international and technology partners, particularly IST-Africa backed by the EC and the Republic of Ireland, nine distinct programs of e-governance were created.<sup>613</sup> Today, Mozambique's ICT Policy Implementation Technical Unit supports at least 17 ongoing projects<sup>614</sup> that include Environmental Management and Information Systems ("EMIS") for the Mining Sector, Licensing and Management of Mineral Resources ("FlexiCadastre") for MIREM, and the electronic State Financial Administration System ("eSISTAFE"). While each of these sectors is critical for the extractive industry, their ICT platforms lack key transparency and accountability components important to minimize corruption. Specifically, the databases for MICOA and MIREM are not currently used to provide public accessibility to documents such as EIA reports or Concessions.

#### **Case Study: An ICT System for Official Development Assistance**

The ODAmoz system 2.0<sup>615</sup> is a transparent national ICT database that the Government of Mozambique uses to manage all official donor country donations and loans. "The original version was created in response to the Paris Declaration advocating for strengthened coordination and harmonization among Donors and alignment with the Government of Mozambique."<sup>616</sup> In 2008, the Development Gateway<sup>617</sup> Company, with support from the Government of Ireland and the EC, began working with Mozambique's Ministry of Planning and Development and supported the ODAmoz transition to self-sustained management.

The system is becoming fully compatible with government's State Financial Administration System (eSISTAFE) and allows donors and United Nation Agencies' projects and programs to see where their money is allocated. It still lacks full capacity of its mandate but substantial donor data is currently available. When it is running at full capacity it will enable customized reports detailing project information that will include operating location, funders, implementing organizations. It has a simple user interface and is readably accessible through the internet. It demonstrates the versatility and capability of Mozambicans to adapt to new technology and effectively manage ICT frameworks.

### Case Study: ICT Failures in Cameroon

In Cameroon, attempts to use e-governance and ICT to improve transparency and efficiency have had a minimal success due to classic barriers including the lack of political mandate. Classic barriers faced by Cameroon, and many developing countries, include e-readiness in staffing, poverty, infrastructure and cultural. Inhibitors include factors that include political considerations, lack of ICT policies, attitude, design and digital access.<sup>618</sup>

Cameroon's lack of an ICT policy until 2007 was an "inhibiting factor" that originated from "political considerations." Cameroon's president should have provided vision and mandate for the ICT policy, however nothing has been established to for years.<sup>619</sup> This has been due to political conflict regarding appointments and responsibilities for approval, implementation and the lack, until recently, of a National ICT Agency. The conflict has come from the host of governmental institutions and institutional actors creating a power struggle between institutional players.<sup>620</sup> Much like its ICT policy, Cameroon's National ICT Agency's also suffered from a lack of mandate due to laws and decrees that have distributed similar responsibilities to other institutions. The lack of a clear ICT policy and a clear mandate for its implementation agency created an ICT implementation gap.

Indeed, a clear vision and strategic goals for e-governance implementation is an important challenge for successful ICT systems.<sup>621</sup> ICT goods and services have the potential to become important drivers across multiple sectors<sup>622</sup> with "...the great potential to enhance the quality of human life."<sup>623</sup> While ICT systems should not be considered a "magic solution"<sup>624</sup> they are a potential tool for increasing transparency, accountability and efficiency within governance.

To develop this system, public and expert consultations should provide input. Experts, advocates, civil society, NGOs, donors, government officials, government agencies, community members and administrators working in or potentially affected by the extractive industries should be consulted through an open forum. This will provide a robust perspective to ensure that all-important issues are discussed. We set out below some of the key transparency and accountability structures that should be incorporated in an extractive industry data management system for concession bides. The following example will use a concession bid process to illustrate relevant features that should be incorporated into an ICT program. However, the key concepts could be applied to other forms of licensing and data management systems relevant to the extractive industries.

The first key to a successful ICT program for concession bidding requires clear regulations outlining what information must be posted and who is responsible for the posting. The Petroleum Law states that companies must demonstrate their capacity to operate (see *Section 7: Gas and Petroleum Laws*), so the particular concession would need to publically disclose its contract's unique minimum requirements. The information should be uploaded to the ICT website with a clearly identified open bidding period to allow all qualified parties the opportunity to bid. This would support fair competition among potential companies and potentially generate a more competitive bidding process, increasing government revenue.

The second component is to create accountability by requiring that each bidder register publicly, and disclose its relative qualifications relating to specific indicators required for concession bids. The register should include the names of all individuals, parent companies, subsidiaries and

public or private corporate shareholders involved in the bid. This should apply to government corporations as well, and return investors should be able to reuse previous registration information if it has not changed. Applying public probity laws to ensure administrators do not have conflicts of interest would further bolster the provision.

The third requirement should entail a widely accessible ICT platform for data submission and viewing so in-person contact with administrators is not required. This would foster equal footing for all interested bidders and would help minimize “rent seeking” by administrators and the pressure of coercion or bribes on administrators. Furthermore, approvals and decisions by administrators should be documented and recorded to bolster accountability through public records.

The fourth requirement is the inclusions of a post decision review period where the public, auditing and oversight institutions and agencies could examine the decisions made by administrators. This would allow verification of information submitted by bidders and empower the public to participate in the bidding process. Furthermore, the public could provide feedback through online or private comments to auditing and oversight entities that would retain the power to veto decisions.

The fifth requirement is the permanent or long-term public access to the files and legislation allowing for post concession grant revocation, concession suspension or fines if information provided by the bidders is inaccurate.

Limitations with ICT systems include the lack of digital access and literacy within Mozambique – key components to a successful e-governance system. Also, the concentration of people living in cities versus rural areas – where extractive industries often have the greatest impacts – makes it more difficult to get their feedback. While other drawbacks exist, e-governance’s has the potential to reduce corruption in the extractive industries through improved transparency and accountability.

**Recommendation 88:** Parliament should hold an open forum with key stakeholders to identify what information should be made public regarding the extractive industries, and should then legislate the creation of this platform with the ICT Policy Implementation Technical Unit providing implementation. It should draw on the experience and insight of other jurisdictions with effective e-governance processes, including Estonia.

## Notes to Section 8

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<sup>497</sup> Electoral Institute of Sustainable Democracy in Africa, “Mozambique Electoral System”: <http://www.eisa.org.za/WEP/moz4.htm>

<sup>498</sup> The EITI framework, a tool developed by the World Bank, was created to help develop the World Bank’s greater strategy of “programs on extractive industries reform, natural resource management, and good governance/anti-corruption.” See “About the EITI Multi-Donor Trust Fund”: <http://go.worldbank.org/B1H1S35S70>

<sup>499</sup> “Mozambique declared 'EITI Compliant,’” <http://eiti.org/news-events/mozambique-declared-eiti-compliant#>

<sup>500</sup> Global Integrity, “Mozambique 2007”: <http://report.globalintegrity.org/Mozambique/2007>

<sup>501</sup> Lainie Reisman and Aly Lalá, “Assessment of Crime and Violence in Mozambique,” Commissioned by the Open Society Foundation’s CVPI & OSISA, March 2012, 7.

<sup>502</sup> Chitragada Choudury et al, “Oil: Uganda’s Opportunity for Prosperity,” Columbia University, SIPA, 2012, 16.

<sup>503</sup> *Ibid*, 17.

<sup>504</sup> Republic of Mozambique, *Resettlement Law, Decree 31/2012*, Article 4, “The principle of direct benefit—the affected people shall be given the possibility to benefit directly from the undertaking and its socio-economic impacts Government of Mozambique’s Regulations for the Resettlement Process Resulting from Economic Activities”:

<http://www.acismoz.com/lib/services/translations/Regulamento%20de%20Reassentamento%20August%20as%20published%20JO.pdf>

<sup>505</sup> Chitragada Choudury et al. “Oil: Uganda’s Opportunity for Prosperity,” 17.

<sup>506</sup> Republic of Mozambique, *Mining Law, Law No. 14 / 2002*.

<sup>507</sup> Republic of Mozambique, *Mining Law Regulations, Decree No. 28/2003 of June 17*.

<sup>508</sup> Republic of Mozambique, *Petroleum Law, Law No. 3 /2001*.

<sup>509</sup> Republic of Mozambique, *Petroleum Operations and Regulations, Decree No. 24/2004*.

<sup>510</sup> “A Direcção Nacional de Minas,” 2009,

[http://www.mirem.gov.mz/index.php?option=com\\_content&view=article&id=59&Itemid=67](http://www.mirem.gov.mz/index.php?option=com_content&view=article&id=59&Itemid=67)

<sup>511</sup> Jim Tankersley, “Federal Report Slams Drilling Inspectors,” *Los Angeles Times*. Los Angeles Times, 25 May 2010. Web. 13 Apr. 2012.

<sup>512</sup> Deepwater Horizon Joint Investigation Team Final Report. Rep. Bureau of Ocean Energy Management, Regulation, and Enforcement, U.S. Coast Guard, 16 Sept. 2011. Web. 13 Apr. 2012.

<sup>513</sup> Chitragada Choudury et al, “Oil: Uganda’s Opportunity for Prosperity,” Columbia University, SIPA, 2012, 18.

<sup>514</sup> *Ibid*.

<sup>515</sup> *Ibid*.

<sup>516</sup> Republic of Mozambique, *Mining Law, Law No. 14 / 2002*, of June 26, Ch. 5.

<sup>517</sup> ICF International, “Natural Gas Master Plan for Mozambique, Draft Report Executive Summary,” August 26, 2012, ES-50 “Existing environmental regulations in Mozambique enable MICOA, who is responsible for environmental audits, to verify environmental impacts and compliance with conditions imposed during environmental licensing, and many of the potential impacts can be reduced to low or negligible levels with appropriate mitigation. However, monitoring and enforcement of environmental management plans and environmental regulations in Mozambique are generally weak and a potential obstacle for efforts to minimize or compensate for potential adverse environmental impacts of development of natural gas in Mozambique.”

<sup>518</sup> Republic of Mozambique, *Mining Law, Law Nr. 14 / 2002*, of June 26, Ch. 1 Article 15.6.(g), “Land use: Maintain the area and mining operations in a safe state, in compliance with management, health and safety regulations”.

<sup>519</sup> Republic of Mozambique, *Mining Law, Law Nr. 14 / 2002*, of June 26: Article 15.7, “ The mining

concession may be revoked in the case the holder fails to comply with the provision of number 2 and lines (a), (b) or (g) of number 6 of this Article, or in the case the mining concession holder breaches any regulatory provision or specified in the Mining Contract and violation of such provision is penalized with the revocation of the mining concession"; Article 24, "The Mining Law's rules regarding exploration license and mining concession revocation fails to list loss of Environmental License, Land Use Permits or lack of compliance with safety requirements as cause for revocation."

<sup>520</sup> Republic of Mozambique, *Petroleum Operations and Regulations, Decree No. 24/2004*, Ch. 8, Article 90.4, "The Operator shall monitor and reduce the effect of all operational and accidental discharge, handling of waste and pollution emissions into the air, sea, lakes, rivers, and soil. Operational discharges shall be within the limits defined by the entity with authority over environmental matters."

<sup>521</sup> Global Integrity, "Mozambique 2007": <http://report.globalintegrity.org/Mozambique/2007>

<sup>522</sup> 3rd Commission - Committee on Social Affairs, Gender and Environmental, 4th Commission - Commission of Public Administration, Local Government and Media, 5th Committee - Committee for Agriculture, Rural Development, Economic Activities and Services. "Comissões Parlamentares": [www.parlamento.org.mz/index.php?option=com\\_content&view=category&id=22&Itemid=225](http://www.parlamento.org.mz/index.php?option=com_content&view=category&id=22&Itemid=225).

<sup>523</sup> *Ibid.*

<sup>524</sup> Elisabete Azevedo, "The Assembly of the Republic of Mozambique: From Enemies to Adversaries?" EISA, May 2009. "Because each committee embraces a range of diverse issues it is questionable whether the deputies can be focused on such different spheres. Each committee has a meeting room and a support room. The staff and the leadership of the committee share the support room. There are three staff assistants for each committee, most of whom have a university education."

<sup>525</sup> "Parliament of Mozambique":

<http://www.awepa.org/en/programmes/institutional-programmes/mozambique.html>

<sup>526</sup> "O Tribunal Administrativo": [http://www.ta.gov.mz/article.php3?id\\_article=31](http://www.ta.gov.mz/article.php3?id_article=31)

<sup>527</sup> Open Society Foundation for Southern Africa, "Mozambique: Justice Sector and Rule of Law," Open Society Foundation, 2006.

<sup>528</sup> "USAID, "USAID Country Profile, Mozambique--Property Rights and Resource Governance," USAID, 2010, 11. "Mozambique's formal court system has jurisdiction over land-related disputes. The country's system includes an administrative court to hear challenges to state administrative actions, and district courts, provincial courts and a supreme court. Particularly at the higher levels, the formal court system suffers from lack of skilled administrative personnel, lack of qualified judges, and inadequate facilities and equipment. The litigation process is lengthy (the average contract enforcement action consumes more than 1000 days), requires parties to be represented by lawyers and includes high fees (10% of the estimated value of the claim). The judicial system has historically lacked independence and has been plagued with corruption."

<sup>529</sup> Open Society Foundation for Southern Africa, "Mozambique: Justice," 67.

<sup>530</sup> *Ibid.*

<sup>531</sup> UNDPADM and UNDESA, "Republic of Mozambique Public Administration Country Profile" United Nations, January 2004.

<sup>532</sup> Chitragada Choudhury, et al., "Oil: Uganda's Opportunity for Prosperity," 21.

<sup>533</sup> Ana Pinelas Pinto and Dimir Coutinho Sampa, "The Mozambican Public Probity Law: The First Episode of a New Season?," *International Law News* 42 (2013): accessed May 13, 2013 [http://www.americanbar.org/publications/international\\_law\\_news/2013/winter/the\\_mozambican\\_public\\_probity\\_law\\_first\\_episode\\_a\\_new\\_season.html](http://www.americanbar.org/publications/international_law_news/2013/winter/the_mozambican_public_probity_law_first_episode_a_new_season.html)

<sup>534</sup> The expansive and clearly defined list of all officials that the principles defined within the *Law of Public Probity* applies to represents a significant improvement from Mozambique's previous conflict of interest provision, which did not explicitly state if it applied to individuals within the executive, judicial, and legislative bodies, and which therefore weakened enforcement of these principles in those branches of government.

<sup>535</sup> Mozambique is a party to the United Nations Convention on Corruption, the African Union Convention against Corruption and the Southern African Development Community Protocol Against Corruption.

- <sup>536</sup> Republic of Mozambique, *Law of Public Probity No. 16/2012*, Article 9 (2013).
- <sup>537</sup> Law on Public Probity, Article 19 (2013).
- <sup>538</sup> The *Law on Public Probity* specifies that conflicts of interest may fall under different headings, notably (a) family relationships, whether direct or by marriage; (b) financial relationships; (c) gifts and gratuities; (d) illegitimate uses of public office for self-benefit; and (e) being a former holder of public office. Obtained from Pinto and Samba “The Mozambican Public Probity Law: The First Episode of a New Season?”
- <sup>539</sup> Information contained in this section is compiled from Ha Joon Chang, “State Owned Enterprise Reform” Policy Notes 4, United Nations Department of Economics and Social Affairs, and Jenik Radon and Julius Thaler, “Resolving Conflicts of Interest in State-Owned Enterprises,” *International Social Sciences Journal* 702 (2008).
- <sup>540</sup> “Leading Oil and Gas Companies in the World,” PetroStrategies, Inc, accessed on May 13, 2013, [http://www.petrostrategies.org/Links/Worlds\\_Largest\\_Oil\\_and\\_Gas\\_Companies\\_Sites.htm](http://www.petrostrategies.org/Links/Worlds_Largest_Oil_and_Gas_Companies_Sites.htm) and Radon and Thaler, 2008.
- <sup>541</sup> Chang “State Owned Enterprise Reform,” 26.
- <sup>542</sup> *Ibid.* 22.
- <sup>543</sup> Radon and Thaler, 2008, 13-14.
- <sup>544</sup> Chang “State Owned Enterprise Reform,” 27.
- <sup>545</sup> Radon and Thaler, 2008, 13.
- <sup>546</sup> Chang “State Owned Enterprise Reform,” 14.
- <sup>547</sup> *Ibid.* 27.
- <sup>548</sup> “Mozambique: Deputies Affected by Public Probity Law Resign,” *All Africa*, March 12, 2013 accessed May 13, 2013, <http://allafrica.com/stories/201303121343.html>
- <sup>549</sup> Members of the National Assembly selected three members of the CCEP with FRELIMO selecting two and RENAMO selecting one.
- <sup>550</sup> “Mozambique: Central Public Ethics Commission Takes Office,” *All Africa*, January 25, 2013 accessed May 13, 2013 <http://allafrica.com/stories/201301251522.html>.
- <sup>551</sup> Law of Public Probity, Article 52 (2013).
- <sup>552</sup> *Ibid.*
- <sup>553</sup> Interview with members of the GCCC. Maputo, Mozambique (March, 2013).
- <sup>554</sup> Choudhury, et al., “Oil: Uganda’s Opportunity for Prosperity,” 23.
- <sup>555</sup> John R. Heilbrunn, “Anti-Corruption Agencies: Panacea or Real Medecine for Fighting Corruption?,” *World Bank Institute*, (2004), 1.
- <sup>556</sup> “World Bank: Georgia is Anti-Corruption Success Story,” Organized Crime and Corruption Reporting Project, accessed May 13, 2013 <https://reportingproject.net/occrp/index.php/ccwatch/cc-watch-briefs/1324-world-bank-georgia-is-anti-corruption-success-story>.
- <sup>557</sup> “Ease of Doing Business in Georgia,” Transparency International, accessed May 13, 2013 <http://www.doingbusiness.org/data/exploreconomies/georgia/>
- <sup>558</sup> The World Bank, “*Fighting Corruption in the Public Service: Chronicling Georgia’s Reforms*,” World Bank (2012), 91-100.
- <sup>559</sup> Marie Chene, “African Experience of Asset Declaration,” *Anti-Corruption Resource Center*, (2008), 2.
- <sup>560</sup> Law of Public Probity, Article 59 (2013).
- <sup>561</sup> *Ibid.*
- <sup>562</sup> An official English translation of the Law on Public Probity was not available at the time of this publication, which therefore limited a full diagnosis of these points.
- <sup>563</sup> DAI and Nathan Associates, “Overview and Analysis of the Anti-Corruption Legislation Process in Mozambique,” (2012), 17.
- <sup>564</sup><sup>564</sup> Interview with members of the GCCC. Maputo, Mozambique (March, 2013).
- <sup>565</sup> Law of Public Probity, Article 56 (2013).
- <sup>566</sup> Pinto and Samba “The Mozambican Public Probity Law: The First Episode of a New Season?”
- <sup>567</sup> Adapted from Choudhury, et al., *Oil: Uganda’s Opportunity for Prosperity*, 23.
- <sup>568</sup> The President of Mozambique has the authority to appoint Ministers and other officials to key

government posts. This process is currently done internally.

<sup>569</sup> Adapted from Choudhury, et al., *Oil: Uganda's Opportunity for Prosperity*, 23.

<sup>570</sup> Parliamentary Law No. 6/2001 of 30 April established 8 working committees that submit and comment on laws, resolutions and motions that relate to their thematic issues. Further, these committees also design and produce field studies, evaluate state institutions' that relate to their thematic focus, ensure that the law is respected and that public opinion is catered for in regards to the issues they oversee. See: Joao Pereira and Carlos Shenga, "Stengthening Parliamentary Democracy in SADC Countries: Mozambique Country Report," *The South African Institute of International Affairs*, 2005, 37.

<sup>571</sup> The *Economic Issues and Services Subcommittee* has a mandate that includes to defend and promote formal business, the normalization of informal business, the development of internal and external economic relations, tourism, gambling, and transportation infrastructure among many others. See Pereira and Shenga, "Stengthening Parliamentary Democracy in SADC Countries: Mozambique Country Report," 33-39.

<sup>572</sup> Adapted from Choudhury, et al., *Oil: Uganda's Opportunity for Prosperity*, 23.

<sup>573</sup> The Constitutional Council is comprised of 7 judges, one is appointed by the President of the Republic, one by the Superior Council of the Judiciary and five are appointed by the Assembly of the Republic according to principles of proportional representation. Mozambique Constitution, Article 242

<sup>574</sup> Adapted from Choudhury, et al., *Oil: Uganda's Opportunity for Prosperity*, 34

<sup>575</sup> For more on the role of whistleblowers, see Jenik Radon, "The New Mantra: Bribers Beware." *Journal of Transnational Management* 11.4 (2006), 19-43.

<sup>576</sup> "Mozambique: Witness Protection Bill Passed," *All Africa*, March 22, 2012, accessed May 13, 2013 <http://allafrica.com/stories/201203230292.html>.

<sup>577</sup> DAI and Nathan Associates, "Overview and Analysis of the Anti-Corruption Legislation Process in Mozambique," *USAID-SPEED*, (2012) 31.

<sup>578</sup> Maria Martini, "Overview of Corruption and Anti-Corruption in Mozambique," *U4 Anti-Corruption Resource Centre*, (2012), 9.

<sup>579</sup> Klaus Schwab, et al, *The Global Competitiveness Report 2012-2013*, *The World Economic Forum*, (Geneva: 2012), 268- 269.

<sup>580</sup> Adapted from Choudhury, et al., *Oil: Uganda's Opportunity for Prosperity*, 24

<sup>581</sup> The Inspector General in the Ministry of Mineral Resources has the authority to conduct assessment of activities in the mining and hydrocarbon sector, as well as suspend and propose a ban of activities that are in violation of these sectors rules and regulations.

<sup>582</sup> Adapted from Choudhury, et al., *Oil: Uganda's Opportunity for Prosperity*, 25

<sup>583</sup> IMF, IMF Country Report No. 11/132, "Republic of Mozambique: Poverty Reduction Strategy Paper", 06/11. : [www.imf.org/external/pubs/ft/scr/2011/cr11132.pdf](http://www.imf.org/external/pubs/ft/scr/2011/cr11132.pdf)

<sup>584</sup> G-19 PAP—Programme Aid Partnership, "Pap Structure", [www.pap.org.mz/pap\\_structure.htm](http://www.pap.org.mz/pap_structure.htm).

<sup>585</sup> The Nordic Embassies in Mozambique, "Elements for an Inclusive Growth Process in Mozambique, Key Messages from the Nordic-Mozambican Conference" The Nordic Partners, 2012.

<sup>586</sup> BTI, "Mozambique Country Report," Bertelsmann Stiftung, BTI 2012, 7.

<sup>587</sup> Note: The G-19 partners are Germany, Austria, Belgium, Canada, Denmark, European Commission, Spain, Finland, France, Ireland, Italy, Norway, Netherlands, Portugal, Sweden, Switzerland, United Kingdom, the African Development Bank (AfDB), and the World Bank.

<sup>588</sup> "Official Development Assistance to Mozambique," <http://www.odamoz.org.mz/reports/custom/new>

<sup>589</sup> "Mozambique: 2013 Budget Shows Further Reduction in Dependence", *All Africa*, 12 Dec. 2012. Web., [www.allafrica.com/stories/201212130126.html](http://www.allafrica.com/stories/201212130126.html)

<sup>590</sup> "AfDB Supports Mozambique's EITI with USD350,000 Grant," 08 Oct, 2010, <http://www.afdb.org/en/news-and-events/article/afdb-supports-mozambiques-eiti-with-usd350-000-grant-7289/>

<sup>591</sup> Ismael Faquir, "EITI Mozambique, Extractive Industry Transparency Initiative, Third Reconciliation Report," REF N.º 3626/TAX/EY/2012, Ernst & Young, 2010.

<sup>592</sup> ICF International, "Natural Gas: Development of a Gas Master Plan", 2013:

<http://www.inp.gov.mz/Highlights/Development-of-a-Gas-Master-Plan-for-Mozambique>

<sup>593</sup> The World Bank Report, "Country Partnership Strategy FY12-15 For the Republic of Mozambique." Report No. 66813-MZ, World Bank, 08 Feb, 2012.

<sup>594</sup> "Poverty Reduction Strategy Papers (PRSPs) are prepared by member countries in broad consultation with stakeholders and development partners, including the staffs of the World Bank and the IMF. Updated every three years with annual progress reports, they describe the country's macroeconomic, structural, and social policies in support of growth and poverty reduction, as well as associated external financing needs and major sources of financing. This country document for the Republic of Mozambique, dated May 3, 2011, is being made available on the IMF website by agreement with the member country as a service to users of the IMF website." See World Bank, "What are PRSPs?," [web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPRS/0,,contentMDK:22283891~menuPK:384209~pagePK:210058~piPK:210062~theSitePK:384201,00.html](http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPRS/0,,contentMDK:22283891~menuPK:384209~pagePK:210058~piPK:210062~theSitePK:384201,00.html).

<sup>595</sup> "Cooperação PALOP e Timor-Leste /UE," <http://cooperacao.palop-tl.eu/>

<sup>596</sup> UNICEF, "Mozambique, Basic Education Quality," <http://www.unicef.org/mozambique/education.html>

<sup>597</sup> Kenneth Sherrmail, et al., "Brain Drain and Health Workforce Distortions in Mozambique," Plos One Online Publishing, 27 April, 2012: [www.plosone.org/article/info:doi/10.1371/journal.pone.0035840](http://www.plosone.org/article/info:doi/10.1371/journal.pone.0035840)

<sup>598</sup> Open Society Foundation for Southern Africa, "Mozambique: Justice Sector and Rule of Law," Open Society Foundation, 2006, 87.

<sup>599</sup> "MICOA-DNGA," <http://dup.esrin.esa.it/usrs/usrs274.php>

<sup>600</sup> USAID, SPEED, "Extractive Industries in Mozambique--Concept Note" USAID, SPEED, 07 Jan., 2012, 7. "The first component sets a framework to allow the civil service to contract some of the best experts to deal with reform, modernization and policy recommendations, and ensure proper implementation, monitoring and evaluation, and accountability of decisions. The second component is public sector reform aimed at modernizing, simplifying systems, improving efficiency and efficacy of deliverables and defining a set of priorities. The third component includes huge investments in education and health to deliver more and better services, together with intensive and rapid delivery of vocational training that responds to the economy's demands for skills. The last component entails designing an expat recruitment strategy to bring to Mozambique some of the best skills to assist the civil service to better respond to its challenges."

<sup>601</sup> "Mozambique: Doctors' Strike Ends" All Africa, January 15, 2013, web.

[www.allafrica.com/stories/201301160275.html](http://www.allafrica.com/stories/201301160275.html)

<sup>602</sup> Note: This type of regulation must be thoughtfully considered to ensure there aren't hidden costs that effect Mozambique due to this type of policy.

<sup>603</sup> "The first component sets a framework to allow the civil service to contract some of the best experts to deal with reform, modernization and policy recommendations, and ensure proper implementation, monitoring and evaluation, and accountability of decisions. The second component is public sector reform aimed at modernizing, simplifying systems, improving efficiency and efficacy of deliverables and defining a set of priorities. The third component includes huge investments in education and health to deliver more and better services, together with intensive and rapid delivery of vocational training that responds to the economy's demands for skills. The last component entails designing an expat recruitment strategy to bring to Mozambique some of the best skills to assist the civil service to better respond to its challenges." USAID, SPEED, "Extractive Industries in Mozambique--Concept Note" USAID, SPEED, 07 Jan., 2012, 7.

<sup>604</sup> Choudhury, et al., *Oil: Uganda's Opportunity for Prosperity*, 27.

<sup>605</sup> "The ODI Fellowship Scheme," <http://www.odi.org.uk/fellowship-scheme>.

<sup>606</sup> Aditi Lalbahadur, "A regional approach to national development priorities in Mozambique?" SAIIA, 20 March, 2013: [www.saiia.org.za/opinion-analysis/a-regional-approach-to-national-development-priorities-in-mozambique](http://www.saiia.org.za/opinion-analysis/a-regional-approach-to-national-development-priorities-in-mozambique)

<sup>607</sup> Maxaeia Salomao, "Diaspora investment in Mozambique's energy company PETROMOC" Club of Mozambique, 10/30/12:

<http://www.clubofmozambique.com/solutions1/sectionnews.php?secao=business&id=26557&tipo=one>

<sup>608</sup> "The Resource Governance Index (RGI) measures the quality of governance in the oil, gas and mining sectors of 58 countries," <http://www.revenuewatch.org/rgi> "...Institutional and Legal Setting: the degree

to which laws, regulations and institutional arrangements facilitate transparency, accountability and open, fair competition; Reporting Practices: government disclosure of information; Safeguards and Quality Controls: the presence and quality of checks and oversight mechanisms that encourage integrity and guard against conflicts of interest and Enabling Environment: the broader governance environment...”

<sup>609</sup> *Ibid.*

<sup>610</sup> Ramon Gil-Carcia, “Enacting state websites: A mixed method study exploring E-government success in multiorganizational setting” PhD dissertation, State University of New York at Albany, 2005, cited in Meelis Kitsing, “An Evaluation of E-Government in Estonia” Prepared for delivery at the Internet, Politics and Policy 2010: An Impact Assessment conference at Oxford University, UK, on September 16-17, 2010: [http://microsites.oii.ox.ac.uk/ipp2010/system/files/IPP2010\\_Kitsing\\_1\\_Paper\\_0.pdf](http://microsites.oii.ox.ac.uk/ipp2010/system/files/IPP2010_Kitsing_1_Paper_0.pdf).

<sup>611</sup> John C. Bertot, et al., “Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies,” *Government Information Quarterly* 27 (2010) 264–271. 267.

<sup>612</sup> Salomão Manhiça, et al., “ICT Policy Implementation Strategy, Toward the Global Information Society,” Republic of Mozambique, Council of Ministers, 10 Dec. 2002.

<sup>613</sup> *Ibid.*, 11-12. “Government Electronic Network (GovNet), State Personnel Information System (SIP 2000), State Financial Administration System (e-SISTAFE), Computerised Land Registry, Civil Identification System, National Development Portal Survey of the state of ICTs in Public Institutions, Health Information System, Electoral Management System”.

<sup>614</sup> “Current ICT Initiatives and Projects in Mozambique”: [www.ist-africa.org/home/default.asp?page=doc-by-id&docid=5563](http://www.ist-africa.org/home/default.asp?page=doc-by-id&docid=5563)

<sup>615</sup> “Official Development Assistance to Mozambique”: <http://www.odamoz.org.mz/reports/custom/new>

<sup>616</sup> *Ibid.*

<sup>617</sup> “Aid information management in Mozambique: A success story”:

<http://www.developmentgateway.org/news/aid-information-management-mozambique-success-story>

<sup>618</sup> Ishmael Shu Aghanifor, “Information and Communication Technology in developing economies: A literature review on the reasons for failures of ICT; The case of Cameroon Presented,” Student of Swedish Business School University of Örebro Sweden Masters in Informatics Thesis, 2011, 6.

<sup>619</sup> Olivier Nana Nzépa and Robertine Tankeu, “Cameroon,” In *Towards an African e-Index: ICT access and usage*, Household and individual across 10 African countries, ed. Gillwald, Alison, 2005.

<sup>620</sup> Olivier Nana Nzépa and Robertine Tankeu, “2007 Cameroon Telecommunications Sector Performance Review, a supply side analysis of policy outcomes,” In *2007 Telecommunications Sector Performance Review*, RESEARCH ICT AFRICA!, ed. Gillwald, Alison, 2007, 11.

<sup>621</sup> Paul de Guchtiniere and Kristina Mlikota, “ICTs for Good Governance – Experiences from Africa, Latin America and the Abstract Caribbean.”

<sup>622</sup> “ICT for Competitiveness and Innovation,” [http://ec.europa.eu/enterprise/sectors/ict/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/ict/index_en.htm)

<sup>623</sup> *Ibid.*

<sup>624</sup> Guchtiniere and Mlikota.

# 9 Managing Wealth: The Sovereign Wealth Fund

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*Sovereign wealth funds can be a force for common good.... They can play an important role in a country's development strategy, helping the transfer of technology and the creation of jobs {and} they can be helpful in managing the risks that countries face.*

Joseph E Stiglitz<sup>625</sup>

## 9.1 A Sovereign Wealth Fund for Mozambique

The question of whether to establish a sovereign wealth fund ("SWF") to manage revenues from extractives is hotly debated in Mozambique. While the central bank, the Banco de Mocambique, is working on a proposal to introduce a Mozambican SWF, other government entities are skeptical about the timing and efficacy of such a fund. The Gas Master Plan, of which the executive summary was published in December 2012, only mentions the establishment of a SWF as one of five options for challenging gas revenues to development.<sup>626</sup>

There seems to be a popular belief that the establishment of a SWF would mean parking the revenue accruing from the country's extractive sector abroad and holding it there. Many are concerned that those funds would be better suited to stay in Mozambique, where they are badly needed for local investment, development, and poverty reduction. While it is clear that a Norwegian-style SWF is not suitable for a country in need of significant domestic investment such as Mozambique, it has to be emphasized that a SWF and investment in domestic development are not at all mutually exclusive. On the contrary, a SWF is an excellent tool to increase efficiency in Mozambique's investments, while maintaining macroeconomic stability and providing savings for future generations. Indeed, both the goals of investment and saving for the future can be achieved. The answer lies in how a SWF is structured, managed and operated.

By 2025 the revenues expected from the export of natural gas alone will surpass Mozambique's current GDP. While coal exportation will also bring financial benefits, the biggest financial impact lies in the country's natural gas production and its conversion into liquefied natural gas ("LNG") for export. It is therefore very important that the government prepares itself for the powerful financial impact expected in the future before natural gas production is up and running. There is enough time now to establish a robust and highly structured SWF, ensure its legal enshrinement, and establish the necessary oversight and operating mechanisms. Once the revenues start flowing, it will be too late to do this in a thorough and reflective manner. While this issue might not seem urgent at the present time, it is critical to the success of Mozambique's revenue management.

SWFs have not always enjoyed positive media coverage. Some funds have been accused of making politically motivated investments, while others have suffered from a lack of

transparency or even mismanagement. That being said, a SWF is a legal and policy tool that can work very well if properly structured and managed.

Weak economic performance of resource rich countries can typically be traced back to low saving rates and boom-bust cycles. However, a well set-up SWF allows for sound and simple revenue collection while establishing mechanisms to protect the economy from fluctuations in commodity prices and enabling development and saving mechanisms. It can be an excellent national planning tool.

In the case of Mozambique, where expected revenues from natural gas and coal exports will make up a large part of the country's annual GDP, sound management of the revenues is critical. Countries like Nigeria and Chad have shown that extraction of natural resources can have little to no beneficial effect on the population if the revenues they generate are not managed with the highest standards available. Nigerian oil production has caused social unrest rather than prosperity, burdening the country with severe social challenges. Lax dealings with commodity revenues have further been identified as one of the main causes of the *Resource Curse*.

**Recommendation 89:** Mozambique needs a SWF for the thorough management of its natural resource revenues. Now is the time to prepare the relevant institutions and actors and create the legal framework for resource revenue management.

### 9.1.1 Dutch Disease

A sovereign wealth fund promotes growth and development in the country in four ways. First, it effectively shelters the domestic economy from the commodity sector, so that volatility in oil, gas or coal prices do not have such a disruptive effect on the country's budget planning from one year to the next. Second, by channeling revenues into specific development programs, the fund can help the government to focus and plan for expansion of infrastructure, education and public services. Third, the fund can help to ensure that government revenue from extractive resources become an ongoing source of income for decades to come, and provide intergenerational equity. Finally, and crucially, a SWF can insulate Mozambique's currency, helping to contribute that investment in the extractives industry does not have negative impacts on other sectors of the economy. For example, a sudden and ample foreign exchange influx due to sales of natural resources will cause significant appreciation of the real exchange rate, through appreciation of the nominal exchange rate and/or a rise in the domestic price level. This effect on the price of a currency, also known as *Dutch Disease*, increases the relative prices of exports and effectively renders other export industries non-competitive since they become too expensive.

#### If it happens in advanced economies then it can happen in Mozambique

"The term *Dutch Disease* originated in the Netherlands during the 1960s, when the high revenue generated by its natural gas discovery led to a sharp decline in the competitiveness of its other, non-booming tradable sector. Despite the revenue windfall the new discovery brought, the Netherlands experienced a drastic decline in economic growth. The huge foreign exchange from the export of the gas led to a shift in prices and appreciation of the exchange rate, so that previously competitive exporters lost market share and production of those exports fell."<sup>627</sup>

If *Dutch Disease* were to strike in Mozambique, it would put Mozambican farmers out of business, make the country's economy less diversified, and therefore more reliant on the extractive industries. This could potentially lead to social unrest as it did in Nigeria, and increase Mozambique's dependency on South African imports even further. Once oil and gas reserves are exhausted, the country would have no vibrant export industry to sustain its economy, and face rising poverty and a general decline in living standards.

If all the money stemming from extractives exportation were spent on imports it would not have much of an effect on the real exchange rate. However, the bulk of the income is often converted into local-currency and spent on domestic non-traded goods. If this happens in a fixed-exchange rate regime (where the currency is not allowed to fluctuate), it would inevitably lead to an increase in money supply, which would increase domestic demand and ultimately increase domestic prices. The increase in domestic prices appreciates the real exchange rate and is concerning due to an increase in inflation. In a country with a floating exchange rate regime, such as Mozambique, an increase in the supply of foreign exchange would appreciate the nominal exchange rate and therefore the real exchange rate (the Metical becomes relatively scarcer).<sup>628</sup>

Mozambique can avoid this scenario by holding its commodity revenues in foreign currencies and investing in productive foreign assets, both of which are to be located in an established, traditional financial center such as London, New York or Singapore. This would avoid a sudden and massive influx of foreign exchange, and help to hedge currency exchange risk. Simply holding the revenues from the megaprojects in an established financial center and letting them flow back into the economy in a controlled manner will help avoid a negative impact on the exchange rate.

**Recommendation 90:** Place the SWF in a well-established, traditional financial center located in London, New York or Singapore. Invest in foreign assets and currencies to create a diversified portfolio that generates ongoing revenue for the country.

### 9.1.2 Managing Expectations

A well-structured SWF is one of the most important tools available to Mozambique to promote sustainable development and long-term growth. It will support a stable economy, which also has spillover benefits for the country's political and democratic development. When natural resources are found, there are often high expectations among citizens and politicians about investments and rapid improvements of infrastructure, health systems and education. While these expectations are understandable and valid, caution has to be exercised when investing in order to avoid stoking inflation.

#### Absorption capacity

The speed and degree in which investment can take place depends heavily on a country's absorption capacity. Sudden increases in domestic demand can lead to supply bottlenecks that push up the prices of non-tradable goods, which include most services and ultimately spike inflation.<sup>629</sup> Aside from the North-South axis, paved roads in Mozambique are fairly sparse and

the country has one of the lowest electrification rates in the world. The lack of these and other prerequisites for many investment projects makes it difficult to complete them in a way that is efficient and economical. Similarly with education, Mozambique needs to increase primary and especially secondary education before it can significantly increase the number of doctors, nurses, engineers etc. Singapore invested heavily in education in the course of its economic rise, but it took decades for that small island state to reach its current level of economic and social development.

Small absorption capacity can either be due to the small size of an economy (lack of labor force, skills, infrastructure etc.) or prevailing inefficiencies within the economy. Since Mozambique has limited capacity, investments can rapidly become ineffective: only so many roads and bridges can be built at the same time, only so many doctors and teachers trained.

This situation is comparable to a hospitalized patient that is dependent upon a life-saving drug. The drug is administered through a drip because an overdose of the supposedly life-saving drug could just as much kill the patient.<sup>630</sup> In the same way, pumping huge amounts of money into Mozambique's economy all at once could "overload" the country. In that sense, while poverty eradication and development should be Mozambique's top priorities, the government should exercise caution to ensure that investments are efficient, that inflation is managed, and to mitigate other detrimental effects of rapid investments of natural resource revenues. Public investment needs to be scaled up gradually in line with institutional and absorption capacity constraints.<sup>631</sup>

### 9.1.3 Saving for Future Generations

Selling one's natural resources is analogous to selling the family silver: a once durable asset is sold and converted into cash, it is no longer a source of secure wealth. A SWF will allow Mozambique to convert its permanent, but finite and depletable resources (i.e. natural gas and coal) into financial assets that generate recurring revenues over long periods of time. Depending on the rate of production and global commodity price trends, Mozambique's gas and coal resources may be depleted within a relatively short period of time. While it is reasonable to immediately invest some of the commodity revenues in order to increase the standard of living of Mozambique's current population, the main objective should be to maintain the fund's value to ensure self-sustaining economic growth for present as well as future generations. Other commodity exporting countries aim to maintain their SWF value (the principal) while only spending its return on assets (the profits, dividends or interest earned on investments – what is sometimes called the *bird-in-hand-approach*<sup>632</sup>). Norway is perhaps the quintessential example of how to best manage a SWF. The country has been able to successfully use the mechanism to guarantee intergenerational equity and provide its population with one of the highest standards of living in the world. If the Norwegian Pension Fund Global were to be distributed today, it would roughly allocate \$150,000 to each of Norway's nearly five million citizens.

To be fair, when Norway discovered its natural resources it was already at a much higher level of development than Mozambique is today. Mozambique can look to Botswana – another sub-Saharan African country – or Timor-Leste for more pertinent comparison studies.

### Botswana: The Pula Fund

Botswana's Pula Fund is a long-term investment portfolio that was established in 1994 to preserve parts of the income stemming from diamond exports for future generations.<sup>633</sup> The fund has successfully increased its value in real terms (\$6.9 billions by the end of 2012, or roughly 50 % of GDP) due to high revenues stemming from diamond exports, recurring positive balance of payments, and high returns on investments. Any resources from extraction that the government cannot invest in productive domestic investments are transferred to the Pula Fund.<sup>634</sup> Additionally, the Pula Fund takes on a stabilization role: During the global financial crisis the Pula Fund served as a smoothing mechanism to support the government's countercyclical policy response to boost economic growth.<sup>635</sup> As opposed to other countries where the government revenue to GDP ratios are low, Botswana, thanks to the Pula Fund, was able to afford stimulus packages that stimulated the economy and increase GDP growth after it dropped significantly in 2009.

#### 9.1.4 Tapping into International Financial Markets

A SWF is a special purpose vehicle for the successful investment of government assets in global financial markets.<sup>636</sup> The complexity and sophistication of international financial markets, however, often exceeds government capacities. This is the case in Mozambique as it struggles with government capacity in most ministries and government entities. This skill gap can be bridged by investing in assets that are located in a traditional financial center such as London, New York or Singapore, and managed by experienced asset managers. Asset manager professionals can draw on their knowledge and experience of financial markets to provide the fund with benefits from economies of scale (cost advantages due to size). That is, an asset manager will likely have better access to a broader range of investments, and therefore have lower administrative costs because it represents a large number of investors.

Mozambique has an important role to play in deciding how much of the extractive revenues to spend, when, and where these revenues should be spent – and how much should be saved. The strategic direction for the SWF will be completely within sovereign control, but the day-to-day administration should be outsourced. In the case of Timor-Leste's petroleum fund, the Ministry of Finance sets the investment strategy after consultation with the Investment Advisory Board (see *Section 9.6.4: Timor-Leste Continued*), whereas the actual administration of the fund's assets is handled by the investment bank JP Morgan in New York (see *Section 9.2.4: The Lesson to Be Learnt from Timor-Leste*).

**Recommendation 91:** Draw on the experience of established financial experts to manage the investment of the SWF's assets.

### Abu Dhabi Investment Authority

The Abu Dhabi Investment Authority ("ADIA")<sup>637</sup> is a globally diversified investment institution that currently manages about \$342 billion in assets that are owned by the Government of the Emirate of Abu Dhabi. ADIA does not invest in Abu Dhabi or the Gulf region for that matter. The

majority of its investments are done in North America and Europe and to a lesser extent in developed Asia and the Emerging Markets.<sup>638</sup>

The fund's resources are invested and managed through the ADIA investment department comprising investment experts from all over the world. A Board of Directors that is directly appointed by the ruler of the emirate but that is not involved in investment and operational decisions oversees the fund. 80 % of the fund's assets are managed by external fund managers whose activities are monitored on a daily basis.<sup>639</sup>

While it is recommended that Mozambique outsource the SWF's investment just like Timor-Leste to an investment bank or another reputable institution ADIA's model for investment might be of interest as a long-term goal (see *Section 9.2.4: The Lesson to Be Learnt from Timor-Leste*).

In 2011 Saeed Al Hajeri, executive director of ADIA's emerging market department emphasized in an interview that ADIA's strength lies in the investment staff that it employs. "ADIA devotes considerable time and resources to ensuring that we not only attract the best local and international talent but also that we are able to motivate and retain them." ADIA currently employs staff from over 40 countries. While two thirds of the staff is foreign, one of the fund's priorities is the development of local staff.

"ADIA is firmly committed to developing local talent. Our scholarship program reaches back into United Arab Emirates schools to identify, develop, and track students at an early age who we believe have the potential to be leaders of the future. We actually interview them and conduct psychometric testing at the high school level. From there, we monitor them. We get a quarterly report and have a dedicated department, following up on them and making sure they are doing their studies. Upon graduation, selected students are sponsored by ADIA to attend universities, usually in the United States or Europe, after which an assessment is made by both parties as to their interest and suitability for a career at ADIA."<sup>640</sup> (See *Appendix Appendix 2A: Abu Dhabi Investment Authority's Manager Selection Process*).

**Recommendation 92:** Instruct a reputable institution to handle operational management for now, but consider building a management team located in Mozambique as a long-term goal. While all assets are still invested in traditional financial markets, this would allow Mozambique to develop and improve its investment management.

### 9.1.5 The Santiago Principles and the Linaburg-Maduel Transparency Index

The Generally Accepted Principles and Practices ("GAPP")<sup>641</sup>, also referred to as the *Santiago Principles*, provide a framework with 24 guidelines for SWFs that reflects appropriate governance, accountability, and investment guidelines and practices (see *Appendix Appendix 2B: Generally Accepted Principles and Practices ("GAPP") – Santiago Principles*). The International Forum of Sovereign Wealth Funds, consisting of 23 IMF member countries, developed these principles in 2008 with the goal of maintaining a stable global financial system and free flow of capital and investments. The *Santiago Principles* call for sound legal frameworks, clearly defined policy purposes, close coordination with domestic fiscal and monetary authority and high levels

of transparency. While it is highly recommended for any country with a SWF to fully adhere to those principles, they simply provide a benchmark and are not enough to ensure macroeconomic stability and prosperity for future generations.

**Recommendation 93:** Adhere fully to the *Santiago Principles*, but do not stop there. These principles provide a benchmark and should not be the end point in ensuring macroeconomic stability.

There have to be obligatory, regular and internal and external audits of the SWF and around the clock information in order to guarantee that the government is pursuing the fund's objectives at all times. The people of a country are the real owners of the fund and have a right to be informed about its performance and progress.

One way of measuring a SWF's transparency is through the Linaburg-Maduell Transparency Index that was developed at the Sovereign Wealth Fund Institute. This index consists of ten essential principals, such as clear provision of a fund's strategy or up-to-date independently audited reports. The compliance with each principal is attributed with a point on the transparency index, awarding the funds with a range from one to ten points. It appears that the index is still being refined and adjusted, however, it provides a good basis on how think about a SWF's transparency (see *Appendix Appendix 2C: The Linaburg-Maduell Transparency Index*).<sup>642</sup>

**Recommendation 94:** Comply with all ten principals that make up the Linaburg-Maduell Transparency Index. Mozambique shall score full ten points on that index.

## 9.2 Resource Fund Typology

### 9.2.1 Budget Support

Budget support or coverage of the budget deficit through natural resource revenues is an important part of a SWF's purpose, especially in a developing country. But even advanced economies such as Norway use the return of investments from their SWF to cover potential budget deficits. Many young countries like Mozambique rely on donor contributions to support their budget prior to resource exportation and the desire to wind down those contributions is only understandable. For accounting, administrative and management reasons, however, all revenues stemming from natural resource production should initially be paid into the SWF. The share required to cover the budget deficit can subsequently be withdrawn from the SWF in compliance with the law specifically enacted for that purpose. This way, withdrawals from the fund are tied to the budgetary process, and therefore to a democratic process. Such a mechanism is another way of implementing checks and balances on withdrawals from the fund.

To prevent inflation, it is important that a country does not increase its budget expenditures disproportionately or too quickly. The danger of limited absorption capacity (see *Section 9.1.2: Absorption Capacity*) and the resulting inefficiencies in investments have to be kept in mind when planning the following year's budget. The contributions from the SWF are supposed to lift a country out of donor dependence and not to simply increase budget expenditures. For larger

development projects, such as transmission lines or a hydro dam, a separate development fund or a separate development account within the SWF should be established. The development fund would be physically separate from the budget but tied to Parliamentary approval and in line with the national development strategy.

**Recommendation 95:** For accounting, administrative and management purposes, all revenues flowing from natural resource production should be paid directly into the SWF, and later distributed for different purposes such as budget, development, stabilization or savings. All withdrawals from the fund are subject to specific legislation or Parliamentary approval.

## 9.2.2 The Stabilization Fund

Commodity price volatility is the most dangerous aspect of commodity exports for emerging market economies, particularly if those exports make up a large share of GDP. Governments have a tendency to expand government expenditure during commodity price booms, when income is more freely available. Rapidly scaling down those expenditures during downturns or busts is usually very painful and comes with high costs such as unemployment or further economic contraction due to decreasing government spending. Aside from price volatility, there may also be volatility in the volume of output due to socio-political unrest, strikes or global demand shifts.<sup>643</sup> Additionally, many developing countries have limited access to international capital markets that could help them get through time periods when prices or supplies are low.

Research suggests that countries that rely on commodities with more stable prices such as industrial metals show stronger growth than countries that rely on commodities with high price volatilities such as oil or gas. In Nigeria or Venezuela, swings in oil prices triggered the *Resource Curse* or exacerbated it significantly.<sup>644</sup> It is therefore crucial that a resource-dependent country establishes a stabilization fund. This is a fund that manages price shocks to revenue gathering commodities, in order to preserve domestic macroeconomic stability and smooth consumption. When commodity prices are high, the fund will expand but it can be drawn on to supplement and smooth government expenditures during times of low commodity prices.

A stabilization fund is a useful alternative to international loans. International lending is usually pro-cyclical and tends to dry up (or become very expensive) when the global economy is on a downward spiral – when funds are most needed in developing countries. To a certain extent, the stabilization fund can function as a lender of last resort that buffers the economy from a variety of macroeconomic shocks.<sup>645</sup> One of the provisions of the stabilization fund could enable withdrawals from the fund in the case of natural disasters or a global economic downturn that affects the entire economy.

In order to establish a stabilization fund, and to determine what proportion of commodity revenues should be contributed to it from time to time, a reference price has to be established. There are usually two approaches: a benchmark price can be set either by using a price-smoothing formula (mostly a combination of historical and forward-looking prices) or by an independent committee. The former price-setting formula mechanism is more common.<sup>646</sup>

### Chile: Pension Reserve and Social and Economic Stabilization Fund

One of the most sophisticated stabilization funds is Chile's Copper Stabilization Fund. Established in 1985, the fund's accumulation and withdrawal rules are based on a reference copper price that is determined through an inclusive process involving the authorities and external experts.<sup>647</sup> The establishment of the fund, for example, effectively helped the government resist expenditure pressures during the upswings in copper prices in the late 1980s and mid-1990s. It would have been very conducive to increase government spending during times of high copper prices and only natural for people and political groups to demand so. The provision to skim those windfall profits off, however, and to direct them into the stabilization fund for times of low copper prices made such spending increases impossible.

The stabilization fund will only be effective if the government adheres to the initially set out rules. If the fund's rules are by-passed and discretionary withdrawals are made, then the stabilization fund will lose its purpose and impact. This was the case in Venezuela, where a stabilization fund that was set up in 1998 included sound rules for volatility management. These rules were subsequently amended and rendered the stabilization fund ineffective.<sup>648</sup>

Since a stabilization fund must have readily available funds in the event of price shocks, most of its assets are fairly liquid so that they can be cashed in quickly. This also implies that a stabilization fund's assets are risk-averse, short-term in nature and fairly liquid, such as actual cash or US treasury bills. In line with the arguments mentioned above, a stabilization fund is most effective when it is held in foreign assets in order to minimize the risk of exchange rate appreciation.

**Recommendation 96:** The Mozambican SWF must incorporate a stabilization mechanism to protect the country from fluctuation in natural gas and coal prices.

### 9.2.3 The Development Fund

After establishing a stabilization fund to counteract the potentially detrimental effects of commodity price fluctuations, a developing country will want to invest part of its revenue into specific projects in infrastructure, health or education to accelerate development. One or more development funds can be created in order to earmark revenues for specific development projects. The development fund, however, should not take over responsibilities that are already allocated to the state institutions and therefore to the budget. In other words, it should not be spent on consumption but on long-term projects such as transmission lines, the construction of a hydro dam or long-term education reforms and programs. These investments are most effective when they contribute to the diversification of the economy. In this way, they facilitate growth in the local economy and improve the overall investment climate in the country. In general, the development fund operates like any private equity fund and makes investments based on a risk-return analysis.<sup>649</sup> However, the fund can (and should) also take non-economic outcomes into account when it is planning and assessing the success of an investment. This means that the country can choose to value certain types of "return" in favor of others – for example, by taking into account the overall welfare gains brought by investments made in education, including increased productivity, social cohesion and stability.

### Mubadala Development Company

The Mubadala Development Company is a development fund established in 2002 that is fully owned by the government of Abu Dhabi (although, technically it does not consider itself a SWF). Its main mandate is the diversification of Abu Dhabi's economy by investing in key social infrastructure. Its investments are not only supposed to generate commercial profit but also social returns. The Mubadala Development Company manages long-term, capital-intensive investments that deliver strong financial returns and tangible social benefits for the Emirate.<sup>650</sup> One of its most successful investments is the Imperial College London Diabetes Centre that opened in 2006. It is fully owned by Mubadala and has showed strong growth in patient consultations since then. Another example for a successful investment is Strata, an aircraft-parts making plant in Al Ain (second largest city in the Emirate of Abu Dhabi), that also been making significant progress.<sup>651</sup>

While earmarking might make it easier to resist political pressure to use the resource revenues for less appropriate purposes, there is still a danger that the fund will be directed to inefficient projects, and that resources could be misused.<sup>652</sup> As discussed above, the absorption capacity of a domestic economy has to be taken into account when making investment decisions. In order to maximize the impact of investments, and to avoid potential rent-seeking behavior, the development fund should be tied to the budgetary process, with high legal standards for spending. Transfers to the development fund must be subject to Parliamentary approval and in line with the national development strategy (see *Section 9.2.4: The Lesson to Be Learnt from Timor-Leste*). In order to identify investment opportunities for the development fund, established frameworks for impact investing should be consulted.<sup>653</sup>

**Recommendation 97:** Mozambique will require significant investments in infrastructure and social projects. Parts of the Mozambican SWF should be used to target specific long-term investments that diversify the economy while taking its limited absorption capacity into account.

### 9.2.4 The Savings Fund

The savings fund is the core of the SWF for resource exporting countries and should ultimately be its main purpose. As mentioned above, selling natural resources is comparable to selling a country's assets, its patrimony. To make sure that future generations will benefit from the revenues of presently sold national assets, those revenues have to be converted into productive capital that generates recurring revenues. Any shares of resource revenues that aren't immediately needed for stabilization or development purposes should be channeled into the savings fund so that the stock of wealth can gradually build up. In this way, current wealth will be shared with future generations. The savings fund is what ensures intergenerational equity.

While returns on assets can be channeled back into the economy (through the budget) the principal will remain intact so as to maintain the fund's value – or increase it through recurrent revenues from commodity sales. The savings fund works under a *permanent income framework* that allows the government to consume up to the real interest (adjusted for inflation) received on the investments on an annual basis. By leaving the principal untouched, ideally the fund will generate *permanent income* through interest earnings. That framework can be expanded or

adjusted to account for growth of the population and changes in market risks or other factors such as level of public debt, the economic cycle and financing constraints.<sup>654</sup> The savings fund is able to bear considerable risk (compared to the stabilization fund) in its investment since it generally bears a long-term investment perspective.<sup>655</sup> Thus, it is not surprising that a mature SWF such as Norway's Government Pension Fund Global even invests in real estate.

#### Government Pension Fund Global

Norway's Government Pension Fund Global was set up in 1990 to ensure the intergenerational transfer of assets that accrue from national oil and gas production. At the end of 2012, the fund held over \$715 billion (Norway's GDP in 2011 was \$486 billion). The fund is fully integrated into the budget, with only the fund's real return being used to cover budget deficits, which is approximately 4 %. All of its assets are held abroad and the Norwegians follow a highly transparent investment strategy.<sup>656</sup>

#### The Lesson to be Learned from Timor-Leste

The Democratic Republic of Timor-Leste (or "East Timor") is a small state that was finally recognized as an independent nation in 2002 after over 20 years of Indonesian occupation and civil war. Virtually the entire infrastructure was destroyed in the course of the war and many lives lost. The new country emerged entirely dependent on foreign aid.

Following discoveries of large oil and gas reserves, Timor-Leste established a Petroleum Fund in 2005. The fund was conceived with the help of the IMF and Norway and enshrined in the Petroleum Management Law.<sup>657</sup> All revenues from the petroleum production go directly to the fund, which is managed by investment bank JP Morgan in New York. JP Morgan invests the funds according to the investment strategy set out by the Ministry of Finance. Similarly to the Norwegian Government Pension Fund Global, the Timor-Leste Petroleum Management Law established an Estimated Sustainable Income ("ESI") formula that was intended to maintain the value of the principal while distributing the returns on assets back into the budget for deficit funding. In 2009, the ESI allowed for 3.8 % of the oil and gas wealth (of the total worth of the SWF at that time) to be distributed to the budget. Under the ESI those 3.8 % are equal to the interest gained on the fund's total value, therefore the withdrawal of that amount will not reduce the principal. In 2010 the distribution totaled 4.8 %, similar to Norway's payout. In 2012 the fund grew to \$11.8 billion, with \$586.0 million transferred back to the budget.<sup>658</sup>

Timor-Leste, however, is not comparable to Norway in terms of its level of development. It came as no surprise then, that the citizens of one of the Pacific region's poorest countries demanded more investment in the country's development. In 2010/2011 the government reacted with the legal establishment of two development funds, the *Human Capital Development Fund* and the *Infrastructure Fund*.<sup>659</sup> Both these funds were designed to enable multi-year investments for critical, capital intensive projects that target poverty alleviation and diversification of the economy. The Infrastructure Fund for example is only investing in projects worth more than \$1 million.<sup>660</sup> This new fund structure allows Timor-Leste to save parts of its petroleum revenues, while kick-starting its economy through specific investments in long-term development projects.

Adjustments to the Timorese conditions were certainly necessary, but it should be mentioned that several actors have criticized the earmarking of funds. As mentioned above, a very rigorous legal environment and close ties to the budget are required in order to avoid inefficient expenditures and rent seeking. In the case of Timor-Leste withdrawals from the petroleum fund may only surpass the ESI after they have been approved by Parliament.

East Timor is an interesting case for Mozambique due to historical and current similarities between the two countries. While its case is not perfect and cannot be applied 1:1 to Mozambique, the East Timorese approach to the creation of a legal and regulatory framework for the management of extractive industries revenue can certainly be of inspiration to Mozambique.

**Recommendation 98:** Make sure that the Mozambican SWF incorporates a solid saving mechanism. While development and budget support will be (and should be) predominant in the early years of natural resource production, the ultimate goal of the SWF is saving for the future and the generation of recurring revenues.

### 9.3 Status Quo in Mozambique

The bulk of extractive revenues are expected to flow once the natural gas production in the Rovuma Basin starts, probably around 2018/19. There are, however, other extractive industries such as aluminum and coal that are already exporting resources. Aside from revenues from these exports, Mozambique has also received payments in the form of signature bonuses or capital gains taxes (at least in the case of the 2012 sale of a stake by Anadarko). Currently, the windfall revenues from sales of shares in hydrocarbon industries are placed in an account at central bank and are automatically converted into reserves. While the government has discretion to withdraw these reserves to increase public spending, in case these resources are not used for debt servicing or to increase spending in projects that had limited fiscal space in the budget the government must provide a supplementary budget. The amount of \$175 million from windfall revenues in 2012 was used to pay outstanding domestic debt and to increase fiscal space in priority sectors, primarily on health and infrastructure.

From conversations during our visit to Maputo in March 2013 and from the 2010 Extractive Industries Transparency Initiative (“EITI”) report<sup>661</sup>, we learned that most of the revenues from the extractive industries so far have been collected by the General Directorate of Taxes, specifically through the Large Taxpayer Unit and Tax Areas. In some circumstances, however, money is paid directly to the regulator Instituto Nacional de Petroleo (“INP”) at the time of the signature of the contracts and the Ministry of Finance. It is not clear how this money is allocated or spent.

### 9.4 The Sovereign Wealth Trust Fund

THE SOVEREIGN WEALTH TRUST FUND. THE KEY TO SUCCESS IN COMMODITY REVENUE MANAGEMENT, 2013  
Bettina Strickler

Under the common law legal system a trust constitutes a relationship that emphasizes the rights of the beneficiaries and reaches a protection of the latter through a solid legal basis. Although it is not yet a widespread practice with natural resource funds, the conversion of a resource windfall into a trust fund features many advantages that make it a desirable new best practice.

Contrasted with other funds that are classified as legal persons, a trust fund is a legal relationship where property is transferred from one party (the settlor) to another (the trustee) that holds it for the benefit of a third party (the beneficiary).<sup>662</sup> The settlor creates the trust, determines its legal terms, and usually provides the initial capital for the trust fund. In the case of a natural resource producing country the settlor is the government of that country, the trustees are a carefully selected group of people that represent the broad spectrum of the population, and the beneficiaries are the people of that country (or state). The trustee takes legal title to the content of the fund, which seemingly means complete ownership, but the trustee does not have the right to receive any benefits from the property. Instead, the trustee owes “fiduciary duties” to the beneficiaries. This means that the trustee is bound to act in good faith, in accordance with the terms of the trust instrument or deed, and not in the trustee’s own interest. The trust instrument will usually set out clear guidelines about how that the trustee should manage the trust’s assets. Trustees usually select, hire and monitor the various service providers who help manage the fund’s resources.

Private trust funds are a way of preserving capital while making the income from the capital available to designated persons or purposes. Public trust funds function similarly, but they are established for public purposes by governments through form of enacting legislation that forms the trust, sets out its legal terms, and assigns respective rights and responsibilities to different parties.<sup>663</sup>

One of the most significant benefits of a trust is the ability to partition and shield assets from the settlor creditors. Under other circumstances creditors have the possibility to obtain what is owed to them through a court decision resulting in the seizure of assets. In the case of a trust fund, however, a creditor cannot seek legal seizure of the fund’s asset, which is an effective protection of the beneficiaries’ assets. The trustee’s powers are wholly fiduciary in nature. Any exercise or failure to exercise a fiduciary power is subject to the supervision of the court. Beneficiaries must have enforceable rights against a trustee and be able to hold him to account.<sup>664</sup>

As mentioned above, there are only few countries that have chosen a trust fund legal structure to manage their natural resource revenues. Within the United States Alaska approved an amendment of the state’s Constitution in 1976, which established the Alaska Permanent Fund as a trust fund to accommodate revenues from oil and gas production. This means that any future change in the fund’s structure will effectively require constitutional amendments. In 1980, the legislature established the Alaska Permanent Fund Corporation that is overseen by a six-member Board of Trustees to manage the fund investments.<sup>665</sup>

The trust fund is particularly instrumental for countries with a relatively high debt level that might have been difficult in the past to sustain. Timor-Leste was virtually debt free following its independence in 2002,<sup>666</sup> which meant it was not essential to establish the sovereign wealth

fund as a trust fund. While Mozambique's debt distress levels are currently classified as low,<sup>667</sup> the constant current account deficits and increasing indebtedness could become problematic in the future. The next five to ten years will require significant investments from the Mozambican government while donor contributions decrease, since the large share of revenues from LNG exportation is not projected to flow in until at least 2018. This is likely to result in higher debt levels in the interim.

#### **The Alaska Permanent Fund**

Alaska approved an amendment of their state constitution in 1976, which effectively established the Alaska Permanent Fund to accommodate revenues from oil and gas production. This means that any future change in the fund's structure will effectively require constitutional amendments. The fund is set up as a trust that receives 25 percent of all royalties and other direct income accruing from Alaska's oil production, the principal of which can only be placed into income generating investments.<sup>668</sup> When taking into account that a substantial amount of revenues from oil production are generated indirectly through taxation then an average of 10 to 15 percent of total income from oil flow into the permanent fund, the rest is directed into a general fund that supports the ordinary expenses of the state.<sup>669</sup> A developed economy such as Alaska's has more economical space to accommodate such a large share of the revenues in a government account. This is not recommended for smaller, open economies, in particular developing economies.

The Alaskan fund is a trust fund that is held *on trust* in the name of the beneficiaries, the people of Alaska, by a board of six trustees that are appointed by the Governor of Alaska. The trustees oversee the Alaska Permanent Fund Corporation that manages the fund's investments and administers the Permanent Fund Dividend Program. The dividend program allows for a substantial part of the income earned on the fund to be distributed to qualified Alaskan residents.<sup>670</sup> The purpose of the program was to increase the public's involvement and interest in the fund and to redistribute financial gains. The dividends reached an all time high in 2008 with just above \$2,000.

The constitutional amendment paired with the Dividend Program increased the citizens' awareness of the fund and maintained their interest in its performance. While such a dividend program might not be feasible in less developed countries, due to lack of census data or technical capacity, it is a very effective means in a developed and democratic system to increase people's awareness and with it external checks and balances.

The Alaska Permanent Fund has been very successful in maintaining the trust fund's value while distributing gains from financial returns back to the people of Alaska. It is a textbook example of how non-renewable resource wealth can be transformed into permanent wealth.<sup>671</sup>

#### **9.4.1 A Sovereign Wealth Trust Fund for Mozambique**

The establishment of a sovereign wealth trust fund will support Mozambique's socio-economic development and political stability, as the following discussion will demonstrate. The government of Mozambique will act as settlor of the trust, while a Board of Trustees will be composed of a representative group of Mozambicans and other experts. The people of

Mozambique, including its future generations, would be the beneficiaries. To incorporate the general benefits of a SWF, such as currency stability, the trust should be placed in an established international financial center chosen by the government.

The trust will bear double benefits for the people of Mozambique. First, the investment of the fund in foreign assets will shelter the domestic economy from detrimental fiscal effects of natural resource exports and, second, the nature of the trust itself provides a legal guarantee for the trustees to act in their best interest.

Mozambique, like many other developing countries, has struggled with servicing its debt in the past. It has gone through several rounds of debt-forgiveness over the past two decades.<sup>672</sup> Given this history and the potential for increasing levels of indebtedness discussed above, it is a reasonable concern that the establishment of an offshore SWF would leave the country vulnerable to forced debt collection or asset seizures. The seizure of an Argentinian ship off the coast of Ghana due to outstanding Argentinian debt in October 2012 has increased such preoccupations. Through the establishment of a trust fund, however, a Mozambican SWF would be insulated from sovereign debt. Any claims by foreign countries on the SWF would not hold before court.

A trust fund offers the highest legal standards of protection available and will help alleviate some of the concerns that have been expressed vis-à-vis the investments of SWFs. In the past, SWFs have had limited access to certain financial markets due to a lack of transparency and governance standards.<sup>673</sup> When the Mozambican SWF is set up as a trust fund, it will adhere to the highest standards that allow it to access the best financial markets and compete with the private sector. This will effectively increase its return on assets.

The trust fund remains sovereign, but legally enshrines its purpose and becomes a dedicated fund. Such a solid structure will increase confidence in Mozambique's system and economy and will ultimately benefit the country's investment climate, thereby leading to increased foreign direct investment.

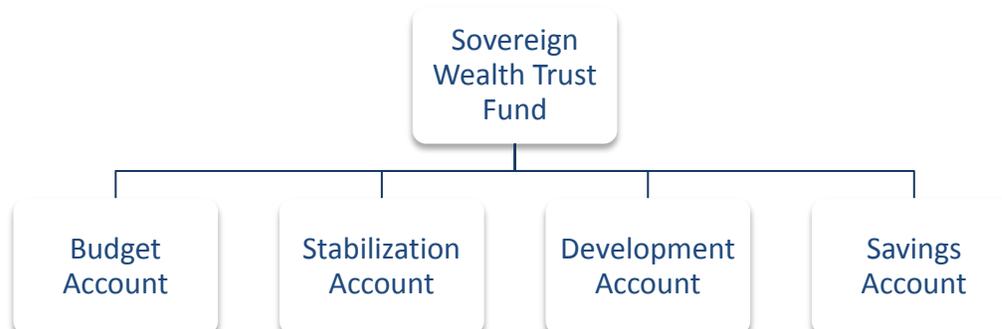
**Recommendation 99:** Mozambique's SWF should be set up as a trust fund to benefit from the highest standards of legal protection, access to financial markets and protection from creditors.

## 9.5 A Sovereign Wealth Trust Fund Structure for Mozambique

To ensure revenue maximization in Mozambique, we propose the following sovereign wealth trust fund structure:

All mining and oil and gas companies will pay the royalties, taxes and any other dues they may have directly into a sovereign wealth trust fund located in a traditional, well-established financial center such as London, New York or Singapore (for the above-mentioned reasons). This trust fund will contain four or more separate accounts that are allocated different functions: a budget account, a stabilization account, a development account and a savings account. Adding a budget account recognizes the fact that thus far Mozambique has not been able to raise enough

tax revenues to replenish its entire budget. Uniting all four accounts under the same trust fund will facilitate accounting and oversight, while lowering administrative costs. At the same time, it is vital that each account is managed in accordance with different criteria, with different decision-making processes to take into account the different purposes of the accounts. For accounting and transparency purposes, each account must clearly state the share of revenues stemming from coal exportation and the share stemming from natural gas or petroleum production and exportation.



The replenishment of the different accounts should happen in a cascading manner. Budget support and stabilization of the economy have to be prioritized. Due to the large and imminent financial impact expected from natural gas production, these two funds should be replenished fairly early. It will subsequently be important to increase the development account following Parliamentary approval and to start investments in projects that diversify the economy and increase domestic capacity. Ultimately, any revenues that are not needed in the budgetary process, for stabilization matters or for specific development projects should be saved in the savings account. The revenues that will accrue from financial investment of the savings account can then be fueled back into the budget. The ultimate goal is to build up the savings account. Over time, as the country builds its other sectors, and generates more tax revenue, Mozambique will no longer need the budget or the development account and will be able to manage its resource wealth through a stabilization account and a savings account.

While a solid legal basis with clearly stated inflow and outflow rules is crucial for the fund's success, studies suggest that funds with flexible rules tend to be more effective than funds with fixed rules.<sup>674</sup> Even with some granted flexibility there have to be clear withdrawal limits to prevent the depletion of the fund. Since market realities and macroeconomic indicators change over time, the laws enshrining Mozambique's sovereign wealth trust fund need to be able to take these new realities into account.

In the process of establishing a SWF for Mozambique, public awareness and involvement will be very important. The public needs to be well informed about the benefits and obligations of the SWF. This can also help to create a sense of ownership and pride among Mozambicans.

In line with the trust fund's protection against debt collection, it should not be permitted to borrow against the fund. This will protect Mozambique against increased borrowing during times of high commodity prices, that might not be sustainable once commodity prices fall and

could effectively lead to a debt crisis.

**Recommendation 100:** To accommodate Mozambique’s current socio-economic situation the sovereign wealth trust fund should include four separate accounts: a budget account that supports the budget, a stabilization account to protect against price fluctuations, a development account to invest in infrastructure and social projects and a savings account to ensure that future generations will also be able to benefit from the fund.

### 9.5.1 The Budget Account

The budget account shall replenish Mozambique’s budget that has thus far been bolstered by donor contributions. In 2012, the donor community sustained almost half of the Mozambican budget.<sup>675</sup> While Mozambique’s independence from foreign aid is a long-term priority, we recommend a gradual replacement of funds stemming from donor countries with commodity revenues. This will allow the economy to gradually adjust to the new circumstances. Currently, revenues from extractive activities (coal production started in 2012, and there are existing smaller scale onshore natural gas productions in the southern part of Mozambique) are flowing into government accounts. These could immediately be directed into the sovereign wealth trust fund and subsequently fueled back into the budget. Once massive revenues from natural gas production start flowing in (expected 2018/19) the budget account will experience rapid growth. As soon as the budget account has reached the level of the projected budget contributions, any overflows will go into the adjunct stabilization account.

### 9.5.2 The Stabilization Account

Mozambique’s stabilization account will fulfill the same tasks as the stabilization funds described above. Given the fact that the larger share of resource revenues are expected to originate from natural gas production, fluctuation in natural gas prices will have a higher impact on Mozambique compared to fluctuations in coal prices. Historically, natural gas prices have experienced high volatility. Thus, establishing a solid stabilization mechanism is very important. During periods of high commodity prices, the account will expand until it reaches a certain threshold that is pre-determined and enshrined in the law. Funds that exceed this threshold will be directed into the development account or the savings account. In the case of a price shock, funds may be withdrawn from the stabilization account. The development or the savings account, however, cannot be touched in such an event. By drawing on the stabilization account in times of low natural gas prices (or coal prices), the government can avoid painful spending cuts or increasing taxes, which could potentially affect GDP growth. These, however, are general guidelines that will have to be studied further and adjusted to suit Mozambique’s fiscal environment.

The International Monetary Fund (“IMF”) has been advising resource rich countries on tools regarding macroeconomic stability. During its mission visit to Maputo in 2012, the IMF advised the government of Mozambique, in particular the Budget Directorate, on how to deal with price fluctuations. In a conversation with the IMF in Maputo in March 2013 we were told, that while the IMF is in favor of a SWF in Mozambique (and it is likely that it will become more vocal about this in the near future), the government currently lacks the capacity to deal with this matter.

This is why engagement with experts on this field will be important in the near future. Implementing a macroeconomic policy framework to deal with price volatility would only provide a Band-Aid-type solution. Rather than spending time and resources on such a short-term measure, the government of Mozambique should partner with advisors and donors to take this opportunity and implement a solid stabilization mechanism through a SWF.

An important matter for the stabilization account that is still uncertain is the pricing that is built into the contracts for LNG exports. In conversations with the Tax Authority and the Budget Directorate also in March 2013, we learned that this question has not been answered definitely.<sup>676</sup> Currently, LNG is sold through long-term export contracts that are linked to oil prices. With worldwide LNG supply and demand on the rise it is possible though that an LNG trading hub will develop. Such a hub would allow trading LNG at a spot price. When setting up the stabilization account, these pricing uncertainties have to be accounted for. Depending on the way LNG prices are integrated in the various contracts, the price formulation of the stabilization account contribution will have to be adjusted.

### 9.5.3 The Development Account

Due to Mozambique's lack of infrastructure and human capacity, the country's sovereign wealth trust fund should have an account that enables investments in large-scale development projects. This development account should be conceived with a purpose-built design that holds assets offshore until a certain investment becomes viable.<sup>677</sup> As mentioned above, the country has limited absorption capacity that can render investments inefficient. While the economy grows, and with it its absorption capacity, the government can scale up investments. A development account will support a rigorous development strategy and mitigate the detrimental effects of exponential increases in investment such as inflation. Its guidelines and governance must be organized in line with the national development strategy. The development account will significantly contribute to the development of the country and the diversification of its economy while shielding it from inflation or *Dutch Disease*.

The development account has to be conditioned by Parliamentary approval to ensure democratic spending processes. However, it should not be used for spending that is usually supported by the regular budget process. The spending rules have to be clearly stated, legally supported and highly regulated. One option would be to look at the various frameworks used to assess the viability, performance, and impact of social, environment and infrastructure investments by other governments, by international organizations, and by private investment funds. For example, the *Impact Investment* approach, developed in 2008, uses a system of management information systems, impact ratings or performance standards, and standardized definitions of impact performance measurements to measure the social and environmental impact of investments.<sup>678</sup>

In order to account for the regional differences, in particular the differences between the regions of Mozambique that produce the natural resources and the ones that do not, the establishment of regional sub-accounts should be considered. That way, equitable distribution of the resource revenues according to needs and contributions can be facilitated.

### 9.5.4 The Savings Account

The savings account is the heart and soul of Mozambique’s sovereign wealth trust fund. The ultimate goal is to stock it with a large proportion of the natural resource revenues so that future generations will benefit as much as possible from the country’s current windfall. While a replenishment of the budget and the stabilization account are crucial for the current state of the country, the accrual of the development and the saving account should happen simultaneously. While the development account will help to make investments now that create better living conditions and a more vibrant economy for future generations, the savings fund will help to ensure economic security and independence for Mozambique in the future. Eventually, when Mozambique has progressed significantly, the budget and the development account will become redundant and the Mozambican sovereign wealth trust fund will consist of a stabilization and a savings account.

## 9.6 Management Structure for Mozambique’s Sovereign Wealth Trust Fund

### 9.6.1 Trustees

The trustees of the Mozambican trust fund will hold the fund for the beneficiaries, the people of Mozambique. They take legal title to the content of the fund, which they hold *on trust*. This means that, rather than having “complete ownership” of the assets, they have a number of important duties, and restrictions. The trustees do not have the right to receive any benefits from the property. Instead, the Trustees owe “fiduciary duties” to the beneficiaries (see *Section 9.4: The Sovereign Wealth Trust Fund*).

The trustees should include a diverse group of Mozambicans that have an excellent reputation, proven integrity and loyalty to their country. As a group, these trustees need to have management experience and a thorough understanding of domestic politics, the economy, and international financial markets. Ideally, the Board of Trustees will include current and former heads of state, current and former ministers and governors (in particular the Minister of Finance and the Governor of the Bank of Mozambique), alongside economists, social investment and development specialists. Additionally, suitable international figures that fulfill the high standards of integrity and loyalty can be included in the board.

The trustees usually select, hire and monitor the various service providers who manage the fund’s resources. It is therefore very important that the trustees themselves have a good understanding of the international financial markets and its actors.

The Board of Trustees answers to Cabinet and the Parliament but it is not a political institution. There should be clear assignment of responsibilities and unambiguous accountability for the fund’s performance.

**Recommendation 101:** Follow the highest legal standards for the selection process of trustees along with setting clear rules for their responsibilities and range of action.

### 9.6.2 Management

The Board of Trustees will determine the management structure of the sovereign wealth trust fund. However, in order to fully tap into international financial markets the fund's management, whether it is a specific institution or a group of managers specifically created for that purpose, should be located in a traditional, well established financial center such as London, New York or Singapore, at least for the time being. These markets have clear and robust legal protections for financial services, so that the managers will be required to provide appropriate disclosure, performance updates, and be accountable for their decisions. Not only will this provide the Mozambican trust fund with a solid legal basis, it will also allow it to increase its return on assets (particularly important for the savings account) due to the proximity of such sophisticated financial markets.

The investment strategy should be defined in collaboration with the Ministry of Finance and Banco de Mozambique to preserve macroeconomic stability. In the case of Timor-Leste, the Ministry of Finance, which has the obligation to consult the Investment Advisory Board, elaborates the investment strategy. The Investment Advisory Board develops benchmarks, desired returns and appropriate risks (see *Section 9.6.4: Timor-Leste Continued*).<sup>679</sup>

**Recommendation 102:** Define and legally enshrine a governance structure that determines the investment strategy and the responsibilities of the fund's management.

### 9.6.3 Audits

The Mozambican trust fund will require a tight system of audits consisting of two annual audits, one potentially carried out by the Administrative Court and the other by an internationally recognized auditing firm. Each audit should be published and accessible to Mozambicans.

Outside of the Ministries directly responsible for extractive industries, the Administrative Court and the Ministry of Finance are currently mandated to provide oversight for extractive industry revenues. The Administrative Court, headed by its Tribunal Supremo Administrativo, has the role of oversight through its mandate to audit public revenue and expenditure<sup>680</sup> in the court's Third Section (Terceira Secção). While certain factors such as lack of funding, available dedicated staff, and technical skill development are currently restricting the court's capacity, its mandate makes it the best option for the sovereign wealth trust fund's audit.

**Recommendation 103:** Establish a tight reporting and auditing system for the sovereign wealth trust fund. Determine an established, highly reputational, international auditing firm to conduct at least one audit of the fund per year. Additionally, we recommend that the Administrative Court be in charge of the domestic audit. In order to ensure excellence capacity building has to be undertaken within the Administrative Court.

### 9.6.4 Oversight

It is recommended to tie an oversight commission to Mozambique's SWF. This commission would be established by law and endowed with administrative and financial independence to

ensure its effective role. It should have investigative and sanction powers.

#### **Timor-Leste Continued**

Timor-Leste has developed a system that provides transparency, accountability, and checks and balances through regulating the three main operations of the SWF (1) investment strategy (2) monitoring and reporting and (3) budget appropriations from the SWF.

An investment strategy for a SWF is constantly updated to adjust to market opportunities. In order to regulate this aspect of a SWF, Timor-Leste developed a framework that requires the Minister of Planning and Finance, who oversees overall SWF management, to consult an Investment Advisory Board before making any investment decision. The Investment Advisory Board is composed of the director of the Treasury, head of the Central Bank, and three individuals appointed by the Minister in charge of finances, two of which must meet competency requirements. The inclusion of multiple agencies advising on investment strategy has seen Timor-Leste's SWF increase by roughly 57 % a year from \$0.5 billion in 2005, to \$11.8 billion in 2012.

Timor-Leste has also developed a reporting system that requires various agencies to submit multiple reports throughout the year. The Central Bank is required to prepare quarterly reports on fund performance, and the Treasury Department is required to present quarterly accounting reports. Additionally, an internal audit of the SWF is also undertaken twice a year, and an annual report that synthesizes all reports during the fiscal year is prepared by the government and presented to Parliament. Furthermore, the annual report is available in several languages on Ministry of Finance's webpage. This reporting process allows for the government and public to be aware of how the fund is being managed. If the government finds the fund is being managed poorly it can then take action to address deficiencies through re-examining its investment strategy and personnel.

Timor-Leste also created a body called the Petroleum Fund Consultative Council ("PFCC") to ensure that Parliament is using funds in a manner that benefits Timor-Leste in the present and future. Members of the PFCC are selected from a broad representation that includes former high government officials, appointments from parliament, as well as appointments from civil society, religious organizations and the private sector. The PFCC submits its advice to Parliament whenever funds are appropriated from the SWF to the government budget. Parliament then releases the advice from the PFCC advice to the general public.

Through combining these general regulatory structures, Timor-Leste has developed a SWF that is transparent, independent and well reported. Similar structures must also be included in Mozambique's SWF.

**Recommendation 104:** Establish an oversight mechanism that represents a cross-section of Mozambique's society, including members from major political parties, civil society, the private sector, religious and community leaders and ethnic minorities.

### 9.6.5 Legal Adjustment

All of the above mentioned should be enshrined in a specifically created law that clearly states the rules, the purposes and the objectives of the Mozambique's sovereign wealth trust fund, the trustees, the roles of different institutions such as the Ministry of Finance or the Central Bank, the Auditors and potential oversight commissions. Any information about the fund's investments and the investment performances must be made publicly available and updated regularly. Professional management, legal underlining, rigorous audits and oversight and public support will be crucial for the fund's success.

**Recommendation 105:** All aspects of the aforementioned recommendations on the sovereign wealth trust fund should be subject to a democratic consultation process and codified into law.

## Notes to Section 9

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<sup>627</sup> Elijah Udoh and Festus O. Egwaikhide, "Does International Oil Price Volatility Complement Domestic Food Price Instability in Nigeria? An Empirical Study," *International Journal of Economics and Finance* (Vol. 4, No. 1, January 2012), 235 – 246, 237.

<sup>628</sup> W. Marx Corden and J. Peter Neary, "Booming Sector and De-Industrialization in a Small Open-Economy," *The Economic Journal*, (Vol. 92, No. 368, December 1982), 825 – 848.

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<sup>630</sup> Bettina Strickler, *The Sovereign Wealth Trust Fund. The Key to Success in Natural Resource Revenue Management*, Columbia University, New York, May 2013 (unpublished).

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<sup>633</sup> "The Pula Fund," <http://www.bankofbotswana.bw/content/2009103013033-pula-fund>.

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<sup>638</sup> "Abu Dhabi Investment Authority": <http://www.adia.ae/En/Investment/Portfolio.aspx>.

<sup>639</sup> Camilla Hall, "Adia restructures management," *Financial Times*, August 21, 2011.

<sup>640</sup> Jonathan Barnes, "A Pure and True Long-Term Investor," *CFA Institute*, (January/February 2011), 38-41, 39.

<sup>641</sup> "International Working Group of Sovereign Wealth Funds": <http://www.iwg-swf.org/pubs/gapplist.htm/>.

<sup>642</sup> "Sovereign Wealth Fund Institute": <http://www.swfinstitute.org/statistics-research/linaburg-maduell-transparency-index/>.

<sup>643</sup> The International Monetary Fund, *Macroeconomic Policy Frameworks*, 14.

<sup>644</sup> Frederick van der Ploeg and Steven Pelhekke, *Volatility and the Natural Resource Curse*, University of Oxford, OxCarre Research Paper (No. 2008-03).

<sup>645</sup> Adam D. Dixon and Ashby H. B. Monk, *Role of Sovereign Wealth Funds in Africa*, 6.

<sup>646</sup> The International Monetary Fund, *Macroeconomic Policy Frameworks*, 21.

<sup>647</sup> Jeffrey Davis et al., *Stabilization and Saving Funds for Nonrenewable Resources*, International Monetary Fund Occasional Paper 205, (Washington D.C.: 2001), 23-25.

<sup>648</sup> *Ibid.*, 26.

<sup>649</sup> Adam D. Dixon and Ashby H. B. Monk, *Role of Sovereign Wealth Funds in Africa*, 7.

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<sup>651</sup> Asa Fitch, "Patience pays off for Mubadala," *The National*, May 3, 2010.

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<sup>655</sup> Adam D. Dixon and Ashby H. B. Monk, *Role of Sovereign Wealth Funds in Africa*, 8.

<sup>656</sup> "Norges Bank Investment Management," <http://www.nbim.no/en/About-us/Government-Pension->

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<sup>660</sup> “Infrastructure Fund,” Republica Democratica de Timor-Leste.

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<sup>669</sup> Rognvaldur Hannesson, *Investing for Sustainability. The Management of Mineral Wealth*, (Boston: Kluwer Academic Publisher, 2001).

<sup>670</sup> Proof of residence for at least six months.

<sup>671</sup> Hannesson, *Investing for Sustainability. The Management of Mineral Wealth*.

<sup>672</sup> “Index Mundi”: <http://www.indexmundi.com/facts/mozambique/debt-forgiveness-or-reduction>.

<sup>673</sup> OECD Investment Newsletter, *International investment of sovereign wealth funds: are new rules needed?*, Issue 5, October 2007: <http://www.oecd.org/daf/inv/investment-policy/39979894.pdf>.

<sup>674</sup> The International Monetary Fund, *Macroeconomic Policy Frameworks*, 28.

<sup>675</sup> “Republic of Mozambique, Ministry of Finance, National Budget Directorate”: [http://www.dno.gov.mz/docs/OE12/CITIZENSUDGET%202012\\_%20English%20version.pdf](http://www.dno.gov.mz/docs/OE12/CITIZENSUDGET%202012_%20English%20version.pdf).

<sup>676</sup> Most contract negotiations between the government of Mozambique and the oil and gas companies were still continuing at the time of writing.

<sup>677</sup> Adam D. Dixon and Ashby H. B. Monk, *Role of Sovereign Wealth Funds in Africa*, 9.

<sup>678</sup> Margot Brandenburg, “Impact Investing’s Three Measurement Tools,” *Stanford Social Innovation Review* (Oct 3, 2012): [http://www.ssireview.org/blog/entry/impact\\_investings\\_three\\_measurement\\_tools](http://www.ssireview.org/blog/entry/impact_investings_three_measurement_tools).

<sup>679</sup> “Central Bank of Timor-Leste”: <http://www.bancocentral.tl/PF/IAB.asp>.

<sup>680</sup> “Tribunal Administrativo Republica de Mocambique”:

[http://www.ta.gov.mz/article.php3?id\\_article=31](http://www.ta.gov.mz/article.php3?id_article=31).



## Summary of Recommendations

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No.	Section	Para	Heading	Recommendation
1)	Economy (1/4)	1.1	The Mozambican Economy	The Government of Mozambique must adopt a sovereign wealth/natural resource fund in order to effectively manage abundant natural resource revenues from its extractive industries and counter the ill effects of Dutch Disease and revenue volatility that are associated with the resource curse.
2)	Economy (2/4)	1.2.1	Liquefied Natural Gas- LNG Price	The Government of Mozambique must work with Anadarko, ENI and other operators in the Rovuma Basin to confirm that long-term, oil-indexed natural gas purchase agreements with built-in take-or-pay obligations are signed with offtakers in the high-demand markets of the Asia-Pacific region.
3)	Economy (3/4)	1.2.2	Financing Liquefied Natural Gas Development-LNG Financing	To optimize the value of natural gas production and export from the Rovuma Basin, the Government of Mozambique must negotiate with Anadarko, ENI, and other gas operators to ensure that the terms of the PSC will be equitable and allow for maximum government take.
4)	Economy (4/4)	1.3.2	Global Coal Market Development-Coal Price	The Government of Mozambique must work with Vale, Rio Tinto and other coal operators in the Moatize Basin to guarantee that buyers in China, India, and elsewhere in the Asia-Pacific region are obtained for the offtake of Mozambique's thermal and coking coal. More importantly, the Government must work with coal project developers to secure investment for the infrastructure development that is necessary for expanded coal exports.

5)	Linkages (1/5)	1.5.1	Enabling an Environment Conducive for SMEs	The Government needs to undertake careful studies to determine the potential for SMEs to develop in the extractive regions of Tete and Cabo Delgado and in the neighboring provinces – especially Niassa, Nampula, Zambezia and Sofala – and to link this SME development to both the needs of extractive industries
6)	Linkages (2/5)	1.5.1	Shortfalls of SME Development	The Government of Mozambique needs to work with IOCs operating in the Rovuma Basin to isolate possible synergies between offshore natural gas development and the country's domestic industrial base. Since electricity generation is the primary source of offtake for natural gas, the Government of Mozambique should direct investment towards building up electricity transmission infrastructure. Further, the Government should look to develop alternative industrial uses for natural gas, including the use of gas in heating and liquid gas in transportation, as well as the development of manufacturing hubs for methanol, fertilizer, cement, iron and steel production.
7)	Linkages (3/5)	1.5.1	Shortfalls of SME Development	In order to create powerful economic linkages between Mozambique's extractive industries and its domestic small-and-medium-enterprises, the Government of Mozambique must institute legislative reforms to improve its private-sector business environment. More specifically, reforms should encourage market-driven competition by reducing bureaucratic and regulatory constraints, eliminating the influence of state-controlled pricing and unequal taxation policies, addressing issues related to land-use rights, and increasing access to capital through the development of key financial agencies and institutions.
8)	Linkages (4/5)	1.5.3	Education	The Government must invest heavily in improving primary education on a national scale to tackle the country's poor literacy rate and increase the competitiveness of its labor force in the long run. The Government should also consider working with IOCs to develop targeted vocational training in regions where extractive industries are active in order to facilitate local hiring by project developers in these areas.

9)	Linkages (5/5)	1.5.3.	Education	Mozambique urgently needs to invest in improving the quality of its primary, secondary, and tertiary education in order to cultivate its domestic human capital in both the immediate term and the long run.
10)	Local Content (1/3)	2.2.1	Employment	<p>Active, early, and honest community engagement by government and extractive companies, and (if possible) monitored by designated civil society organizations about opportunities, expectations, challenges, and strategic solutions to employment.</p> <p>Develop the local content plan at the very early stages of resource evaluation; implement programs prior to construction to support sustainable workforce development.</p> <p>Coordinate with internal and external stakeholders, and the development of flexible, transitioning, and exit strategies for each stage of the project cycle.</p> <p>Partner with national and local government, donors, and IFIs if companies do not have adequate experience designing and implementing local content programs in a development context.</p>
11)	Local Content (2/3)	2.2.2	Procurement	<p>Partner with key contractors to share risks.</p> <p>Leverage partnerships with peer companies and other institutions to scale up impact.</p> <p>Pursue a higher level of complexity in the supply chain.</p> <p>Practice open-book approaches that allow primary contractors to cover additional costs related to contracting local suppliers (i.e. management and supervisory costs).</p> <p>Determine whether and how suppliers have met delivery milestones, and provide feedback to suppliers on successes and shortfalls, at each decision gate – before</p>

				contracts on subsequent project steps are awarded.
12)	Local Content (3/3)	2.3.2	Strategic Social Investment for a Brighter Future	<p>Engage with local communities very early in the project cycle to identify community needs, shortcomings, and strengths.</p> <p>Align community strengths with private sector demands – build capacity where possible (and needed).</p> <p>Pursue a higher level of complexity in the supply chain.</p> <p>Leverage/pool resources amongst stakeholders.</p> <p>Engage international organizations to leverage expertise when designing and implementing capacity building initiatives.</p>
13)	Infrastructure (1/12)	3.3	Foreign Investment to Develop Railways for All	The Government of Mozambique must ensure that, wherever possible, services in the existing and projected railways are accessible for passengers and for enterprises other than mining companies. The Government should also undertake studies to determine the most convenient location of train stops, taking into account the potential for local trade and connection with
14)	Infrastructure (2/12)	3.3	Vale's New Nacala Corridor	The Government must ensure that the alignment of the new Nacala railway supports the current commercial dynamics around the corridor, by linking with the rural and general road network to productive areas in Nampula and neighboring Niassa and Cabo Delgado.
15)	Infrastructure (3/12)	3.3	Vale's New Nacala Corridor	The Government must ensure that at least general freight transport is granted to and from Nacala port, in order to extend the market for local businesses, and decrease their total transport costs.

16)	Infrastructure (4/12)	3.2	Vale's New Nacala Corridor	Once connection is granted, access must also be ensured. The Government must negotiate payment mechanisms with the concessionaire to make sure that the user fees charged to passengers and local traders willing to use the train are affordable for the income levels of the area. These mechanisms must be set out and guaranteed in the operations contract. As part of the consortium, CFM is expected to earn profits from operations. This flow of revenue could serve to partially subsidize the fees for passengers and low-income level farmers in the first years of operations.
17)	Infrastructure (5/12)	3.2	A New Railway to Macuse	Given that infrastructure concessions usually have a term of several decades, the Government of Mozambique must compel the concessionaire to implement a modern system at the levels of the best European or Asian railways. This means constructing a state-of-the-art infrastructure and purchasing the latest rolling stock technology.
18)	Infrastructure (6/12)	3.2	A New Railway to Macuse	Demand-side studies should be conducted, including hypotheses for the development of the new corridor and neighboring lands over the next decades. These studies may be used as a basis for the Government to negotiate with the concessionaire on different operational models that ensure access to the system for passengers and SMEs, at user fees affordable for the income levels of the area. The studies may also be crucial in deciding the most economically and socially convenient location for train stops, as well as the number of stations.
19)	Infrastructure (7/12)	3.2	Sena Line	While a number of private operators are transporting their coal from Tete to Beira, an additional operator such as CFM needs to continue offering services for passengers and other freight. The Government should ensure that the rail line constitutes a reliable connection between the potential agricultural production areas along the Beira corridor, and the industries in Tete, thus providing the means for its "growth poles" strategy to function.

20)	Infrastructure (8/12)	3.3	Roads that Fight Inequality	In order to ensure greater participation by Mozambique's provinces in economic activity and distribution of the profits of extractive regions, the Government and donors should focus on constructing paved rural roads to connect the extremely isolated rural areas with railway corridors and highways. Initial efforts could concentrate in the western region of Tete, Niassa, Cabo Delgado, Nampula, Sofala and Zambezia.
21)	Infrastructure (9/12)	3.3	Addressing the Problem of Disperse Population	In order to ensure the success of strategies such as the growth poles, public consultation must take place in rural areas before the Government undertakes any action. Given the unwillingness of some Mozambicans to leave their customary towns, the relevant Ministries must engage with local communities about planning and decision-making to identify the natural growth possibilities in each region. The community's preferences must be taken into account to ensure that infrastructure implementation is attractive and effective. Without such consultation, there is a risk that new or upgraded infrastructure will not, in fact, attract the people.
22)	Infrastructure (10/12)	3.3	Handling the Risks of Crowding and Slumming	When roads are available between the industrial hubs and the neighboring villages, the extractive companies could partially finance the provision of shuttle services from those villages to the economic clusters where the mega projects and the businesses serving them take place.
23)	Infrastructure (11/12)	3.4	Addressing the Paradox of Electricity	The Government must ensure that the grid not only reaches the districts but that it actually reaches the people. A combination of public, FUNAE, donor and private funds could finance these investments, following consultation with the target communities. Access to electricity must be granted to the people at affordable prices, and subsidized if necessary.
24)	Infrastructure (12/12)	3.4	Addressing the Paradox of Electricity	The Government should conduct analysis of potential hydropower developments, alongside its gas strategy. In particular, options to generate and use renewable

				energy sources domestically could help to drastically reduce Mozambique's energy costs (and environmental impacts) in future generations.
25)	Environment (1/15)	4.1.2	Fisheries	In the medium term, utilize income from the recommended sovereign wealth fund to outfit the Ministry of Fisheries with the necessary equipment and staff as well as to fund international cooperation programs to monitor overfished fishing stocks and precious corals.
26)	Environment (2/15)	4.1.3	Climate Change	Review company and company-government infrastructure plans with a long term view of climate change impacts. Do not build mining infrastructure within floodplains as these could become more susceptible to inundation as sea levels rise.
27)	Environment (3/15)	4.1.4	General Environmental Considerations and Recommendations	Given the scale of mining activities and potential for environmental and social impacts, the Government of Mozambique should create an emergency response plan for mining accidents. This will align government departments and allow rapid response should large environmental accidents occur.
28)	Environment (4/15)	4.2.2	Practices to Integrate Environmental Rehabilitation into Planning	Water strategies need to be part of a comprehensive environmental strategy and integrated into the mine's management plan.
29)	Environment (5/15)	4.2.2	Practices to Integrate Environmental Rehabilitation into Planning	Combine methane extraction with mining to address greenhouse gas emissions
30)	Environment (6/15)	4.2.2	Practices to Integrate Environmental Rehabilitation into	All infrastructure planning should be approved by the Council of Ministers or relevant bodies (in accordance with Article Six of Land Law Regulation Decree 66/98) only after review by MICOA and other environmental authorities.

			Planning	Furthermore the Government of Mozambique should seek the advice and cooperation of international environmental organizations to learn about and adapt best practices in order to mitigate the harmful environmental impacts of infrastructure development.
31)	Environment (7/15)	4.2.3	Artisanal Mining in Mozambique	Increase efforts to organize artisanal miners into officially registered and monitored associations. Institute training and awareness campaigns on the danger of mercury pollution and inhalation and introduce locally available solutions, with the use of a retort, that reduce mercury vapor and increase mercury recovery.
32)	Environment (8/15)	4.2.4	Preventative Measures for Environmental Impacts	Improve the legal framework for small-scale and artisanal miners through formal recognition. Mozambique should ensure that small-scale and artisanal mines are subject to specific regulations including requirements that: Owners possess a mining title and an environmental license; Owners ensure compliance with environmental laws; Owners pay appropriate taxes and The exploited product is distributed or exported in accordance with regulations.
33)	Environment (9/15)	4.2.4	Preventative Measures for Environmental Impacts	Building a good business environment for small-scale miners to operate within the legal framework is key. This includes: Sufficient tax regulations that do not overly burden the small mines; simple and sound bureaucratic procedures; outreach and awareness-raising in areas where miners operate, including education and mitigation of harmful pollutants, such as mercury.
34)	Environment (10/15)	4.2.5	Gender Issues with Artisanal Mining and Health	Create a support fund for small-scale and artisanal miners. In an effort to better study and build capacity in this sector, the Government of Mozambique should set up a fund with revenues from large scale mining operations, that goes directly to supporting artisanal miners and the ASM sector through trainings, research on local mining habits, credit and activities to mitigate negative social consequences of mining.

35)	Environment (11/15)	4.3.1	Environmental Effect of Offshore Geologic Seismic Surveying	<p>Due to the importance of fisheries and marine biodiversity to Mozambique's environment and economy, the government should exercise caution during their issuance of exploration licenses.</p> <ul style="list-style-type: none"> <li>- Strategic Environment Assessment (i.e. geological seismic survey) should be conducted with multiple players, such as coastal managers, the fishery sector, environmental nonprofits and local communities.</li> <li>- The SEA should reserve certain areas and prohibit exploration in those sites, including all artisanal fishing areas.</li> <li>- The government should have clear standards for geological seismic surveys, such as enforcing the companies to comply with EIAs and related international treaties.</li> <li>- The government should prohibit seismic surveys in shallow or marine protected areas, given that these areas are very important for renewal of fish stocks.</li> <li>- Companies should also avoid conducting surveys during the migration of key and endangered species. Meanwhile, drilling companies should be required to use "soft start" technique when they are conducting the surveys. Finally, it is important for the company to comply with UNCLOS ("United Nations Convention On the Law of SEA")</li> </ul>
36)	Environment (12/15)	4.3.2	Importance of FPSO regulation	<ul style="list-style-type: none"> <li>- The Government should conduct Strategic Environmental Assessments ("SEAs") in line with the Abidjan Convention and Paris Declaration.</li> <li>- Establish legal water quality standards for offshore natural gas</li> </ul>

				<p>exploration.</p> <ul style="list-style-type: none"> <li>- Prohibit production in venerable areas, such as Marine Protection Areas, around all coral reefs—especially shallow corals used by artisanal fishermen—and other nursery areas for the renewal of fish stocks.</li> <li>- Implement zero discharge regimes prior to production.</li> </ul>
37)	Environment (13/15)	4.4.2	Environmental Impact Procedures Need to Be Improved	EIA review period for extraction project exceeding 100 million dollars should be 90 days or more.
38)	Environment (14/15)	4.4.2	Environmental Impact Procedures Need to Be Improved	Make EIAs publicly available in electronic form on company or government websites during and after the review period.
39)	Environment (15/15)	4.4.2	Environmental Impact Procedures Need to Be Improved	Mozambique Government should have the power to turn suggestions written in EIAs to be adhered to as other environmental laws.
40)	Resettlement (1/10)	5.1.1	Establish early, inclusive, free, and transparent consultation processes and ensure community participation in all stages of the resettlement process	<ol style="list-style-type: none"> <li>1) Ensure that the consultation process starts during the exploration phase of the project. The private company that is carrying out exploration activities and causing the resettlement should bear the cost of consultation. The role of the Government is to provide the framework, oversee activities and ensure that the agreements reached are fair to the community.</li> <li>2) Clarify who is to be recognized as both legal and legitimate community representatives and interlocutors. Set up a protocol to identify and validate these 1 legitimate representatives and ensure the full representation of ethnic and</li> </ol>

				<p>minority groups (See below the Case of Chinalco and the Resettlement of Morococha in Peru).</p> <p>3) Define what instances of participation correspond to a legal consultation as opposed to solely informing communities about resettlement. Demand proper inclusive consultation in addition to basic informational activities.</p> <p>4) Ensure fair agreements by addressing technical and information asymmetries, building the capacity of communities to be able to fully participate in consultation processes and negotiations</p>
41)	Resettlement (2/10)	5.1.2	Level the playing field by building the capacity of communities to participate in negotiations	<p>1) Ensure that community representatives have the necessary skills and information to participate at negotiation tables. Extractive companies operating in Mozambique should provide all the necessary training and capacity to community representatives to hold fair negotiations and must bear the cost of such training.</p> <p>2) Include in contracts with extractive companies a clause that ensures that the company covers the cost of experts accompanying negotiations and working on behalf of the communities. External experts should be able to accompany communities in the negotiation process if necessary.</p> <p>3) Ensure Government representation at all stages of the negotiation process, not only from the Ministry of Natural Resources, but also from other relevant incumbents including the Ministry of Health, Ministry of Education, Ministry of Environmental Coordination, and Ministry of Women and Social Affairs.</p>
42)	Resettlement (3/10)	5.1.3	Ensure fair and holistic compensation, improved livelihoods and standard of living, and poverty reduction strategies	<p>1) Livelihoods of resettled communities must be actually improved. If Mozambique is able to do this, it will become a global best practice and a leader in establishing sustainable resettlements.</p> <p>2) Compensation must be established prior to resettlement and all costs related to the resettlement must be covered by the entity causing the relocation.</p>

				3) All basic services must be in place and their operational costs fully funded by the Government prior to the resettlement.
43)	Resettlement (4/10)	5.1.4	Minimize negative environmental impacts in resettlement	<p>1) Include in the EIA an identification of adverse social effects of extractive operations, including the impacts and losses for resettled communities, prior to the exploration phase.</p> <p>2) Expand regulations on environmental accountability to include a strict liability standard for environmental and health damage caused by extractive operations.</p>
44)	Resettlement (5/10)	5.1.5	Constitute an inclusive and legitimate post-resettlement committee that overlooks agreement compliance, progress and accountability	<p>1) Resettlement agreements should be legally-binding and compensation and other aspects must be respected and enforced.</p> <p>2) A Post-Resettlement Committee must legitimately represent the community, should meet periodically, and its members must have the necessary skills and resources to monitor the terms of the agreement. It must also be granted access to information necessary to make relevant decisions, and counts on the participation of government agents that supervise the fulfillment of agreements.</p> <p>3) Communities and other stakeholders must be kept informed about the project through established mechanisms for two-way communications.</p>
45)	Resettlement (6/10)	5.2	Gendered Social and Environmental Impacts from Mining Activities	Amend existing mining legislation to improve safeguards for women in matters of resettlement, consultation and compensation.
46)	Resettlement (7/10)	5.2	Gendered Social and Environmental Impacts from Mining Activities	Safeguard women's rights to land in concession and leasing arrangements.

47)	Resettlement (8/10)	5.2	Gendered Social and Environmental Impacts from Mining Activities	Improve women's economic opportunities and ability to benefit from extractive sector employment.
48)	Resettlement (9/10)	5.2	Gendered Social and Environmental Impacts from Mining Activities	Establish a 'Women's Land Rights Network' with a special focus to educate women on their land rights and to address situations where women have been resettled due to extractive operations.
49)	Resettlement (10/10)	5.2	Resettlement-Conclusion	<p>In order for extractive operations in Mozambique to earn/achieve a legitimate, stable, and sustainable social license, the Government must ensure that all resettlement processes meet the following six conditions:</p> <ol style="list-style-type: none"> <li>1) Establish early, inclusive, free, and transparent consultation processes. Ensure community participation in all stages of the resettlement process.</li> <li>2) Level the playing field by building the capacity of communities to participate in negotiations.</li> <li>3) Ensure fair and holistic compensation, improved livelihoods and standard of living, and poverty reduction strategies.</li> <li>4) Address the gender impacts in mining operations by taking special measures to include women in consultation matters concerning resettlement, compensation, livelihoods and income generation.</li> <li>5) Minimize negative environmental impacts in resettlement.</li> <li>6) Constitute an inclusive and legitimate post-resettlement committee that oversees agreement compliance, progress, and accountability.</li> </ol>

50)	Legal: Mining Laws (1/7)	6.2.1	Increase Checks and Balances	Incorporate checks and balances in mining industry regulation to supplement MIREM's central role, and to incorporate greater coordination between, and powers for, the Ministries of Environment, Health and Safety and Social Affairs.
51)	Legal: Mining Laws (2/7)	6.2.1	Use Reference Laws in Adopting Clear Standards for "Best" and "Good" Mining Practices	Clearly define "Best" and "Good" mining practices in the New Mining Legislation. In determining best practices, draw upon the scientific knowledge, technology, reference laws, and standards of more established jurisdictions, including Australia and the European Union.
52)	Legal: Mining Laws (3/7)	6.2.1	Health	Strengthen environmental laws and regulations in order to reduce harmful environmental and health impacts through the following:  1) Hold companies strictly liable for environmental and health damage arising from mining activities.  2) Hold directors of a company jointly and severally liable for negative environmental and health impacts.
53)	Legal: Mining Laws (4/7)	6.2.1	Amend existing Mining Legislation to bolster safeguards for communities in matters of resettlement, particularly by ensuring procedures for public consultation and expansive, holistic compensation	Amend the existing Mining Law and the 2012 Resettlement Decree to provide greater protection of land occupancy rights of local communities who are forced to resettle due to mining operations. Amendments include:  1) Minimizing involuntary resettlement whenever possible;  2) Gaining full and informed community consent by consulting with impacted communities, with particular attention being paid to women and other marginalized groups, at all stages of the resettlement process;  3) Improving the impacted community's standard of living through livelihoods and by ensuring access to markets, education and healthcare facilities.  Providing resettled communities with a share of future profits from mining

				operations.
54)	Legal: Mining Laws (5/7)	6.2.1	Implications for Government Revenues	<p>1) Mozambique's fiscal regime should establish royalty, tax and windfall profit provisions which are firmly grounded in the Mining Legislation instead of in one-off contracts.</p> <p>2) The Mining Legislation should specify minimum royalty rates payable by companies and provide for a windfall profit tax that is activated when mineral prices increase beyond a stipulated amount.</p> <p>3) All such payments should be independently audited, applying international auditing standards, with results and auditing comments made publicly available.</p>
55)	Legal: Mining Laws (6/7)	6.2.1	Implications for Government Revenues	Stabilization clauses must only be allowed in narrow circumstances and for a prescribed period of time. Stabilization clauses should never be allowed to limit the host country's ability to regulate or impose stricter standards in labor, health, safety and the environment.
56)	Legal: Mining Laws (7/7)	6.2.1	Benefits of Full Contract Transparency and Published Contracts	Promote transparency in natural resource extraction by making all mining contracts publicly available.
57)	Legal: Gas & Petroleum Laws (1/11)	7.2	What works best, legislation or contract?	The Government of Mozambique should standardize and set out in legislation as many details of the deal as possible. This will provide greater transparency for investors, and a more accountable democratic process.
58)	Legal: Gas & Petroleum Laws (2/11)	7.2.1	Balancing Confidentiality and Freedom of Information	The Petroleum legislation itself must contain an exception from confidentiality provisions of future Concession Contracts for appropriate situations where there is a strong public interest in disclosure, particularly in respect of health, environment and social impacts. The government should also seek to agree with

				existing concessionaires appropriate guidelines for disclosure of information to the public.
59)	Legal: Gas & Petroleum Laws (3/11)	7.3.1	Clarifying, Modernizing, and Strengthening the Gas and Petroleum Legislation	To define “good practice” or “best practice” the amended Petroleum Law should refer to the highest international standards of the oil and gas industry, and should include specific rules and standards, either in regulations, or by incorporating references to “model laws”. These model laws can be drawn from the best available international standards or from the laws of foreign jurisdictions.
60)	Legal: Gas & Petroleum Laws (4/11)	7.3.1	Stabilization clauses should be limited	<p>1) Set out clear limits on stabilization clauses in the petroleum legislation so that they never extend to non-fiscal regulations, such as environment, health, or labor.</p> <p>2) Stabilization clauses should be limited to apply in respect of changes in the fiscal regime for the first five years of the project, and no longer.</p> <p>3) Stabilization clauses should either ensure that the fiscal regime agreed in the concession contract will remain in effect for the time period, <b>or</b> should provide for an “economic equilibrium”.</p> <p>4) If the stabilization clause provides for an “economic equilibrium”, the clause should require the concessionaire to mitigate the costs of compliance with the new fiscal regime <b>and</b> ensure that the cost of compliance is determined or verified by an independent expert before payment.</p>
61)	Legal: Gas & Petroleum Laws (5/11)	7.3.1	Access to facilities must be strengthened	Amend the Petroleum Law to provide more specific obligations and guidelines about access to infrastructure. The legislation must ensure access to infrastructure on fair and reasonable terms to promote competition, increase efficiency, and accelerate the development of Mozambique’s extractive industry.
62)	Legal: Gas & Petroleum Laws	7.3.1	Penalties must be clear and significant to deter	Prescribe clear and significant penalties for breaches of the petroleum and environmental legislation and regulations.

	(6/10)		bad behavior	
63)	Legal: Gas & Petroleum Laws (7/11)	7.3.1	Environmental protections must be strengthened	Shift the regulatory burden for environmental monitoring and reporting onto the companies. Ensure that penalties for environmental damage and pollution are significant enough to act as a deterrent. Hold companies strictly liable, and hold directors of the company jointly and severally liable for the actions or omissions of the company.
64)	Legal: Gas & Petroleum Laws (8/11)	7.3.1	Holistic Resettlement Provisions must be included in the legislation	Amend the existing Petroleum Law and the 2012 Resettlement Decree to provide greater protection of land occupancy rights of local communities who are forced to resettle due to gas and petroleum operations. Amendments include: <ol style="list-style-type: none"> <li>1) Minimizing involuntary resettlement whenever possible;</li> <li>2) Gaining full and informed community consent by consulting with impacted communities, with particular attention being paid to women and other marginalized groups, at all stages of the resettlement process;</li> <li>3) Improving the impacted community's standard of living through livelihoods and by ensuring access to markets, education and healthcare facilities.</li> <li>4) Providing resettled communities with a share of future profits from mining operations.</li> </ol>
65)	Legal: Gas & Petroleum Laws (9/11)	7.3.1	Work with existing investors to renegotiate contracts in line with new regulations	Engage concessionaires to agree on a timeline and work program to bring their operations into line with the new environmental, health, labor, and other regulatory standards
66)	Legal: Gas & Petroleum Laws	7.3.1	Archaeological Heritage Protection	Include in the Petroleum Law an unconditional "stop work" order whenever a

	(10/11)			company finds archaeological materials. Appoint an independent agency to assess the finds and to delay work in the relevant area, and/or to approve continuance
67)	Legal: Gas & Petroleum Laws (11/11)	7.3.3	Responses and a way forward for Mozambique	Mozambique should take a phased approach to strengthening its current transfer pricing rules. First, a simplified mechanism should be imposed, such as a cap on intra-company costs for tax purposes. Second, the Government should work with the OECD and other international organizations or donors to formulate a comprehensive transfer pricing strategy that will help to ensure a fairer share of revenue for Mozambique.
68)	Governance (1/21)	8.2.1	Establish clear division of decision-making powers across multiple ministries/agencies.	Ensure structural separation of powers through establishment of MICOA as a co-equal ministry mandated to provide oversight and monitoring empowered through an articulated enforcement tool: the ability to fine, suspend and revoke Concessions through EIA, ESIA and Environmental License non-compliance.
69)	Governance (2/21)	8.2.1	Establish clear division of decision-making powers across multiple ministries/agencies.	Involve additional co-equal ministries parallel to MIREM and MICOA able to regulate other extractive impacts including Social Impacts on Local communities, possibly through the Ministry of State Administration which already works at the district, provincial and Federal level (MAE) to administer governance, or the Ministry of Women and Social Action whose mandate could provide strong stakeholder representation, and health and safety regulations, possibly through the Ministry of Labor whose mandate already covers these functions.
70)	Governance (3/21)	8.2.2	Strengthen the oversight and implementation role of Parliament	Create an Extractive Industry Parliamentary Committee and mandate it to provide oversight through direct reporting, optional audits and appropriate expert staff.
71)	Governance (4/21)	8.2.2	Strengthen the oversight and implementation role of Parliament	Increase the technical expertise and staff within Parliamentary Committees.

72)	Governance (5/21)	8.2.3	Strengthening the auditing role of the Administrative Court and Ministry of Finance	Increase independence of the Administrative Court through mandatory Parliamentary Ratifications of Presidential nominations to the court.
73)	Governance (6/21)	8.2.3	Strengthening the auditing role of the Administrative Court and Ministry of Finance	Give the Administrative court the ability to make mandatory decisions during first round decisions for all Administrative court hearings.
74)	Governance (7/21)	8.3.1	Conflicts of Interest	Ensure that Conflicts of Interest are regulated and sanctioned by the Central Public Ethics Commission. Ensure legitimate enforcement extends to family members
75)	Governance (8/21)	8.3.2	Central Public Ethics Commission and Ethics Commission	Central Public Ethics Commission (CCEP): <ol style="list-style-type: none"> <li>1) Promote role as institute to regulate conflicts of interest.</li> <li>2) Harmonize communication with other anti-corruption institutions</li> <li>3) Provide transparency and strengthen sanctions for violations.</li> </ol> Central Ethics Commission (CEP): <ol style="list-style-type: none"> <li>1) Begin formation of CEPs in key ministries</li> </ol>
76)	Governance (9/21)	8.3.3	Declaration of Assets	<ol style="list-style-type: none"> <li>1) Coordinate the collection of Declaration of Assets.</li> <li>2) Provide transparency when investigations are initiated.</li> </ol>

				3) Provide mechanisms for the public to access all information quickly and with minimal transactions.
77)	Governance (10/21)	8.3.4	Implement strict penalties for ethical breaches	1) Provide explicitly defined penalties for violations. 2) Prioritize the adoption of the Mozambique Criminal Code and Criminal Procedure Code.
78)	Governance (11/21)	8.3.5	Obtain approval or ratification for key nominations from the National Assembly	Form a committee in the National Assembly that oversees all matters related to the extractive economy and regulatory structure and which also has the authority to be involved in the nomination and appointment process.
79)	Governance (12/21)	8.3.6	Protect appointees	Guarantee appointees' independence by giving them greater security of tenure and establish an independent appointment process. Encourage parliament to confirm appointments in key ministries.
80)	Governance (13/21)	8.3.7	Protect whistleblowers and encourage them to come forward	1) Work with international donors to get more funds for developing protection programs and conduct an awareness campaign to raise visibility of the new institutions. 2) Develop stronger communication links between the GCPV, CCEP, GCCC and other relevant agencies to ensure protection of whistleblowers
81)	Governance (14/21)	8.3.8	Develop Private Sector Transparency Regulations	1) Develop a private sector transparency initiative that requires extractive companies to report payments to the government in line with international best practices 2) Include rules on corruption in the private sector in the revised Criminal Code

				and Criminal Procedure Code. 3) Increase institutional linkages between EITI and the GCCC 4) Increase training for monitoring private sector practices in GCCC
82)	Governance (15/21)	8.4.1	Give agencies broader investigation powers	Give agencies the right to conduct unannounced audits and inspections, including to right to compel the production of documents, and facilitate cooperation and information sharing across agencies.
83)	Governance (16/21)	8.4.2	Give agencies the power to impose sanctions or suspend operations when an agency finds that oil industry actors have violated their contractual obligations	Donors, NGOs, Bi-Lateral Partners and UN Agencies should continue to coordinate and use their leverage to ensure media, civil society and governance institutions can hold each other accountable.
84)	Governance (17/21)	8.5.1	Encourage donors to redirect aids towards building capacity and promoting transparency	Governments and Donors should examine their current technical support programs and develop partnerships and offer support through direct placements pending government approval.
85)	Governance (18/21)	8.5.3	Professionalizing the Civil Service	1) Professionalize the core of the civil and administrative service to create a competent administrative staff. 2) Hire experts to help assess, structure and develop the current civil service program.

86)	Governance (19/21)	8.5.4	Reversing the Brain Drain and Increasing Expert Admin	Collaborate with bi-lateral donors, NGOs, and companies to bring expert knowledge into various agencies to bridge the administrative skill gaps and developing domestic capacity across all sectors.
87)	Governance (20/21)	8.5.4	Reversing the Brain Drain and Increasing Expert Admin	Create policies to ensure Mozambican and foreign talent is recruited into the civil and administrative services. This can include salary matching, civil service placements of foreigners and other creative solutions.
88)	Governance (21/21)	8.6.1	Transparency through E-Governance and Information and Communication Technology (“ICT”)	Parliament should hold an open forum with key stakeholders to identify what information should be made public regarding the extractive industries, and should then legislate the creation of this platform with the ICT Policy Implementation Technical Unit providing implementation. It should draw on the experience and insight of other jurisdictions with effective e-governance processes, including Estonia.
89)	SWTF (1/17)	9.1	A Sovereign Wealth Fund for Mozambique	Mozambique needs a SWF for the thorough management of its natural resource revenues. Now is the time to prepare the relevant institutions and actors and create the legal framework for resource revenue management.
90)	SWTF (2/17)	9.1.1	Dutch Disease	Place the SWF in a well-established, traditional financial center located in London, New York or Singapore. Invest in foreign assets and currencies to create a diversified portfolio that generates ongoing revenue for the country.
91)	SWTF (3/17)	9.1.4	Tapping into International Financial Markets	Draw on the experience of established financial experts to manage the investment of the SWF’s assets.
92)	SWTF (4/17)	9.1.4	Tapping into International Financial Markets	Instruct a reputable institution to handle operational management for now, but consider building a management team located in Mozambique as a long-term

				goal. While all assets are still invested in traditional financial markets, this would allow Mozambique to develop and improve its investment management.
93)	SWTF (5/17)	9.1.5	The Santiago Principles and the Linaburg-Maduel Transparency Index	Adhere fully to the Santiago Principles, but do not stop there. These principles provide a benchmark and should not be the end point in ensuring macroeconomic stability.
94)	SWTF (6/17)	9.1.5	The Santiago Principles and the Linaburg-Maduel Transparency Index	Comply with all ten principals that make up the Linaburg-Maduell Transparency Index. Mozambique shall score full ten points on that index.
95)	SWTF (7/17)	9.2.1	Budget Support	For accounting, administrative and management purposes, all revenues flowing from natural resource production should be paid directly into the SWF, and later distributed for different purposes such as budget, development, stabilization or savings. All withdrawals from the fund are subject to specific legislation or Parliamentary approval.
96)	SWTF (8/17)	9.2.2	The Stabilization Fund	The Mozambican SWF must incorporate a stabilization mechanism to protect the country from fluctuation in natural gas and coal prices.
97)	SWTF (9/17)	9.2.3	The Development Fund	Mozambique will require significant investments in infrastructure and social projects. Parts of the Mozambican SWF should be used to target specific long-term investments that diversify the economy while taking its limited absorption capacity into account.
98)	SWTF (10/17)	9.2.4	The Savings Fund	Make sure that the Mozambican SWF incorporates a solid saving mechanism. While development and budget support will be (and should be) predominant in the early years of natural resource production, the ultimate goal of the SWF is saving for the future and the generation of recurring revenues.

99)	SWTF (11/17)	9.4.1	A Sovereign Wealth Trust Fund for Mozambique	Mozambique's SWF should be set up as a trust fund to benefit from the highest standards of legal protection, access to financial markets and protection from creditors.
100)	SWTF (12/17)	9.5	A Sovereign Wealth Trust Fund Structure for Mozambique	To accommodate Mozambique's current socio-economic situation the sovereign wealth trust fund should include four separate accounts: a budget account that supports the budget, a stabilization account to protect against price fluctuations, a development account to invest in infrastructure and social projects and a savings account to ensure that future generations will also be able to benefit from the fund.
101)	SWTF (13/17)	9.6.1	Trustees	Follow the highest legal standards for the selection process of trustees along with setting clear rules for their responsibilities and range of action.
102)	SWTF (14/17)	9.6.2	Management	Define and legally enshrine a governance structure that determines the investment strategy and the responsibilities of the fund's management.
103)	SWTF (15/17)	9.6.3	Audits	Establish a tight reporting and auditing system for the sovereign wealth trust fund. Determine an established, highly reputational, international auditing firm to conduct at least one audit of the fund per year. Additionally, we recommend that the Administrative Court be in charge of the domestic audit. In order to ensure excellence capacity building has to be undertaken within the Administrative Court.
104)	SWTF (16/17)	9.6.4	Oversight	Establish an oversight mechanism that represents a cross-section of Mozambique's society, including members from major political parties, civil society, the private sector, religious and community leaders and ethnic minorities.

105)	SWTF (17/17)	9.6.5	Legal Adjustment	All aspects of the aforementioned recommendations on the sovereign wealth trust fund should be codified into law.
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# Appendices

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## Appendix 1: Law

### Appendix 1A: Existing Mining Contracts under the Mining Law

Concession Contracts available in Mining				
Purpose	Eligibility	Rights	Period	Process
<b>Reconnaissance</b>	May be held by any person, national or foreign, natural or legal with the relevant capacity, and who intends to carry out reconnaissance activities permitted under this license, subject to applicable fees. [ <i>Mining Law, Article 6</i> ]	Rights include access to the area, on a non-exclusive basis; obtain and remove samples; occupy the area and construct temporary installations subject to applicable law and use the water, wood and other materials necessary for reconnaissance. [ <i>Mining Law, Article 8</i> ]	Two years maximum [ <i>Mining Regulations, Article 21</i> ]	Requested by means of a letter to Minister of Mineral Resources, submitted via the National or Provincial Directorate of Mines. [ <i>Mining Regulations, Article 21</i> ]
<b>Exploration</b>	May be held by any person, national or foreign, natural or legal with the relevant capacity, and who intends to carry out exploration activities permitted under this license, subject to applicable fees. [ <i>Mining Law, Article 6</i> ]	Rights include access the area subject to exploration; prospect on an exclusive basis the mineral resources covered by license within the licensed area; collect, remove and export samples and specimens; occupy land and erect temporary installations necessary for carry out exploration activities. [ <i>Mining Law, Article 11</i> ]	Five years, renewable for up to a further five years. [ <i>Mining Regulations, Article 33</i> ]	May be granted either on application by an interested entity or by public tender. [ <i>Mining Regulations, Article 8</i> ]  Requested by means of a letter to Minister of Mineral Resources, submitted via the National or Provincial Directorate of Mines.

<p><b>Mining Concessions</b></p>	<p>May be held by any legal person established and registered in Mozambique. Natural persons and legal persons established in other jurisdictions may not apply for or hold mining concessions. [<i>Mining Law, Articles 6 and 13</i>]</p>		<p>Granted by the State for the period equivalent to the economic life of the mine/mining operation up to a maximum of 25 years; renewable for further periods not exceeding 25 years. [<i>Mining Law, Article 13</i>]</p>	<p>Mining concession can be granted to a previous holder of exploration license or without a previous exploration license for the area petitioned.</p> <p>Application made by way of request addressed to Minister, which must be prepared in the form of a model letter provided by the National Directorate of Mines. [<i>Mining Law, Article 13; Mining Regulation, Article 44</i>]</p>
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## Appendix 1B: Key Petroleum and Gas Laws and Policies

Petroleum and Gas Laws and Policies				
Legislation and Regulations currently in force				
	Title	Type and status <sup>1</sup>	Key Provisions	Status
1	<b>Petroleum Law</b> (Law No. 3/2001, of 21 <sup>st</sup> February) Lei Petroleo	(i) Law	<ul style="list-style-type: none"> <li>• Defines state &amp; state agency roles and responsibilities</li> <li>• Eligibility for concession contracts</li> <li>• State participation in oil &amp; gas operations</li> <li>• Types and key features of concession contracts</li> <li>• Third party access to oil or gas pipelines</li> <li>• Ownership of data</li> <li>• Rights for land access and use by concessionaires</li> <li>• Basic environmental protections</li> <li>• Basic principles of the fiscal regime</li> <li>• Dispute resolution guidelines</li> <li>• Regulations and authority to regulate</li> </ul>	Currently under review – amendments approved by Cabinet
2	<b>Petroleum Operations Regulation</b> (Decree No. 24/2004, of 20 <sup>th</sup> August) Regulamento de Operações Petrolíferas	(ii) Decree: Regulation	<ul style="list-style-type: none"> <li>• Types, terms and conditions of Contracts</li> <li>• Resource management</li> <li>• Health and safety</li> <li>• Environmental petroleum</li> <li>• Reporting, samples and disclosure</li> </ul>	May need amendment to align with revised Petroleum Law
3	<b>Revision of Mining and Petroleum Tax Incentives</b> (Law No. 13/2007) Revisão do regime dos incentivos fiscais das áreas mineiras e petrolíferas.	(i) Law	<ul style="list-style-type: none"> <li>• Provides for tax benefits during the first five years following the approval of a development plan to stimulate oil activities</li> <li>• Sets out conditions for entitlement</li> <li>• Existing tax benefits remain in force</li> </ul>	Currently under Review

<sup>1</sup> Under the Mozambican Constitution, the hierarchy of legal instruments is: (i) ratified international treaties and agreements, laws, and decree-laws; (ii) decrees; (iii) ministerial resolutions; and (iv) ministerial diplomas. See UNCTAD *Trade Policy Review: Mozambique* (WT/TPR/S/209) p. 11.

			<ul style="list-style-type: none"> <li>• Tax incentives set out in the Investment Law are not applicable to petroleum activities</li> </ul>	
<b>4</b>	<b>Petroleum Production Tax Regulations</b> <b>(Decree No. 4/2008 of 9 April)</b> Regulamento do Imposto sobre a Produção do Petróleo	(ii) Decree: Regulation	<ul style="list-style-type: none"> <li>• Sets out the guidelines on the assessment of taxable income from petroleum production,</li> <li>• Sets out rules on royalty collection and payment.</li> </ul>	May need amendment to align with revised Fiscal Regime
<b>5</b>	<b>Licensing of Petroleum Facilities and Activities Regulation</b> <b>(Ministerial Order 272/2009)</b> Regulamento de Licenciamento de Instalações e Actividades Petrolíferas (Diploma Ministerial)	(iv) Ministerial Diploma	<ul style="list-style-type: none"> <li>• Sets out rules and procedures for licensing the construction, alteration, operation, closure and decommissioning of: <ul style="list-style-type: none"> <li>○ petroleum facilities and activities; and</li> <li>○ petroleum storage and transportation.</li> </ul> </li> </ul>	May need amendment to align with revised Petroleum Law
<b>6</b>	<b>Legal Provisions Concerning the Importation of Petroleum Products</b> <b>(Decree No. 9/2009)</b> Disposições legais relativas à importação de produtos petrolíferos	(ii) Decree: Regulation	<ul style="list-style-type: none"> <li>• Amends the law relating to the import of petroleum products, taking into account the variation in fuel prices in the international market.</li> <li>• Seeks to address the effects of this volatility on local sale prices.</li> </ul>	May need amendment to align with revised Petroleum Law
<b>7</b>	<b>Strategy for the Development of the Natural Gas market in Mozambique</b> <b>(Resolution 64/2009)</b> Estratégia para o Desenvolvimento do Mercado de Gás Natural em Moçambique (Resolução 64/2009)	(iii) Ministerial Resolution	<ul style="list-style-type: none"> <li>• Describes the potential for natural gas investment in Mozambique</li> <li>• Sets out options for utilizing natural gas as a source of energy in Mozambique</li> <li>• Describes the natural gas strategy</li> </ul>	Has been superseded by the Gas Master Plan
<b>8</b>	<b>Strategy for Concession Areas for Petroleum Operations</b> <b>(Resolution 27/2009)</b> Estratégia para Concessão de Áreas para as Operações Petrolíferas (Resolução 27/2009)	(iii) Ministerial Resolution	<ul style="list-style-type: none"> <li>• Outlines the objectives for petroleum exploration and development in Mozambique, including: <ul style="list-style-type: none"> <li>○ to stimulate the domestic private sector;</li> <li>○ to promote foreign investment; and</li> <li>○ to efficiently manage existing and potential resources.</li> </ul> </li> <li>• Outlines the specific strategies for concessions</li> </ul>	May need amendment to align with revised Fiscal Regime
<b>9</b>	<b>Environmental Regulations for</b>	(ii) Decree:	<ul style="list-style-type: none"> <li>• Sets out the Environmental Impact Assessment process</li> </ul>	May need amendment to

	<b>Petroleum Operations (Decree 56/2010)</b>	Regulations	<ul style="list-style-type: none"> <li>• Classifies different petroleum operations, and the type of assessment necessary</li> <li>• Empowers MICOA to oversee compliance with the Regulations, to review reports and studies, and issue an Environmental Licences when required.</li> <li>• Empowers MIREM to coordinate the EIA process with MICOA, and to participate in review of reports and studies.</li> <li>• Allows for an Inter-Institutional Group for Petroleum Operations to review environmental management.</li> </ul>	align with revised Petroleum Law
<b>10</b>	<b>Transport and Export of Petroleum Products (Decree 45/2012)</b> Transporte e exportação de produtos petrolífero	(ii) Decree: Regulation	<ul style="list-style-type: none"> <li>• Establishes the legal regime for production, import/export, storage, transport and trade of petroleum products.</li> <li>• Aims to guarantee supply, promote safety and environmental protection, promote market development and other social, economic and cultural outcomes.</li> </ul>	May need amendment to align with revised Petroleum Law

## Appendix 1C: Existing Gas and Petroleum Contracts under the Petroleum Law 2001

### **Eligibility**

Concession Contracts may be awarded to an individual or legal entity (the “concessionaire”).<sup>681</sup> The concessionaire may be Mozambican or foreign, but Mozambican or Mozambique-linked entities are given preference if all other factors are identical.<sup>682</sup> To be awarded a contract, the concessionaire must have technical competency and adequate financial resources to perform the activities.<sup>683</sup>

### **Process for Granting a Concession Contract**

Concession Contracts are usually awarded following a public tender by way of a licensing round, administered by INP. However, they may also be awarded through simultaneous or direct negotiation in certain circumstances, such as where a prior tender has been unsuccessful, a previous contract has been terminated, or where adjacent areas are to be joined.<sup>684</sup> Exploration and Production Contracts and Gas Pipeline and Oil Pipeline Contracts are approved by the Council of Ministers.<sup>685</sup> The different types of contracts are outlined in the table below.

### **Guarantee of Confidentiality**

The Petroleum Regulations guarantee that, “[u]nless otherwise agreed, all data gathered under ... Concession Contracts shall be kept confidential”.<sup>686</sup> The time period for that confidentiality is three years for Survey Concession Contracts, but no time limit is set for Exploration and Production or Oil or Gas Pipeline Concession Contracts.<sup>687</sup> The Government does reserve to itself the right to make general statements on the Petroleum Operations conducted under a Concession Contract, and the probabilities of discovering petroleum.<sup>688</sup>

### **Consent for Assignment**

The Model EPCC provides that assignment of any rights or obligations under the EPCC (whether direct or indirect, e.g. through a change in ownership of the concessionaire) is subject to written consent of the Minister of Mineral Resources.

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<sup>681</sup> Regulations for Petroleum Operations (Decree No. 24/2004, of 20 August), (*Petroleum Regulations*) Article 3 (3).

<sup>682</sup> Petroleum Regulations, Article 3(4).

<sup>683</sup> Petroleum Regulations, Article 3(2).

<sup>684</sup> Petroleum Regulations, Article 4.

<sup>685</sup> Petroleum Law, Article 10.

<sup>686</sup> Petroleum Regulations, Article 5(1).

<sup>687</sup> Petroleum Regulations, Article 5(2).

<sup>688</sup> Petroleum Regulations, Article 5(3).

<b>Types of Concession Contracts available</b> Petroleum and Gas				
<b>Purpose</b>	<b>Regulations</b>	<b>Rights</b>	<b>Period</b>	<b>Comments</b>
<b>Survey or Reconnaissance</b>	Article 12 of the Petroleum Law	<ul style="list-style-type: none"> <li>Grants exclusive rights to conduct a variety of surveys to a depth not greater than 100 meters below the surface or the bottom of the sea.</li> <li>Preferential right to enter into negotiations with the government for an EPCC.</li> </ul>	<ul style="list-style-type: none"> <li>Two years maximum</li> </ul>	<ul style="list-style-type: none"> <li>The most recent draft petroleum law removes the preferential right to enter into negotiations with the government for an EPCC.</li> </ul>
<b>Exploration and Production (EPCC)</b>	Article 13 of the Petroleum Law  Petroleum Regulations	<ul style="list-style-type: none"> <li>Exclusive right to explore for and produce petroleum in the contract area.</li> <li>Non-exclusive right to construct and operate pipelines to transport raw petroleum or natural gas produced from the Contract area (except where access to an existing pipeline is available on reasonable commercial terms).</li> </ul>	<ul style="list-style-type: none"> <li>Exploration period up to 8 years</li> <li>In the case of a discovery, the rights-holder may maintain the exclusive right to complete the operations for an additional 2 years.</li> <li>In the case of an unassociated Natural Gas discovery, the rights-holder may maintain the exclusive right to complete the operations for an additional 8 years.</li> <li>Development and Production period up to 30 years</li> <li>Some permitted extensions.</li> </ul>	<ul style="list-style-type: none"> <li>Model contract currently in use.</li> <li>Contract must contain the provisions required by law.</li> </ul>
<b>Construction and Operation of an Oil or Gas Pipeline</b>	Article 14 of the Petroleum Law	<ul style="list-style-type: none"> <li>Right to construct and operate an Oil Pipeline or Gas Pipeline for the purpose of transporting Crude Oil or natural gas in those cases that are not covered by an EPCC.</li> </ul>	<ul style="list-style-type: none"> <li>Not specified.</li> </ul>	<ul style="list-style-type: none"> <li>Must be accompanied by a Development Plan, which forms an “integral part of the Contract”.</li> </ul>

Types of Concession Contracts available				
Petroleum and Gas				
Purpose	Regulations	Rights	Period	Comments
<b>Proposed new Concession Contract under the Draft Petroleum Law</b>				
<b>Construction and Operation of Infrastructure</b>	New Article 15	<ul style="list-style-type: none"> <li>Right to build and operate infrastructure for oil production, such as processing and conversion, in those cases that are not covered by a development plan approved as part of an EPCC.</li> </ul>	<ul style="list-style-type: none"> <li>Not specified.</li> </ul>	<ul style="list-style-type: none"> <li>Few details incorporated in the Draft Law.</li> </ul>

## Appendix 1D: Fiscal Tools for Mining and Hydrocarbon Revenue

Type of tool	Bonuses (Signature, Discovery, Production)	Conventional Royalties	Sliding Scale Royalties	Corporate Income Tax ("CIT")	Sector Specific Tax – Variable Income Tax (VIT) – Resource Rent Tax	Capital Gains Tax	State Equity
<b>Pros</b> <i>What are the advantages of this tool?</i>	Securing early revenue. Can help to cover admin costs of bidding.	Securing early revenue.  Provide a consistent percentage of income.	Can be tailored to suit the needs of the country	Can be administered through existing systems.	Better capture of high prices. Sector specific.	Usually early revenues b/c project turn over is high in the initial phase of production.	Government ownership – a seat at the table. May allow for capacity-building. Can balance non-fiscal priorities.
<b>Cons</b> <i>What are the disadvantages of this tool?</i>	Can be off-putting for investors if too large	Can be deterrent. Regressive, don't respond to profitability.	Can be distortive.	Does not capture rising commodity prices. Is biased toward debt-financing; interest is deductible.	Can be deterrent.	Can be deterrent if set too high.  Can be difficult to police and enforce	If investment is needed to expand production, Government share may be eroded over time.
<b>Progressivity</b> <i>Is the tool responsive to changes in income?</i>	Regressive	Regressive	Different effect on different projects. Can be progressive, e.g. increasing every year.	Standard corporate income tax is proportional, but manages to capture higher prices.	Can be set to be fairly progressive.	Usually progressive, e.g. the longer an asset was held the less capital gains tax paid.	Depends on the arrangement. Needs strong contractual terms and monitoring of the business.
<b>Risk to Government</b>	Little to none.	Little to none.	Little to none.	Higher risk on government.	Government increases risk if minimum VIT rate is below CIT rate.	Little to none.	Depends on terms. Requires oversight More favorable when local capacity is better trained.
<b>Revenues</b> <i>When, how, and how much?</i>	Early revenue. Since all risk on investor, lowest	Relatively low, but early. In times of project cost recovery	Higher capture of revenues than regular royalties.	Depends significantly on transfer pricing.	Better capture high prices than CIT if terms set	Can be highly profitable. In particular in	Depends on the profitability of the company.

	expected government revenue.	royalties might be the only revenues accruing to the state.			accordingly. Maximizing government share over project life.	highly promising areas where project turn over is high in the initial phase.	
<b>Investor Friendliness</b>	Depends on the amount. Transparent.	Can be deterrent if set to high, in particular where projects are high cost		Lowers burden on high cost projects.	Effective as long as maximum rate is not set too high.		Depends on the terms.
<b>Prevalence</b> <i>Mining or Petroleum?</i>	Petroleum	Equal		Equal	Equal		Petroleum
<b>Administration / Oversight</b> <i>Is the tool relatively easy or difficult to administer?</i>	Fairly easy. One-off payments.	Relatively simple as long as prices easily determined. For natural gas thus far no benchmark price, therefore valuation risks.	Complex. Each project (and each mineral) might have different royalties.	Relatively simple as long as all data is available (and the pricing regulated).		Simple. One shot transactions that are easy to track and tax. Concerns could be tax treaties when the transactions involve two foreign companies.	Complex. Leads to pressure for negotiation at expense of other fiscal elements
<b>Countries</b>	Angola, U.S.	U.S., Mongolia	Canada (Alberta)	U.S., Libya	Australia, Papua New Guinea	Uganda, Nigeria	Venezuela, Malaysia

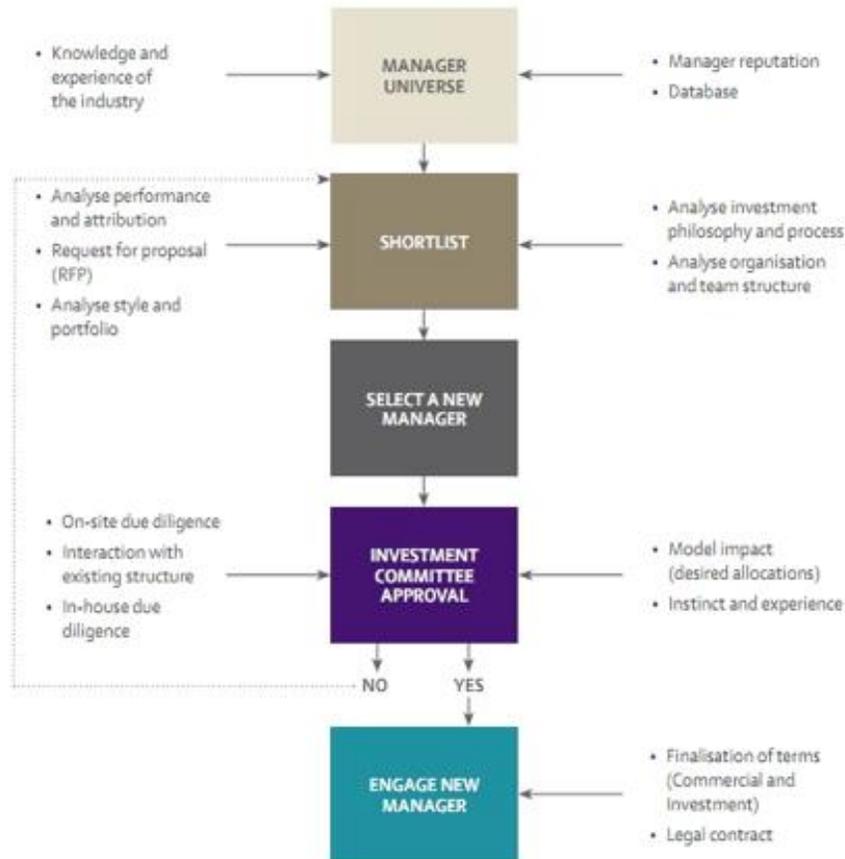
**Sources:** IMF *Fiscal Regimes for Extractive Industries: Design and Implementation* (August 15, 2012).

Ernst & Young *Global Oil and Gas Tax Guide* (2012).

Emil M. Sunley, Thomas Baunsgaard and Dominique Simard “Revenue from the Oil and Gas Sector: Issues and Country Experience” Background paper prepared for the IMF conference on fiscal policy formulation and implementation in oil producing countries, June 5-6, 2002. Post-conference draft, (June 8, 2002).

## Appendix 2: Sovereign Wealth Fund

### Appendix 2A: Abu Dhabi Investment Authority's Manager Selection Process



Source: <http://oxfordswfproject.com/tag/abu-dhabi-investment-authority/>

## Appendix 2B: Generally Accepted Principles and Practices (“GAPP”) – Santiago Principles

From the “International Working Group of Sovereign Wealth Funds,” <http://www.iwgswf.org/pubs/gapplist.htm/>.

**GAPP 1. Principle** The legal framework for the SWF should be sound and support its effective operation and the achievement of its stated objective(s).

*GAPP 1.1 Subprinciple* The legal framework for the SWF should ensure the legal soundness of the SWF and its transactions.

*GAPP 1.2 Subprinciple* The key features of the SWF's legal basis and structure, as well as the legal relationship between the SWF and the other state bodies, should be publicly disclosed.

**GAPP 2. Principle** The policy purpose of the SWF should be clearly defined and publicly disclosed.

**GAPP 3. Principle** Where the SWF's activities have significant direct domestic macroeconomic implications, those activities should be closely coordinated with the domestic fiscal and monetary authorities, so as to ensure consistency with the overall macroeconomic policies.

**GAPP 4. Principle** There should be clear and publicly disclosed policies, rules, procedures, or arrangements in relation to the SWF's general approach to funding, withdrawal, and spending operations.

*GAPP 4.1 Subprinciple* The source of SWF funding should be publicly disclosed.

*GAPP 4.2 Subprinciple* The general approach to withdrawals from the SWF and spending on behalf of the government should be publicly disclosed.

**GAPP 5. Principle** The relevant statistical data pertaining to the SWF should be reported on a timely basis to the owner, or as otherwise required, for inclusion where appropriate in macroeconomic data sets.

**GAPP 6. Principle** The governance framework for the SWF should be sound and establish a clear and effective division of roles and responsibilities in order to facilitate accountability and operational independence in the management of the SWF to pursue its objectives.

**GAPP 7. Principle** The owner should set the objectives of the SWF, appoint the members of its governing body(ies) in accordance with clearly defined procedures, and exercise oversight over the SWF's operations.

**GAPP 8. Principle** The governing body(ies) should act in the best interests of the SWF, and have a clear mandate and adequate authority and competency to carry out its functions.

**GAPP 9. Principle** The operational management of the SWF should implement the SWF's strategies in an independent manner and in accordance with clearly defined responsibilities.

**GAPP 10. Principle** The accountability framework for the SWF's operations should be clearly defined in the relevant legislation, charter, other constitutive documents, or management agreement.

**GAPP 11. Principle** An annual report and accompanying financial statements on the SWF's operations and performance should be prepared in a timely fashion and in accordance with recognized international or national accounting standards in a consistent manner.

**GAPP 12. Principle** The SWF's operations and financial statements should be audited annually in accordance with recognized international or national auditing standards in a consistent manner.

**GAPP 13. Principle** Professional and ethical standards should be clearly defined and made known to the members of the SWF's governing body(ies), management, and staff.

**GAPP 14. Principle** Dealing with third parties for the purpose of the SWF's operational management should be based on economic and financial grounds, and follow clear rules and procedures.

**GAPP 15. Principle** SWF operations and activities in host countries should be conducted in compliance with all applicable regulatory and disclosure requirements of the countries in which they operate.

**GAPP 16. Principle** The governance framework and objectives, as well as the manner in which the SWF's management is operationally independent from the owner, should be publicly disclosed.

**GAPP 17. Principle** Relevant financial information regarding the SWF should be publicly disclosed to demonstrate its economic and financial orientation, so as to contribute to stability in international financial markets and enhance trust in recipient countries.

**GAPP 18. Principle** The SWF's investment policy should be clear and consistent with its defined objectives, risk tolerance, and investment strategy, as set by the owner or the governing body(ies), and be based on sound portfolio management principles.

*GAPP 18.1 Subprinciple* The investment policy should guide the SWF's financial risk exposures and the possible use of leverage.

*GAPP 18.2 Subprinciple* The investment policy should address the extent to which internal and/or external investment managers are used, the range of their activities and authority, and the process

by which they are selected and their performance monitored.

*GAPP 18.3 Subprinciple* A description of the investment policy of the SWF should be publicly disclosed.

**GAPP 19. Principle** The SWF's investment decisions should aim to maximize risk-adjusted financial returns in a manner consistent with its investment policy, and based on economic and financial grounds.

*GAPP 19.1 Subprinciple* If investment decisions are subject to other than economic and financial considerations, these should be clearly set out in the investment policy and be publicly disclosed.

*GAPP 19.2 Subprinciple* The management of an SWF's assets should be consistent with what is generally accepted as sound asset management principles.

**GAPP 20. Principle** The SWF should not seek or take advantage of privileged information or inappropriate influence by the broader government in competing with private entities.

**GAPP 21. Principle** SWFs view shareholder ownership rights as a fundamental element of their equity investments' value. If an SWF chooses to exercise its ownership rights, it should do so in a manner that is consistent with its investment policy and protects the financial value of its investments. The SWF should publicly disclose its general approach to voting securities of listed entities, including the key factors guiding its exercise of ownership rights.

**GAPP 22. Principle** The SWF should have a framework that identifies, assesses, and manages the risks of its operations.

*GAPP 22.1 Subprinciple* The risk management framework should include reliable information and timely reporting systems, which should enable the adequate monitoring and management of relevant risks within acceptable parameters and levels, control and incentive mechanisms, codes of conduct, business continuity planning, and an independent audit function.

*GAPP 22.2 Subprinciple* The general approach to the SWF's risk management framework should be publicly disclosed.

**GAPP 23. Principle** The assets and investment performance (absolute and relative to benchmarks, if any) of the SWF should be measured and reported to the owner according to clearly defined principles or standards.

**GAPP 24. Principle**

A process of regular review of the implementation of the GAPP should be engaged in by or on behalf of the SWF.

## Appendix 2C: The Linaburg-Maduell Transparency Index

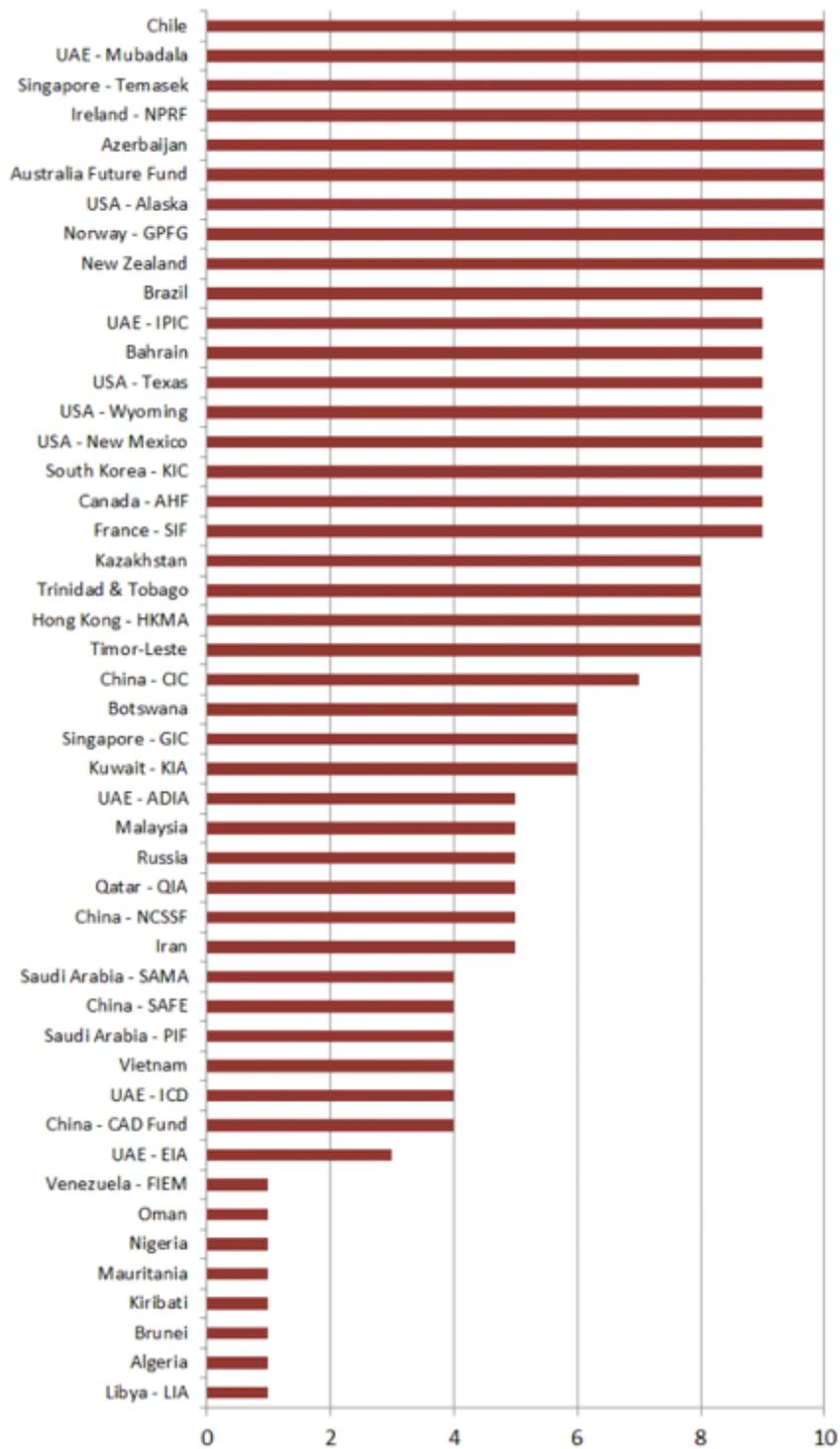
As mentioned in *Section [1.1.1]: Sovereign Wealth Fund* the Linaburg-Maduell Transparency index ranges from 1 to 10 where each of the steps stands for an essential principal with regard to transparency for SWFs. The existence of each principal for a specific SWF adds one point of transparency to the index rating. While a SWF can technically rate as low as one the Sovereign Wealth Fund Institute recommends a minimum rating of eight points. See below the ten principles and a current rating of SWFs as per the Sovereign Wealth Fund Institutes web page in May 2013.

### Principles of the Linaburg-Maduell Transparency Index 1- 10

From: "The Sovereign Wealth Fund Institute," <http://www.swfinstitute.org/statistics-research/linaburg-maduell-transparency-index/>.

- + 1 Fund provides history including reason for creation, origins of wealth, and government ownership structure
- + 1 Fund provides up-to-date independently audited annual reports
- + 1 Fund provides ownership percentage of company holdings, and geographic location of holdings
- + 1 Fund provides total portfolio market value, returns, and management compensation
- + 1 Fund provides guidelines in reference to ethical standards, investment policies, and enforcer of guidelines
- + 1 Fund provides clear strategies and objectives
- + 1 If applicable, the fund clearly identifies subsidiaries and contact information
- + 1 If applicable, the fund identifies external managers
- + 1 Fund manages its own web site
- + 1 Fund provides main office location address and contact information such as telephone and fax

Fourth Quarter 2012, Linaburg-Maduell Transparency Index Ratings



Source: "The Sovereign Wealth Fund Institute," <http://www.swfinstitute.org/statistics-research/linaburg-maduell-transparency-index/>.

## **Appendix 3: Development Indicators**

The following tables set out a number of useful indices that give a snapshot of Mozambique's current development in comparison to its neighbors and similar economies worldwide. The tables were prepared by the Capstone team with reference to a range of different sources, including the UN, the World Bank, the IFC, the IMF, and the Mo-Ibrahim Foundation. The most recent rankings available were used, and the relevant dates are incorporated into each table. Unless otherwise stated, regional measures refer to all countries within the region, regardless of income level.

### ***Appendix 3A: Economic Indicators***

This data set seeks to give the reader a better present understanding of Mozambique's economic status by comparing it with other countries. It includes different economic-related indicators for each country, such as GDP, GDP per capita, electrification rate and infrastructure indexes to give a comprehensive view of the country's general economic situation.

### ***Appendix 3B: Social Indicators***

This data set seeks to provide an overall view of the status quo relating to the social sector in Mozambique. Since the resource boom is such an important opportunity for Mozambique's social development, we take a wide range of indicators into account, including the literacy rate, mortality rate, primary education duration, labor force participation rate, and so on.

### ***Appendix 3C: Governance Indicators***

This data set provides various governance indicators to present a perspective of Mozambique's governance capacity in comparison with other countries. Indicators include transparency, expenditure on social welfare, investor protection, and rankings on procedures to register poverty. This also includes the Ibrahim Index of African governance, created by the Mo Ibrahim Foundation, which looks at country and regional performance across four major categories: Safety & Rule of Law, Participation & Human Rights, Sustainable Economic Opportunity and Human Development.

### ***Appendix 3D: Business Competitiveness Indicators***

This data set includes indicators that describe the relative position of Mozambique's developing economy with other countries on the ease of doing business. Indicators are included from The World Economic Forum Competitiveness Index and IFC business indicators.

### ***Appendix 3E: Natural Resource Management Indicators***

This includes indicators on the management of Mozambique's ecology, water and sanitation as well as the economics and management of fossil fuel resources. Included is the Resource Watch 2013 Resource Governance Index.

## Appendix 3A: Economic Indicators

Country	Access to electricity (% of population) (2009)	Adjusted net national income (annual % growth) (2011)	Agricultural land (% of land area) (2011)	CPIA business regulatory environment rating (1=low to 6=high) (2011)	Ease of doing business index (1=most business-friendly regulations) (2012)	GDP (current US\$) (2011)	GDP growth (annual %) (2011)	GDP per capita (current US\$) (2011)
Angola	26.20	14.48	46.84	2	172	1.043E+11	3.92	5318
Australia	99.70	4.90	53.33		10	1.379E+12	1.91	61789
Botswana	45.40	4.57	45.63		59	1.733E+10	5.72	8533
Brazil	98.30	3.22	32.51		130	2.477E+12	2.73	12594
Chile	98.50	7.23	21.24		37	2.486E+11	5.99	14394
Congo, Dem. Rep.	11.10	-1.35	11.36	2.5	181	1.565E+10	6.88	231
East Asia & Pacific	90.89		49.09	2.961538462	75.14	1.880E+13	3.36	8485
Europe & Central Asia			29.28	3.75	53.43	2.216E+13	1.96	24741
Ghana	60.50	4.00	69.88	4.5	64	3.920E+10	14.39	1570
Hong Kong SAR, China	99.70	6.01			2	2.486E+11	4.89	35156
Kenya	16.10	4.55	48.23	4	121	3.362E+10	4.38	808
Korea, Rep.	16.10	1.18	18.08		8	1.116E+12	3.63	22424
Latin America & Caribbean	99.70	3.80	36.73	3.5	97.18181818	5.802E+12	4.66	9746
Lesotho	16.00	4.00	76.15	3	136	2.426E+09	4.20	1106
Madagascar	19.00		71.18	3	142	9.912E+09	0.99	465
Malawi	9.00	3.73	59.19	3	157	5.621E+09	4.35	365
Malaysia	99.40	6.64	23.95		12	2.879E+11	5.08	9977
Mauritius	99.40	0.74	43.84		19	1.126E+10	4.08	8755
Mexico		2.68	53.07		48	1.153E+12	3.91	10047
Middle East & North Africa	93.78		33.39	3.25	95.3	3.050E+12	5.18	7829
Middle East & North Africa	92.93		23.02	3.25	125.58			
<b>Mozambique</b>	<b>11.70</b>	<b>10.26</b>	<b>62.82</b>	<b>3</b>	<b>146</b>	<b>1.276E+10</b>	<b>7.10</b>	<b>533</b>
Namibia	34.00	5.45	47.14		87	1.251E+10	4.84	5383
New Zealand	99.70		43.18		3	1.597E+11	0.97	36254
Nigeria	50.60		83.67	3.5	131	2.440E+11	7.36	1502
North America			25.98		10.5	1.673E+13	1.75	48343
Norway	99.70	6.14	3.28		6	4.858E+11	1.45	98081
Portugal		-3.87	39.75		30	2.374E+11	-1.67	22485
Qatar	98.70		5.68		40	1.730E+11	18.80	92501
Seychelles	98.70		6.52		74	1.060E+09	5.01	12321
Singapore	100.00	2.46	1.04		1	2.397E+11	4.89	46241
South Africa	75.00	3.46	79.45		39	4.082E+11	3.12	8070
Sub-Saharan Africa	32.42	4.40	43.54	3.039	139.84	1.286E+12	4.72	1469
Sub-Saharan Africa (developing only)	32.42	4.07	43.59	3.039	139.35	1.266E+12	4.69	1447
Swaziland		2.01	71.05		123	4.090E+09	1.30	3831
Tanzania	13.9	8.33	42.11	3.5	134	2.387E+10	6.45	532
Timor-Leste	22		24.21	1.5	169	1.054E+09	10.60	896
Turkey		6.00	49.70		71	7.750E+11	8.50	10524
Uganda	9	3.62	70.38	4	120	1.681E+10	6.70	487
United Kingdom	99.7	-2.58	70.95		7	2.445E+12	0.76	38974
United States		-0.72	44.96		4	1.499E+13	1.70	48112
World	74.12		37.46	3.1858	92.99	7.002E+13	2.73	10040
Zambia	18.8	11.28	31.52	3.5	94	1.921E+10	6.46	1425
Zimbabwe	41.5	11.49	42.19	2	172	9.656E+09	9.38	757
Source	World Bank & UN Data	World Bank	World Bank	World Bank	World Bank	World Bank	World Bank	World Bank

## Appendix 3A: Economic Indicators (Continued)

Country	GDP per person employed (constant 1990 PPP \$) (2011)	Land area (sq. km) (2011)	Percent of Management time dealing with officials (2007)	Time required to get electricity (days) (2012)	Time to prepare and pay taxes (hours) (2012)	Consumer Price Index (2011)	Foreign direct investment, net inflows (% of GDP) (2010)
Angola	2878.00	1,246,700		55.00	282.00	211	-3.9
Australia	49898.00	7,682,300		75.00	109.00	120	2.7
Botswana		566,730		121.00	152.00	169	1.8
Brazil	13690.00	8,459,420		57.00	2600.00	134	2.3
Chile	33860.00	743,532		31.00	291.00	..	22.4
Congo, Dem. Rep.	742.00	2,267,050		58.00	336.00		
East Asia & Pacific	16262.51	24,322,880		82.82	207.61		
Europe & Central Asia	32467.49	27,379,578		127.67	215.94		
Ghana	4448.00	227,540	3.2	78.00	224.00	205	7.9
Hong Kong SAR, China	65798.00	1,042		41.00	78.00	118	31.7
Kenya	2482.00	569,140	5.1	146.00	340.00	205	0.6
Korea, Rep.	45158.00	97,100		28.00	207.00	121	0
Latin America & Caribbean	17920.69	20,142,392		66.48	367.21	..	2.4
Lesotho		30,360		125.00	324.00	148	5.4
Madagascar	1362.00	581,540		450.00	201.00	174	9.9
Malawi	1841.00	94,280		222.00	175.00	168	2.8
Malaysia	26009.00	328,550	7.8	46.00	133.00	118	3.9
Mauritius		2,030		84.00	161.00	146	4.4
Mexico	19726.00	1,943,950		95.00	337.00		
Middle East & North Africa	15602.99	11,236,010		86.30	186.70		
Middle East & North Africa (developing only)	13466.28	8,641,070		89.42	252.67		
<b>Mozambique</b>	<b>5306.00</b>	<b>786,380</b>	<b>3.3</b>	<b>117.00</b>	<b>230.00</b>	<b>174</b>	<b>8.6</b>
Namibia		823,290		38.00	350.00	148	7.1
New Zealand	36994.00	263,310		50.00	152.00	120	0.5
Nigeria	6230.00	910,770	6.1	260.00	956.00	179	3.1
North America	66112.91	18,240,980		105.00	153.00		
Norway	51456.00	304,250		66.00	87.00	113	2.8
Portugal	30855.00	91,470		64.00	275.00	113	1.2
Qatar	18585.00	11,610		90.00	48.00	138	4.3
Seychelles		460		147.00	76.00	190	17.4
Singapore	50303.00	700		36.00	82.00	120	18.1
South Africa	13610.00	1,213,090	6	226.00	200.00	147	0.3
Sub-Saharan Africa	3669.13	23,616,831		132.50	318.76	..	2.3
Sub-Saharan Africa (developing only)	3669.13	23,588,781		133.09	314.91		
Swaziland		17,200		137.00	104.00	153	3.7
Tanzania	1702.00	885,800		109.00	172.00	170	1.9
Timor-Leste		14,870		63.00	276.00	153	32
Turkey	29274.00	769,630		70.00	223.00	163	1.2
Uganda	2673.00	199,810		91.00	213.00	178	3.2
United Kingdom	47884.00	241,930		105.00	110.00	120	2.4
United States	68156.00	9,147,420		68.00	175.00	115	1.6
World	18461.05	129,709,895		107.34	267.49	..	2.3
Zambia	2311.00	743,390	4.6	117.00	132.00	178	10.7
Zimbabwe	1707.00	386,850		106.00	242.00	..	1.4
Source	World Bank	World Bank	World Bank	World Bank	World Bank	UN	UN

## Appendix 3B: Social Indicators

Country	Improved sanitation facilities, urban (% of urban population with access) (2010)	Improved water source (% of population with access) (2010)	Improved water source, rural (% of rural population with access) (2010)	Labor force participation rate, female (% of female population ages 15-64) (2011)	Labor force participation rate, male (% of male population ages 15-64) (2011)	Life expectancy at birth, female (years) (2011)	Life expectancy at birth, male (years) (2011)	Literacy rate, adult total (% of people ages 15 and above) (2010)
Angola	85.0	51.0	38.0	64.1	78.0	52.56	49.63	70.140
Australia	100.0	100.0	100.0	70.3	82.9	84.10	79.70	
Botswana	75.0	96.0	92.0	75.0	82.9	51.97	54.02	84.471
Brazil	85.0	98.0	85.0	64.9	85.3	76.98	70.06	
Chile	98.0	96.0	75.0	52.8	79.1	82.16	76.03	
Congo, Dem. Rep.	24.0	45.0	27.0	70.9	72.7	50.02	46.80	66.799
East Asia & Pacific	79.9	90.8	84.5	70.3	84.8	75.49	71.42	94.155
Europe & Central Asia	94.0	98.1	94.8	61.8	77.3	79.73	72.91	98.597
Ghana	19.0	86.0	80.0	68.5	72.5	65.26	63.24	67.273
Hong Kong SAR, China				59.4	78.0	86.70	80.30	
Kenya	32.0	59.0	52.0	62.0	72.2	58.26	55.96	87.381
Korea, Rep.	100.0	98.0	88.0	54.3	75.3	84.40	77.50	
Latin America & Caribbean	84.5	94.2	81.5	58.0	83.7	77.54	71.39	91.390
Lesotho	32.0	78.0	73.0	60.2	74.7	47.20	48.73	89.647
Madagascar	21.0	46.0	34.0	85.3	89.4	68.37	65.10	
Malawi	49.0	83.0	80.0	84.7	80.5	54.23	54.05	74.766
Malaysia	96.0	100.0	99.0	46.4	78.8	76.51	72.12	93.118
Mauritius	91.0	99.0	99.0	48.7	80.4	76.97	69.74	88.514
Mexico	87.0	96.0	91.0	47.3	83.8	79.37	74.53	93.069
Middle East & North Africa	95.0	89.3	81.4	22.4	76.8	74.62	70.98	77.585
Middle East & North Africa (developing only)	93.9	88.6	81.1	21.1	75.9	74.29	70.32	75.718
<b>Mozambique</b>	<b>38.0</b>	<b>47.0</b>	<b>29.0</b>	<b>86.6</b>	<b>82.7</b>	<b>51.13</b>	<b>49.22</b>	<b>56.108</b>
Namibia	57.0	93.0	90.0	60.7	71.7	62.88	61.81	88.751
New Zealand		100.0	100.0	72.0	83.7	82.80	79.10	
Nigeria	35.0	58.0	43.0	48.1	63.2	52.70	51.07	61.339
North America	100.0	99.1	94.5	68.0	78.6	81.32	76.54	
Norway	100.0	100.0	100.0	75.7	80.8	83.60	79.10	
Portugal	100.0	99.0	100.0	70.2	78.5	84.00	77.60	95.179
Qatar	100.0	100.0	100.0	52.7	95.6	77.95	78.54	96.284
Seychelles	98.0					77.40	69.70	91.836
Singapore	100.0	100.0		62.9	82.3	84.30	79.60	95.857
South Africa	86.0	91.0	79.0	47.6	63.6	53.21	52.05	
Sub-Saharan Africa	42.4	61.1	48.4	64.5	76.9	55.75	53.58	62.588
Sub-Saharan Africa (developing only)	42.4	61.1	48.4	64.4	76.9	55.75	53.58	62.558
Swaziland	64.0	71.0	65.0	45.1	72.0	48.16	49.14	87.437
Tanzania	20.0	53.0	44.0	89.9	91.2	59.13	57.22	73.206
Timor-Leste	73.0	69.0	60.0	39.6	75.2	63.47	61.50	58.309
Turkey	97.0	100.0	99.0	30.3	75.5	76.29	71.71	
Uganda	34.0	72.0	68.0	76.9	79.8	54.80	53.38	73.212
United Kingdom	100.0	100.0	100.0	69.6	81.3	82.70	78.90	
United States	100.0	99.0	94.0	67.3	78.2	81.10	76.30	
World	79.2	88.4	80.5	56.2	81.9	72.02	67.87	84.071
Zambia	57.0	61.0	46.0	73.4	86.0	49.42	48.54	71.211
Zimbabwe	52.0	80.0	69.0	84.4	90.4	50.42	52.01	92.235

## Appendix 3B: Social Indicators (Continued)

Country	Maternal mortality ratio (modeled estimate, per 100,000 live births) (2010)	Mortality rate, adult, female (per 1,000 female adults) (2011)	Mortality rate, adult, male (per 1,000 male adults) (2011)	Mortality rate, under-5 (per 1,000 live births) (2011)	Notified cases of malaria (per 100,000 people) (2011)	Out-of-pocket health expenditure (% of private expenditure on health) (2011)	Physicians (per 1,000 people) (2011)
Angola	450.00	332.87	381.70	157.60	21593.00	70.99	
Australia	7.00			4.50		62.97	3.851
Botswana	160.00	593.17	543.42	25.90	587.00	12.69	0.336
Brazil	56.00	112.06	213.62	15.60	210.00	57.76	1.764
Chile	25.00	56.17	121.37	8.70		70.05	1.026
Congo, Dem. Rep.	540.00	351.39	404.85	167.70	37400.00	65.71	
East Asia & Pacific	78.27	100.66	152.15	19.73	512.10	72.85	
Europe & Central Asia (all income levels)	20.64			13.19		74.81	
Ghana	350.00	219.92	249.86	77.60	31179.00	66.29	0.085
Hong Kong SAR, China		36.15	72.05				
Kenya	360.00	348.35	369.54	72.80	30307.00	76.73	
Korea, Rep.	16.00	38.86	84.20	4.80	8.00	77.08	2.024
Latin America & Caribbean (all income levels)	80.14	96.22	177.98	19.15	205.90	74.43	
Lesotho	620.00	609.87	569.41	86.00		69.01	
Madagascar	240.00	166.32	213.32	61.60	3735.00	68.29	0.161
Malawi	460.00	399.63	396.36	82.60	33773.00	53.42	0.019
Malaysia	29.00	72.52	143.78	6.50	75.00	76.81	1.198
Mauritius	60.00	100.50	203.62	15.10		88.79	
Mexico	50.00	71.53	129.95	15.70	3.00	92.02	1.959
Middle East & North Africa	73.73	92.19	151.18	29.52		73.18	
Middle East & North Africa (developing only)	80.77	93.07	158.95	31.90		87.92	
<b>Mozambique</b>	<b>490.00</b>	<b>443.27</b>	<b>477.28</b>	<b>103.10</b>	<b>32555.00</b>	<b>15.46</b>	<b>0.026</b>
Namibia	200.00	344.57	343.36	41.50	4589.00	17.87	0.374
New Zealand	15.00			5.90		62.58	2.735
Nigeria	630.00	359.02	387.11	124.10	38259.00	95.43	0.395
North America	19.99			7.34		28.20	
Norway	7.00			3.10		94.55	4.159
Portugal	8.00			3.40		75.97	3.868
Qatar	7.00	58.20	68.34	7.70		63.81	2.757
Seychelles		104.29	218.03	13.80		68.54	
Singapore	3.00	44.25	75.16	2.60		87.60	1.921
South Africa	300.00	573.56	572.01	46.70	80.00	13.78	
Sub-Saharan Africa	500.00	342.72	374.42	108.34	26267.73	66.98	
Sub-Saharan Africa (developing only)	500.00	342.72	374.41	108.60	26266.53	62.24	
Swaziland	320.00	582.24	559.69	103.60	57.00	42.75	
Tanzania	460.00	331.12	350.97	67.60	24088.00	52.44	0.008
Timor-Leste	300.00	217.88	253.88	54.10	46380.00	14.18	
Turkey	20.00	74.48	132.68	15.20	0.00	64.41	1.538
Uganda	310.00	377.12	392.55	89.90	36233.00	64.82	0.117
United Kingdom	12.00			5.10		53.07	2.743
United States	21.00			7.50		20.89	2.422
World	210.00	147.40	207.33	51.40	4553.67	69.09	
Zambia	440.00	489.43	485.84	82.90	13456.00	67.07	0.066
Zimbabwe	570.00	570.88	516.90	67.10	7480.00		

## Appendix 3B: Social Indicators (Continued)

Country	Population, total (2011)	Prevalence of HIV, total (% of population ages 15-49) (2011)	Primary education, duration (years) (2012)	Ratio of girls to boys in primary and secondary education (%) (2011)	Secondary education, duration (years) (2012)	Combined gross enrolment in education (both sexes) (%) (2011)
Angola	19,618,432	2.100	6		6	65
Australia	22,323,900	0.200	7		6	108
Botswana	2,030,738	23.400	7		5	70
Brazil	196,655,014	0.300	5		7	87
Chile	17,269,525	0.500	6		6	54
Congo, Dem. Rep.	67,757,577		6	78.59	6	
East Asia & Pacific (all income levels)	2,215,712,025	0.197		102.62		
Europe & Central Asia (all income levels)	895,542,242	0.291		98.45		
Ghana	24,965,816	1.500	6	96.38	7	65
Hong Kong SAR, China	7,071,600		6	102.85	7	83
Kenya	41,609,728	6.200	6		6	67
Korea, Rep.	49,779,000	0.100	6		6	101
Latin America & Caribbean (all income levels)	595,269,033	0.414		101.53		..
Lesotho	2,193,843	23.300	7	106.11	5	58
Madagascar	21,315,135	0.300	5		7	67
Malawi	15,380,888	10.000	6	101.63	6	68
Malaysia	28,859,154	0.400	6		7	71
Mauritius	1,286,051	1.000	6		7	76
Mexico	114,793,341	0.300	6	102.35	6	
Middle East & North Africa (all income levels)	389,553,060			93.41		
Middle East & North Africa (developing only)	336,540,278			92.62		
<b>Mozambique</b>	<b>23,929,708</b>	<b>11.300</b>	<b>7</b>	<b>90.06</b>	<b>5</b>	<b>59</b>
Namibia	2,324,004	13.400	7		5	69
New Zealand	4,405,200	0.100	6		7	108
Nigeria	162,470,737	3.700	6		6	56
North America	346,140,592	0.659		99.93		
Norway	4,953,088	0.200	7		6	97
Portugal	10,556,999	0.700	6		6	96
Qatar	1,870,041		6	102.76	6	57
Seychelles	86,000		6	105.04	5	87
Singapore	5,183,700	0.100	6		4	102.8
South Africa	50,586,757	17.300	7		5	..
Sub-Saharan Africa (all income levels)	875,561,262	4.908		90.07		..
Sub-Saharan Africa (developing only)	874,841,049	4.908		90.07		
Swaziland	1,067,773	26.000	7	91.82	5	65
Tanzania	46,218,486	5.800	7		6	..
Timor-Leste	1,175,880		6	98.12	6	71
Turkey	73,639,596	0.100	5		7	76
Uganda	34,509,205	7.200	7		6	69
United Kingdom	62,744,081	0.300	6		7	90
United States	311,591,917	0.700	6		6	98
World	6,974,242,787	0.804		97.28		76.5
Zambia	13,474,959	12.500	7		5	..
Zimbabwe	12,754,378	14.900	7		6	..

Source: World Bank

## Appendix 3B: Social Indicators (Continued)

Country	Education index (2012)	Expenditure on health, public (% of GDP) (%) (2010)	GII: Gender Inequality Index, value (2012)	Health index (2012)	Human Development Index (HDI) value (2012)	Child labour (% aged 5-14 years) (2010)	Contribution of Education (%) (2012)
Angola	0.463	2.4	..	0.497	0.508	24	..
Australia	0.981	5.9	0.115	0.978	0.938	..	..
Botswana	0.683	6	0.485	0.521	0.634	9	..
Brazil	0.674	4.2	0.447	0.849	0.73	3	39
Chile	0.362	3.4	0.681	0.453	0.304	42	18
Congo, Dem. Rep.							
East Asia & Pacific							
Europe & Central Asia							
Ghana	0.596	3.1	0.565	0.703	0.558	34	32.1
Hong Kong SAR, China	0.831	..	..	0.994	0.906	..	..
Kenya	0.584	2.1	0.608	0.594	0.519	26	12.7
Korea, Rep.	0.942	4.1	0.153	0.958	0.909	..	..
Latin America & Caribbean	0.693	3.8	..	0.865	0.744	8.2	..
Lesotho	0.501	8.5	0.534	0.453	0.461	23	21.9
Madagascar	0.49	2.3	..	0.74	0.483	28	34.3
Malawi	0.443	4	0.573	0.549	0.418	26	19.5
Malaysia	0.731	2.4	0.256	0.859	0.769	..	..
Mauritius	0.659	2.5	0.377	0.844	0.737	..	..
Mexico							
Middle East & North Africa							
Middle East & North Africa (developing only)							
<b>Mozambique</b>	0.222	3.7	0.582	0.485	0.327	22	23.9
Namibia	0.557	4	0.455	0.672	0.608	..	15.1
New Zealand	1	8.4	0.164	0.959	0.919	..	..
Nigeria	0.457	1.9	..	0.51	0.471	29	27
North America							
Norway	0.99	8	0.065	0.966	0.955	..	..
Portugal	0.741	7.5	0.114	0.942	0.816	3	..
Qatar	0.629	1.4	0.546	0.923	0.834	..	..
Seychelles	0.773	3.1	..	0.848	0.806	..	..
Singapore	0.804	1.4	0.101	0.966	0.895	..	..
South Africa	0.705	3.9	0.462	0.526	0.629	..	7.5
Sub-Saharan Africa	0.44	3	..	0.551	0.475	33.5	..
Sub-Saharan Africa (developing only)							
Swaziland	0.583	4.2	0.525	0.456	0.536	9	16.7
Tanzania	0.454	4	0.556	0.614	0.476	21	18.3
Timor-Leste	0.48	5.1	..	0.677	0.576	4	21.3
Turkey	0.608	5.1	0.366	0.855	0.722	3	42.3
Uganda	0.482	2	0.517	0.544	0.456	25	15.6
United Kingdom	0.828	8.1	0.205	0.951	0.875	..	..
United States	0.994	9.5	0.256	0.926	0.937	..	..
World	0.621	6.5	..	0.79	0.694	16.8	..
Zambia	0.503	3.6	0.623	0.464	0.448	41	17.5
Zimbabwe	0.571	..	0.544	0.516	0.397	..	10.2

Source: UN

## Appendix 3B: Social Indicators (Continued)

Country	Gallup: Trust in other people (% answering "yes" to having the element)	Homicide rate (per 100,000)	Intensity of deprivation	Labour force participation rate, female-male ratio (Ratio of female to male shares)	Natural resource depletion (% of GNI)
Angola	..	19	..	0.816	35.1
Australia	..	1	..	0.813	6.5
Botswana	9	14.5	..	0.879	3.4
Brazil	15	21	39.3	0.737	3.4
Chile	39	21.7	53.7	0.968	13.7
Congo, Dem. Rep.					
East Asia &					
Europe & Central Asia					
Ghana	19	15.7	46.2	0.932	8
Hong Kong SAR, China	29	0.2	..	0.749	0
Kenya	10	20.1	48	0.857	1.1
Korea, Rep.	26	2.6	..	0.689	0
Latin America & Caribbean (all income levels)	17.9	..	..	0.669	5.6
Lesotho	..	35.2	44.1	0.802	1
Madagascar	..	8.1	53.3	0.94	1
Malawi	33	36	50.1	1.043	1.8
Malaysia	14	2.3	..	0.57	6.9
Mauritius	..	2.5	..	0.584	0
Mexico					
Middle East & North Africa					
Middle East & North Africa (developing only)					
<b>Mozambique</b>	..	<b>8.8</b>	<b>64.6</b>	<b>1.037</b>	<b>3.3</b>
Namibia	..	17.2	47.2	0.838	0.7
New Zealand	..	0.9	..	0.831	..
Nigeria	13	12.2	57.3	0.757	22
North America					
Norway	..	0.6	..	0.88	10.2
Portugal	27	1.2	..	0.831	0.1
Qatar	23	0.9	..	0.544	..
Seychelles	..	8.3	..	..	0
Singapore	33	0.3	..	0.738	0
South Africa	17	31.8	42.3	0.724	6.1
Sub-Saharan Africa	21.6	..	..	0.85	11.6
Sub-Saharan Africa (developing only)					
Swaziland	..	12.9	41.9	0.616	0.1
Tanzania	26	24.5	50.7	0.977	3.2
Timor-Leste	..	6.9	52.9	0.518	..
Turkey	8	3.3	42	0.394	0.4
Uganda	17	36.3	52.5	0.956	4.5
United Kingdom	35	1.2	..	0.812	1.3
United States	37	4.2	..	0.82	0.9
World	29.8	..	..	0.663	3.3
Zambia	31	38	51.2	0.855	18.9
Zimbabwe	15	14.3	44	0.927	2.7

Source: UN

## Appendix 3B: Social Indicators (Continued)

Country	Population with at least secondary education, female/male ratio (Ratio of female to male rates) (2010)	Internet users (per100 people) (2010)	Loss due to inequality in education (%) (2012)	Loss due to inequality in income (%) (2012)	Multidimensional poverty index (%) (2012)
Angola	..	10	34.6	50	..
Australia	0.979	75.9	1.7	16.6	..
Botswana	0.949	6	..	..	..
Brazil	1.054	40.7	25.3	39.7	0.011
Chile	0.295	0.7	31.2	36.8	0.392
Congo, Dem. Rep.					
East Asia & Pacific					
Europe & Central Asia					
Ghana	0.739	9.5	40.9	27.2	0.144
Hong Kong SAR, China	0.948	71.8	..	..	..
Kenya	0.521	25.9	30.7	36	0.229
Korea, Rep.	0.866	82.5	25.5	18.4	..
Latin America & Caribbean	..	34.8	22.7	38.4	..
Lesotho	1.199	3.9	24.3	47	0.156
Madagascar	..	1.7	30.1	36.1	0.357
Malawi	0.51	2.3	30.2	23.1	0.334
Malaysia	0.907	56.3	..	..	..
Mauritius	0.854	28.7	13.5	16.6	..
Mexico					
Middle East & North Africa					
Middle East & North Africa (developing only)					
<b>Mozambique</b>	<b>0.249</b>	<b>4.2</b>	<b>18.2</b>	<b>37</b>	<b>0.512</b>
Namibia	0.97	6.5	27.8	68.3	0.187
New Zealand	0.975	83	..	..	..
Nigeria	..	28.4	45.2	34.5	0.31
North America					
Norway	1.002	93.3	2.2	12.8	..
Portugal	0.965	51.3	5.6	20.8	..
Qatar	1.136	81.6	..	..	..
Seychelles	..	40.8	..	..	..
Singapore	0.91	71.1	..	..	..
South Africa	0.976	12.3	20.8	..	0.057
Sub-Saharan Africa	..	11.3	35.3	30.4	..
Sub-Saharan Africa (developing only)					
Swaziland	1.083	9	29.8	40.9	0.086
Tanzania	0.606	11	28.3	20.9	0.332
Timor-Leste	..	0.2	47.6	17.8	0.36
Turkey	0.58	39.8	27.4	26.5	0.028
Uganda	0.437	12.5	32.2	29.1	0.367
United Kingdom	1.015	84.7	2.6	16.9	..
United States	1.004	74.2	5.3	24.1	..
World	..	30	27	23.5	..
Zambia	0.582	10.1	23.8	42.6	0.328
Zimbabwe	0.787	11.5	17.8	35.8	0.172

Source: UN

## Appendix 3B: Social Indicators (Continued) Gini Coefficient for Select Regions

Country	UN R/P	UN R/P	World Bank	WB Gini	CIA R/P	Year	CIA Gini	CIA Gini	GPI Gini
	10%[3]	20%[4]	Gini (%)[5]	(year)	10%[6]		(%)[7]	(year)	(%)[8]
Angola			58.6	2000					62
Botswana	43	20.4	61	1994			63	1993	
Brazil	40.6	21.8	54.7	2009	37.1	2007	51.9	2012	
Democratic Republic of the Congo			44.4	2006					55
Ghana	14.1	8.4	42.8	2006	13.7	1999	39.4	2005–2006	
Hong Kong	17.8	9.7	53.3	2007			53.7	2011	
Kenya	13.6	8.2	47.7	2005	18.6	2000	42.5	2008 est.	
South Korea	7.8	4.7	31.3	2007	8.6	2005 est.	31	2010	
Lesotho	10.5	44.2	52.5	2003	48.2	2002 est.	63.2	1995	
Madagascar	19.2	11	44.1	2010	19.3	2001	47.5	2001	
Mozambique	18.8	9.9	45.7	2008	18.8	2002	45.6	2008	
Namibia	12.8	56.1	63.9	2004	129	2003	70.7	2003	
New Zealand	12.4	6.8	36.2	1997			36.2	1997	
Nigeria	17.8	9.7	48.8	2010	17.5	2003	43.7	2003	
Norway	6.1	3.9	25.8	2000	6	2000	25	2008	
Qatar			41.1	2007					39
Portugal	15	8	38.5	2007	9.2	1995 est.	38.5	2007	
Seychelles			65.8	2007					
Singapore	17.7	9.7	48.1	2008	17.3	1998	47.3	2011	
South Africa	33.1	17.9	63.1	2009	31.9	2000	65	2005	
Australia	12.5	7	30.5	2006	12.7	1994	30.5	2006	
Swaziland	25.1	13	51.5	2010	25.4	2001	50.4	2001	
Tanzania	9.2	5.8	37.6	2007	9.3	2000	37.6	2007	
Timor-Leste			31.9	2007			31.9	2007 est.	
Turkey	6.6	4.6	39	2008	17.1	2003	40.2	2010	
Uganda	16.6	9.2	44.3	2009	16.4	2002	44.3	2009	
United Kingdom	13.8	7.2	34	2005	13.6	1999	34	2005	
United States	15.9	8.4	45	2007	15	2007 est.	45	2007	
World					12	2002 est.	39	2007	
Zambia			54.6	2006			50.8	2004	
Zimbabwe			50.1	1995			50.1	2006	

Source: UN, World Bank, CIA &amp; GPI.

## Appendix 3C: Governance Indicators

Country	CPIA transparency, accountability, and corruption in the public sector rating (1=low to 6=high) (2011)	Disaster risk reduction progress score (1-5 scale; 5=best) (2011)	Procedures to register property (number) (2012)	Expenditure on health, public (% of GDP) (%) (2010)
Angola	2.50		7	2.4
Australia		4	5	5.9
Botswana		3	5	6
Brazil		4.5	14	4.2
Chile		2.75	6	3.4
Congo, Dem. Rep.	2.00		6	
East Asia & Pacific	3.08		5.08	
Europe & Central Asia	2.88		5.104166667	
Ghana	4.00	3.25	5	3.1
Hong Kong SAR, China			5	..
Kenya	3.00	4	9	2.1
Korea, Rep.			7	4.1
Latin America & Caribbean	3.39		6.94	3.8
Lesotho	3.50	2.5	6.00	8.5
Madagascar	2.50	3.75	6.00	2.3
Malawi	3.00	1.75	6.00	4
Malaysia		3.75	5.00	2.4
Mauritius		3.5	4.00	2.5
Mexico		4.25	7.00	
Middle East & North Africa	2.50		6.05	
Middle East & North Africa (developing only)	2.50		6.83	
<b>Mozambique</b>	<b>3.00</b>	<b>4</b>	<b>8.00</b>	<b>3.7</b>
Namibia			8.00	4
New Zealand		3.75	2.00	8.4
Nigeria	3.00	4	13.00	1.9
North America			5.00	
Norway		3.75	1.00	8
Portugal			1.00	7.5
Qatar			7.00	1.4
Seychelles			4.00	3.1
Singapore			5.00	1.4
South Africa			6.00	3.9
Sub-Saharan Africa	2.78		6.48	3
Sub-Saharan Africa (developing only)	2.78		6.49	
Swaziland			9.00	4.2
Tanzania	3.00	3.5	8.00	4
Timor-Leste	2.50			5.1
Turkey			6.00	5.1
Uganda	2.50		12.00	2
United Kingdom			6.00	8.1
United States		3.5	4.00	9.5
World	2.92		5.92	6.5
Zambia	2.50	3.75	5.00	3.6
Zimbabwe	1.50		5.00	..

Source: World Bank

**Appendix 3C: Transparency International's Corruptions Perception's Index***Darker shading indicates better performance.*

Country / Territory	CPI 2012 Score	Country Rank
Angola	22	157
Australia	85	7
Botswana	65	30
Brazil	43	69
Democratic Republic of the Congo	21	160
Ghana	45	64
Hong Kong	77	14
Kenya	27	139
Korea (South)	56	45
Lesotho	45	64
Madagascar	32	118
Malawi	37	88
Malaysia	49	54
Mauritius	57	43
Mexico	34	105
<b>Mozambique</b>	<b>31</b>	<b>123</b>
Namibia	48	58
New Zealand	90	1
Nigeria	27	139
Norway	85	7
Portugal	63	33
Qatar	68	27
Seychelles	52	51
Singapore	87	5
South Africa	43	69
Swaziland	37	88
Tanzania	35	102
Timor-Leste	33	113
Turkey	49	54
Uganda	29	130
United Kingdom	74	17
United States	73	19
Zambia	37	88
Zimbabwe	20	163

Source: Transparency International

## Appendix 3C: Ibrahim Index of African Governance

*Darker bars indicate better performance*

Country	Overall Score: 2011		Safety & Rule of Law: 2011		Participation & Human Rights: 2011		Sustainable Economic Opportunity: 2011		Human Development: 2011	
	Rank	Score / 100	Rank	Score / 100	Rank	Score / 100	Rank	Score / 100	Rank	Score / 100
Algeria	24	52.9	34	46.2	36	39.0	20	51.6	8	74.7
Angola	40	44.1	40	43.3	31	42.0	33	43.4	40	47.7
Benin	13	57.8	10	64.8	10	61.3	19	51.8	28	53.2
Botswana	3	77.2	1	89.5	4	71.1	5	68.0	6	80.3
Burkina Faso	18	55.1	18	58.7	17	57.1	10	59.0	44	45.8
Burundi	37	44.9	37	44.8	28	46.0	39	40.1	36	48.5
Cameroon	36	44.9	35	46.2	43	32.0	29	46.9	27	54.6
Cape Verde	2	78.4	3	82.4	1	81.7	4	68.2	5	81.3
Central African Republic	48	33.7	49	29.5	40	34.4	41	37.8	50	32.9
Chad	50	32.8	45	36.7	48	29.1	44	34.5	51	31.1
Comoros	31	47.9	26	54.2	24	48.8	49	28.8	19	59.8
Congo	41	43.5	39	44.5	33	40.4	36	41.1	38	47.9
Congo, Democratic Rep.	51	32.8	48	31.6	42	33.2	50	28.2	49	38.0
Côte d'Ivoire	46	38.8	46	36.2	44	31.9	38	40.7	42	46.6
Djibouti	29	49.0	28	53.8	38	38.0	24	49.2	26	55.0
Egypt	14	57.7	20	57.4	46	31.1	3	68.3	9	74.0
Equatorial Guinea	44	40.5	36	44.9	49	24.7	42	36.6	25	55.8
Eritrea	49	33.0	47	32.3	51	21.8	48	29.0	33	48.8
Ethiopia	33	46.7	38	44.6	39	36.3	15	53.4	29	52.6
Gabon	22	53.6	19	57.8	25	48.6	32	43.5	15	64.6
Gambia	27	51.6	29	51.0	32	40.8	17	52.5	18	62.1
Ghana	7	66.3	6	72.0	6	69.2	13	54.5	11	69.4
Guinea	42	42.5	41	43.2	26	48.5	43	36.4	47	42.1
Guinea-Bissau	45	39.8	43	42.3	34	40.0	46	33.6	45	43.3
Kenya	25	52.7	32	49.0	22	50.6	28	48.0	17	63.3
Lesotho	9	61.0	8	68.9	11	60.4	12	55.1	21	59.4
Liberia	34	46.6	30	50.2	21	53.2	45	34.4	34	48.7
Libya	38	44.5	51	28.6	50	22.6	34	41.9	3	84.8
Madagascar	35	46.1	42	42.9	30	42.1	26	49.1	32	50.3
Malawi	17	56.0	15	62.5	13	59.9	23	49.4	30	52.2
Mali	20	55.0	14	62.6	12	60.3	25	49.1	37	48.1
Mauritania	32	47.5	33	48.4	23	50.3	30	45.1	43	46.2
Mauritius	1	82.8	2	88.4	2	78.3	1	79.7	2	85.0
Morocco	15	57.0	17	60.1	41	34.3	6	64.5	12	69.1
<b>Mozambique</b>	<b>21</b>	<b>54.9</b>	<b>13</b>	<b>62.9</b>	<b>16</b>	<b>57.9</b>	<b>18</b>	<b>52.0</b>	<b>41</b>	<b>46.7</b>
Namibia	6	69.8	4	78.0	5	70.0	9	61.1	10	69.9
Niger	28	49.5	23	56.4	18	55.2	31	44.1	46	42.4
Nigeria	43	42.0	44	40.6	37	38.5	37	41.1	39	47.8
Rwanda	23	53.5	31	49.4	29	43.2	11	57.2	16	64.2
São Tomé and Príncipe	11	58.5	9	64.9	7	65.1	40	37.9	13	65.9
Senegal	16	56.2	24	56.1	14	59.6	16	53.1	24	56.1
Seychelles	4	73.4	5	74.6	8	64.4	7	63.7	1	90.8
Sierra Leone	30	48.1	21	57.1	20	54.6	35	41.2	48	39.4
Somalia	52	7.2	52	4.8	52	10.0	52	2.1	52	11.7
South Africa	5	70.7	7	71.5	3	73.3	8	61.6	7	76.6
Swaziland	26	52.0	12	63.7	47	29.7	27	49.0	14	65.7
Tanzania	10	58.8	16	62.3	9	62.3	14	54.2	23	56.4
Togo	39	44.4	25	55.8	35	39.8	47	33.4	35	48.5
Tunisia	8	62.7	27	54.1	27	46.4	2	68.6	4	81.7
Uganda	19	55.1	22	56.8	19	54.8	21	50.9	22	57.9
Zambia	12	58.5	11	64.4	15	59.1	22	50.8	20	59.5
Zimbabwe	47	34.4	50	29.3	45	31.7	51	24.8	31	51.8

## Appendix 3C: Ibrahim Index of African Governance Continued)

**REGIONAL AVERAGES**

Africa	51.2	53.3	47.6	47.3	56.7
Sub-Saharan Africa	50.9	53.9	48.9	46.1	54.8
Central Africa	40.3	41.6	34.6	38.4	46.4
East Africa	47.5	47.9	43.3	43.3	55.4
North Africa	53.7	49.1	37.3	56.7	71.8
Southern Africa	59.0	63.8	56.3	53.7	62.1
West Africa	51.9	55.9	53.6	45.7	52.5

**RECs AVERAGES**

AMU	52.9	47.5	38.5	54.3	71.3
CEN-SAD	47.3	48.9	44.2	43.7	52.5
COMESA	51.2	51.6	44.0	47.9	61.2
EAC	53.0	52.5	51.4	50.1	58.1
ECCAS	42.9	44.4	39.6	39.0	48.7
ECOWAS	51.5	55.3	52.8	46.2	51.7
IGAD	42.1	41.8	37.9	40.7	48.1
SADC	58.2	62.2	55.7	52.7	62.0

Source: Mo Ibrahim Foundation

## Appendix 3D: World Bank Governance Indicators

Country	Control of Corruption		Rule of Law		Reg Quality	
	Percentile Rank	Governance Score	Percentile Rank	Governance Score	Percentile Rank	Governance Score
	(0-100)	(-2.5 to +2.5)	(0-100)	(-2.5 to +2.5)	(0-100)	(-2.5 to +2.5)
ANGOLA	3.8	-1.36	10.3	-1.23	12.3	-1.1
AUSTRALIA	96.7	2.16	96.2	1.78	96.7	1.79
BOTSWANA	80.1	0.97	69.5	0.66	69.2	0.5
BRAZIL	63	0.17	55.4	0.01	55.9	0.17
CONGO, DEM. REP.	3.3	-1.37	1.9	-1.6	5.7	-1.52
East Asia & Pacific	50.4	0	53.9	0.13	44.6	-0.17
Europe & Central Asia	62.8	0.48	66.1	0.58	70.1	0.67
GHANA	62.6	0.17	54.5	-0.06	55.5	0.14
HONG KONG SAR, CHINA	94.3	1.84	90.6	1.54	99.1	1.88
KENYA	19.4	-0.87	16.4	-1.01	46.9	-0.16
KOREA, REP.	70.1	0.45	80.8	1.01	79.1	0.95
Latin America & Caribbean	58.6	0.24	52.1	0.05	56.2	0.18
LESOTHO	64.5	0.22	47.4	-0.27	30.3	-0.61
MADAGASCAR	49.3	-0.28	23.9	-0.84	32.2	-0.55
MALAWI	45.5	-0.36	50.2	-0.17	26.5	-0.7
MALAYSIA	57.8	0	66.2	0.52	74.4	0.66
MAURITIUS	72.5	0.62	75.1	0.86	76.8	0.84
MEXICO	45	-0.36	38.5	-0.49	60.7	0.35
Middle East & North Africa	43.6	-0.26	45.8	-0.17	46	-0.15
<b>Mozambique</b>	<b>41.7</b>		<b>33.8</b>		<b>37</b>	
NAMIBIA	64	0.22	61	0.19	55	0.08
NEW ZEALAND	99.5	2.33	98.6	1.91	99.5	1.91
NIGERIA	9	-1.14	9.9	-1.25	27.5	-0.69
North America	89.6	1.51	90.3	1.5	92.6	1.51
NORWAY	97.2	2.17	98.1	1.89	91	1.41
PORTUGAL	82.9	1.09	81.7	1.01	73.9	0.66
QATAR	80.6	1.02	73.7	0.78	66.4	0.44
SEYCHELLES	65.4	0.26	54.9	-0.01	36	-0.43
SINGAPORE	96.2	2.12	93.4	1.69	97.2	1.83
SOUTH AFRICA	59.2	0.03	58.7	0.1	65.9	0.44
Sub-Saharan Africa	32.5	-0.58	29.2	-0.71	30	-0.67
SWAZILAND	50.2	-0.27	42.3	-0.42	28.4	-0.64
TANZANIA	36	-0.52	34.3	-0.52	35.5	-0.44
TIMOR-LESTE	14.7	-1.05	11.7	-1.19	14.7	-1.04
TURKEY	61.1	0.1	57.7	0.08	65.4	0.42
UGANDA	19.9	-0.86	43.7	-0.4	49.8	-0.11
UNITED KINGDOM	91.5	1.54	92.5	1.67	94.3	1.62
UNITED STATES	85.3	1.23	91.1	1.6	91.9	1.49
ZAMBIA	37	-0.51	39.4	-0.47	36.5	-0.43
ZIMBABWE	5.7	-1.3	0.9	-1.75	2.4	-1.9

## Appendix 3D: World Bank Governance Indicators (Continued)

Country	Governance Indicators		Political Stability		Voice and Accountability
	Percentile Rank	Governance Score	Percentile Rank	Governance Score	Percentile Rank
	(0-100)	(-2.5 to +2.5)	(0-100)	(-2.5 to +2.5)	(0-100)
ANGOLA	64.9	0.37	35.8	-0.33	14.6
AUSTRALIA	11.4	-1.15	73.6	0.87	95.3
BOTSWANA	68.2	0.53	84.9	1.04	60.6
BRAZIL	55.5	-0.01	46.2	-0.04	63.8
CONGO, DEM. REP.	53.6	-0.03	2.4	-2.21	8
East Asia & Pacific	36	-0.54	60.4	0.37	52.4
Europe & Central Asia	19	-0.87	62.1	0.43	66.6
GHANA	63.5	0.32	51.4	0.15	62.4
HONG KONG SAR, CHINA	57.8	0.06	77.8	0.96	64.8
KENYA	12.8	-1.12	9.9	-1.31	40.4
KOREA, REP.	36.5	-0.54	55.2	0.23	68.5
Latin America & Caribbean	65.4	0.41	56.3	0.25	60.9
LESOTHO	37.4	-0.51	55.7	0.27	45.1
MADAGASCAR	29.9	-0.65	19.8	-0.88	25.8
MALAWI	6.2	-1.4	44.3	-0.07	39.4
MALAYSIA	1.9	-1.66	52.4	0.16	33.8
MAURITIUS	86.3	1.23	75	0.88	70.4
MEXICO	40.3	-0.43	25.5	-0.7	53.5
Middle East & North Africa	81	1	32.3	-0.65	23.5
<b>Mozambique</b>	<b>35.5</b>				<b>44.1</b>
NAMIBIA	74.4	0.76	75.9	0.89	56.8
NEW ZEALAND	44.5	-0.28	97.2	1.35	96.7
NIGERIA	99.1	2.16	4.2	-1.94	26.8
North America	95.3	1.74	77	0.86	87.2
NORWAY	94.3	1.7	96.7	1.35	99.5
PORTUGAL	98.1	1.93	69.8	0.7	85
QATAR	96.2	1.76	90.6	1.21	21.6
SEYCHELLES	78.7	0.97	79.7	0.97	52.6
SINGAPORE	28.4	-0.69	90.1	1.21	42.7
SOUTH AFRICA	92.4	1.55	48.1	0.02	65.7
Sub-Saharan Africa	75.8	0.83	34.2	-0.54	32.3
SWAZILAND	12.3	-1.13	30.7	-0.47	12.7
TANZANIA	62.1	0.24	46.7	-0.01	45.5
TIMOR-LESTE	47.6	-0.06	29.2	-0.5	54
TURKEY	36.5	-0.47	17.9	-0.93	43.7
UGANDA	58.3	0.22	15.1	-1.1	30
UNITED KINGDOM	67.2	0.62	60.4	0.37	92
UNITED STATES	27.7	-0.75	63.7	0.54	85.9
ZAMBIA	46.2	-0.15	61.8	0.47	42.3
ZIMBABWE	88.8	1.42	16	-1.04	8.9

## Appendix 3D: Business Environment Indicators

Country	2012-2013 World Economic Forum Global Competitive Index	
	Rank	Value (1-7, 7 best)
Angola		NA
Australia	20	5.11523
Botswana	79	4.056525
Brazil	48	4.40053
Chile		4.647511
DRC		NA
Ghana	103	3.792629
Hong Kong SAR	9	5.414841
Kenya	106	3.748383
Korea, Rep.	19	5.120141
Latin America and the Caribbean (average)		3.971349
Lesotho	137	3.193168
Madagascar	130	3.378358
Malawi	129	3.378925
Malaysia	25	5.055779
Mauritius	54	4.350214
Mexico	53	4.364365
Middle East and North Africa (average)		4.224756
<b>Mozambique</b>	<b>138</b>	<b>3.166081</b>
Namibia	92	3.876823
New Zealand	23	5.091438
Nigeria	115	3.671259
Norway	15	5.265519
Portugal	49	4.397178
Qatar	11	5.381802
Seychelles	76	4.103536
Singapore	2	5.673014
South Africa	52	4.370595
Sub-Saharan Africa (average)		3.575611
Swaziland	135	3.278775
Tanzania	120	3.600019
Timor-Leste	136	3.269081
Turkey	43	4.452335
Uganda	123	3.534528
United Kingdom	8	5.449578
United States	7	5.46758
Zambia	102	3.796589
Zimbabwe	132	3.342888

## Appendix 3D: IFC Ease of Doing Business 2013

Darker shading indicates better performance.

Economy	Ease of Doing Business Rank	Starting a Business					Dealing with Construction Permits			
		Rank	Procedures (number)	Time (days)	Cost (% of income per capita)	Paid-in Min. Capital (% of income per capita)	Rank	Procedures (number)	Time (days)	Cost (% of income per capita)
Angola	172	171	8	68	105.4	24.6	124	12	348	153.6
Australia	10	2	2	2	0.7	0	11	11	112	13.4
Botswana	59	99	10	61	1.6	0	132	22	145	172.7
Brazil	130	121	13	119	4.8	0	131	17	469	36
Chile	37	32	7	8	4.5	0	84	15	155	67.3
Congo, Dem. Rep.	181	149	10	58	284.7	0	81	11	117	1582.7
Ghana	64	112	7	12	18.5	4.3	162	16	218	481.2
Hong Kong SAR, China	2	6	3	3	1.9	0	1	6	67	16.3
Kenya	121	126	10	32	40.4	0	45	9	125	211.9
Korea, Rep.	8	24	5	7	14.6	0	26	11	29	127.2
Lesotho	136	79	7	24	13	0	140	11	330	950.4
Madagascar	142	17	2	8	10.8	0	148	16	172	1116.9
Malawi	157	141	10	39	83.7	0	175	18	200	1198.3
Malaysia	12	54	3	6	15.1	0	96	37	140	17.5
Mauritius	19	14	5	6	3.3	0	62	16	143	28.5
Mexico	48	36	6	9	10.1	0	36	10	69	322.7
<b>Mozambique</b>	<b>146</b>	<b>96</b>	<b>9</b>	<b>13</b>	<b>19.7</b>	<b>0</b>	<b>135</b>	<b>14</b>	<b>377</b>	<b>113.3</b>
Namibia	87	133	10	66	18.5	0	56	12	139	110.9
New Zealand	3	1	1	1	0.4	0	6	6	89	29.8
Nigeria	131	119	8	34	60.4	0	88	15	85	417.7
Norway	6	43	5	7	1.7	5.4	23	10	123	30.2
Portugal	30	31	5	5	2.3	0	78	13	108	370
Qatar	40	109	8	9	4.9	60.7	18	16	62	1.1
Seychelles	74	117	10	39	14.3	0	57	17	126	25.3
Singapore	1	4	3	3	0.6	0	2	11	26	16.7
South Africa	39	53	5	19	0.3	0	39	13	127	33.4
Swaziland	123	165	12	56	24.1	0.4	41	13	95	94.9
Tanzania	134	113	9	26	28.2	0	174	19	206	564.6
Timor-Leste	169	147	8	94	2.9	126.6	116	19	238	13.9
Turkey	71	72	6	6	10.5	7.2	142	20	180	164.3
Uganda	120	144	15	33	76.7	0	118	15	125	853.1
United Kingdom	7	19	6	13	0.7	0	20	9	99	62.4
United States	4	13	6	6	1.4	0	17	15	27	14.4
Zambia	94	74	6	17	26.6	0	151	14	196	1679.1
Zimbabwe	172	143	9	90	107	0	170	12	614	4423.4

## Appendix 3D: IFC Ease of Doing Business 2013 (Continued)

Darker shading indicates better performance.

Economy	Getting Electricity				Registering Property			
	Rank	Procedures (number)	Time (days)	Cost (% of income per capita)	Rank	Procedures (number)	Time (days)	Cost (% of property value)
Angola	113	7	55	754.9	131	7	184	3.1
Australia	36	5	75	8.7	37	5	5	5.1
Botswana	90	5	121	353.8	51	5	16	5.1
Brazil	60	6	57	116.7	109	14	34	2.6
Chile	40	6	31	67.6	55	6	31	1.3
Congo, Dem. Rep.	140	6	58	27211.6	106	6	47	6.7
Ghana	63	4	78	957.3	45	5	34	1.2
Hong Kong SAR, China	4	4	41	1.6	60	5	36	4
Kenya	162	6	146	1208.2	161	9	73	4.3
Korea, Rep.	3	4	28	33.3	75	7	11	5.1
Lesotho	133	5	125	2275.9	157	6	101	7.9
Madagascar	183	6	450	9056.7	147	6	74	10.5
Malawi	179	6	222	8854.9	97	6	69	3.6
Malaysia	28	5	46	53.9	33	5	14	3.3
Mauritius	44	4	84	295.1	60	4	15	10.6
Mexico	130	7	95	382.8	141	7	74	5.3
<b>Mozambique</b>	<b>174</b>	<b>9</b>	<b>117</b>	<b>2394.7</b>	<b>155</b>	<b>8</b>	<b>42</b>	<b>8</b>
Namibia	87	7	38	482.2	169	8	46	13.8
New Zealand	32	5	50	76.1	2	2	2	0.1
Nigeria	178	8	260	873.9	182	13	86	20.8
Norway	14	4	66	6.5	7	1	3	2.5
Portugal	35	5	64	52.7	30	1	1	7.3
Qatar	25	4	90	3.9	40	7	13	0.3
Seychelles	144	6	147	429.8	66	4	33	7
Singapore	5	4	36	28.6	36	5	21	2.9
South Africa	150	5	226	1505.8	79	6	23	5.9
Swaziland	156	6	137	1071.8	129	9	21	7.1
Tanzania	96	4	109	1944.1	137	8	68	4.4
Timor-Leste	40	3	63	593	185	no practice	no practice	no practice
Turkey	68	5	70	517.9	42	6	6	3.3
Uganda	127	5	91	4623	124	12	52	1.9
United Kingdom	62	5	105	108.9	73	6	29	4.7
United States	19	4	68	16.1	25	4	12	3.5
Zambia	151	6	117	1109.5	96	5	40	8.2
Zimbabwe	157	6	106	3917.2	85	5	31	7.8

## Appendix 3D: IFC Ease of Doing Business 2013 (Continued)

Darker shading indicates better performance.

Economy	Getting Credit					Protecting Investors				
	Rank	Strength of legal rights index (0-10)	Depth of credit information index (0-6)	Public registry coverage (% of adults)	Private bureau coverage (% of adults)	Rank	Extent of disclosure index (0-10)	Extent of director liability index (0-10)	Ease of shareholder suits index (0-10)	Strength of investor protection index (0-10)
Angola	129	3	4	1.8	0	70	5	6	6	5.7
Australia	4	10	5	0	100	70	8	2	7	5.7
Botswana	53	7	4	0	58.9	49	7	8	3	6
Brazil	104	3	5	46.8	62.2	82	6	7	3	5.3
Chile	53	6	5	37.4	3.5	32	8	6	5	6.3
Congo, Dem. Rep.	176	3	0	0	0	158	3	3	4	3.3
Ghana	23	8	5	0	5.7	49	7	5	6	6
Hong Kong SAR, China	4	10	5	0	89.4	3	10	8	9	9
Kenya	12	10	4	0	4.9	100	3	2	10	5
Korea, Rep.	12	8	6	0	100	49	7	4	7	6
Lesotho	154	6	0	0	0	100	3	4	8	5
Madagascar	180	2	0	0.1	0	70	5	6	6	5.7
Malawi	129	7	0	0	0	82	4	7	5	5.3
Malaysia	1	10	6	56.1	81.8	4	10	9	7	8.7
Mauritius	53	6	5	56.3	0	13	6	8	9	7.7
Mexico	40	6	6	0	99.2	49	8	5	5	6
<b>Mozambique</b>	<b>129</b>	<b>3</b>	<b>4</b>	<b>4.4</b>	<b>0</b>	<b>49</b>	<b>5</b>	<b>4</b>	<b>9</b>	<b>6</b>
Namibia	40	8	4	0	63.9	82	5	5	6	5.3
New Zealand	4	10	5	0	100	1	10	9	10	9.7
Nigeria	23	9	4	0.1	4.1	70	5	7	5	5.7
Norway	70	6	4	0	100	25	7	6	7	6.7
Portugal	104	3	5	90.7	22.9	49	6	5	7	6
Qatar	104	4	4	25.2	0	100	5	6	4	5
Seychelles	167	4	0	0	0	70	4	8	5	5.7
Singapore	12	10	4	0	58.3	2	10	9	9	9.3
South Africa	1	10	6	0	54	10	8	8	8	8
Swaziland	53	6	5	0	47.8	128	2	5	6	4.3
Tanzania	129	7	0	0	0	100	3	4	8	5
Timor-Leste	159	2	3	2	0	139	3	4	5	4
Turkey	83	4	5	23.5	63	70	9	4	4	5.7
Uganda	40	7	5	0	3.7	139	2	5	5	4
United Kingdom	1	10	6	0	100	10	10	7	7	8
United States	4	9	6	0	100	6	7	9	9	8.3
Zambia	12	9	5	0	5.4	82	3	6	7	5.3
Zimbabwe	129	7	0	0	0	128	8	1	4	4.3

## Appendix 3D: IFC Ease of Doing Business 2013 (Continued)

Darker shading indicates better performance.

Economy	Paying Taxes						
	Rank	Payments (number per year)	Time (hours per year)	Profit tax (%)	Labor tax and contributions (%)	Other taxes (%)	Total tax rate (% profit)
Angola	154	31	282	24.6	9	19.5	53.2
Australia	48	11	109	26	20.3	1.2	47.5
Botswana	39	32	152	21.7	0	3.6	25.3
Brazil	156	9	2600	24.6	40.8	3.8	69.3
Chile	36	6	291	21.1	3.8	3.2	28.1
Congo, Dem. Rep.	171	32	336	58.9	7.9	272.8	339.7
Ghana	89	32	224	18.5	14.7	0.4	33.5
Hong Kong SAR, China	4	3	78	17.6	5.3	0.1	23
Kenya	164	41	340	28.1	6.8	9.5	44.4
Korea, Rep.	30	10	207	15.2	13.2	1.4	29.8
Lesotho	95	33	324	13.1	0	3	16
Madagascar	68	23	201	14	20.3	1.6	36
Malawi	58	26	175	23.6	7.7	3.5	34.7
Malaysia	15	13	133	7.5	15.6	1.4	24.5
Mauritius	12	7	161	11.6	9.6	7.3	28.5
Mexico	107	6	337	24.6	26.5	1.4	52.5
<b>Mozambique</b>	<b>105</b>	<b>37</b>	<b>230</b>	<b>27.7</b>	<b>4.5</b>	<b>2.1</b>	<b>34.3</b>
Namibia	112	37	350	17.2	1	4.5	22.7
New Zealand	21	8	152	28.8	3.7	0.9	33.5
Nigeria	155	41	956	22.3	10.8	0.7	33.8
Norway	19	4	87	24.4	15.9	1.3	41.6
Portugal	77	8	275	14.5	26.8	1.4	42.6
Qatar	2	4	48	0	11.3	0	11.3
Seychelles	20	27	76	23.3	1.7	0.7	25.7
Singapore	5	5	82	6	17	4.7	27.6
South Africa	32	9	200	24.3	4.1	4.9	33.3
Swaziland	58	33	104	28.1	4	4.7	36.8
Tanzania	133	48	172	20.2	18	7.1	45.3
Timor-Leste	61	18	276	14.9	0	0.2	15.1
Turkey	80	15	223	17.9	18.8	4.5	41.2
Uganda	93	31	213	25	11.3	0.8	37.1
United Kingdom	16	8	110	22.2	10.2	3.1	35.5
United States	69	11	175	27.6	10	9	46.7
Zambia	47	37	132	1.1	10.4	3.7	15.2
Zimbabwe	134	49	242	20.5	5.1	10.1	35.8

## Appendix 3D: IFC Ease of Doing Business 2013 (Continued)

Darker shading indicates better performance.

## Mozambique Capstone

Economy	Trading Across Borders						
	Rank	Documents to export (number)	Time to export (days)	Cost to export (US\$ per container)	Documents to import (number)	Time to import (days)	Cost to import (US\$ per container)
Angola	164	11	48	1850	8	45	2690
Australia	44	6	9	1100	7	8	1120
Botswana	147	6	27	2945	7	37	3445
Brazil	123	7	13	2215	8	17	2275
Chile	48	6	15	980	6	12	965
Congo, Dem. Rep.	170	8	44	3155	9	63	3435
Ghana	99	7	19	815	7	34	1315
Hong Kong SAR, China	2	4	5	575	4	5	565
Kenya	148	8	26	2255	7	26	2350
Korea, Rep.	3	3	7	665	3	7	695
Lesotho	144	7	31	1695	7	35	1945
Madagascar	112	4	21	1197	9	24	1555
Malawi	168	10	34	2175	9	43	2870
Malaysia	11	5	11	435	6	8	420
Mauritius	15	5	10	660	6	10	695
Mexico	61	5	12	1450	4	12	1780
<b>Mozambique</b>	<b>134</b>	<b>7</b>	<b>23</b>	<b>1100</b>	<b>10</b>	<b>28</b>	<b>1545</b>
Namibia	140	9	25	1800	7	20	1905
New Zealand	25	5	10	870	6	9	825
Nigeria	154	10	24	1380	10	39	1540
Norway	21	4	7	1125	5	7	1100
Portugal	17	4	13	685	5	12	899
Qatar	58	5	17	885	7	17	1033
Seychelles	33	5	16	876	5	17	876
Singapore	1	4	5	456	4	4	439
South Africa	115	6	16	1620	7	23	1940
Swaziland	141	8	18	1880	8	27	2085
Tanzania	122	6	18	1040	10	31	1565
Timor-Leste	83	6	25	750	7	26	755
Turkey	78	7	13	990	7	14	1235
Uganda	159	7	33	3050	9	33	3215
United Kingdom	14	4	7	950	4	6	1045
United States	22	4	6	1090	5	5	1315
Zambia	156	6	44	2765	8	56	3560
Zimbabwe	167	8	53	3280	8	73	5200

## Appendix 3D: IFC Ease of Doing Business 2013 (Continued)

Darker shading indicates better performance.

Economy	Enforcing Contracts				Resolving Insolvency				
	Rank	Time (days)	Cost (% of claim)	Procedures (number)	Rank	Time (years)	Cost (% of estate)	Outcome (0 as piecemeal sale and 1 as going concern)	Recovery rate (cents on the dollar)
Angola	183	1011	44.4	46	162	6.2	22	0	
Australia	15	395	21.8	28	18	1	8	1	80.8
Botswana	68	625	28.1	28	29	1.7	15	1	64.8
Brazil	116	731	16.5	44	143	4	12	1	15.9
Chile	70	480	28.6	36	98	3.2	15	0	30
Congo, Dem. Rep.	173	610	147.6	43	168	5.2	29	0	1.6
Ghana	48	487	23	36	114	1.9	22	0	26.9
Hong Kong SAR, China	10	360	21.2	27	17	1.1	9	1	81.2
Kenya	149	465	47.2	44	100	4.5	22	1	29.5
Korea, Rep.	2	230	10.3	33	14	1.5	4	1	81.8
Lesotho	139	615	31.3	41	75	2.6	8	0	37.6
Madagascar	156	871	42.4	38	151	2	30	0	12.9
Malawi	144	432	94.1	42	134	2.6	25	0	18.5
Malaysia	33	425	27.5	29	49	1.5	15	0	44.7
Mauritius	58	645	16.3	36	64	1.7	15	0	40.9
Mexico	76	415	31	38	26	1.8	18	1	67.3
<b>Mozambique</b>	<b>132</b>	<b>730</b>	<b>142.5</b>	<b>30</b>	<b>147</b>	<b>5</b>	<b>9</b>	<b>0</b>	<b>15</b>
Namibia	41	270	35.8	33	59	1.5	15	0	42.3
New Zealand	17	216	27.2	30	13	1.3	4	1	83
Nigeria	98	457	32	40	105	2	22	0	28.2
Norway	4	280	9.9	34	3	0.9	1	1	90.8
Portugal	22	547	13	32	23	2	9	1	74.6
Qatar	95	570	21.6	43	36	2.8	22	1	55.5
Seychelles	83	915	15.4	37	65	2	11	0	39.6
Singapore	12	150	25.8	21	2	0.8	1	1	91.3
South Africa	82	600	33.2	29	84	2	18	0	35.4
Swaziland	174	956	56.1	40	74	2	15	0	38.3
Tanzania	36	462	14.3	38	129	3	22	0	21.7
Timor-Leste	185	1285	163.2	51	185	no practice	no practice	no practice	no practice
Turkey	40	420	24.9	36	124	3.3	15	0	23.6
Uganda	117	490	44.9	38	69	2.2	30	1	38.9
United Kingdom	21	399	25.9	28	8	1	6	1	88.6
United States	6	370	14.4	32	16	1.5	7	1	81.5
Zambia	89	471	38.7	35	99	2.7	9	0	29.8
Zimbabwe	111	410	113.1	38	169	3.3	22	0	0.1

## Appendix 3E: Natural Resource Management Indicators

Country Name	Natural Resource Management Index	Natural Resource Protection Indicator	Child Health Indicator	Proximity to Water Target (%)	Proximity to Sanitation Target (%)	Proximity to Ecoregion Protection Target (%)
Angola	60.1	98.4	47.3	50.0	57.0	34.9
Australia	95.6	83.0	99.7	100.0	100.0	99.2
Botswana	85.7	100.0	80.9	95.0	60.0	87.7
Brazil	91.5	93.8	90.7	97.0	80.0	95.2
Chile	89.4	67.0	96.9	96.0	96.0	98.6
Congo, Democratic Republic	46.6	95.6	30.2	46.0	23.0	21.7
Ghana	68.5	99.4	58.1	82.0	13.0	79.4
Hong Kong	--	100.0	--	--	--	99.3
Kenya	60.8	86.6	52.2	59.0	31.0	66.7
Korea, Republic of	88.2	55.7	99.0	98.0	100.0	99.0
Lesotho	46.2	2.2	60.9	85.0	29.0	68.7
Madagascar	41.5	30.9	45.0	41.0	11.0	83.1
Malawi	74.2	97.3	66.5	80.0	56.0	63.6
Malaysia	98.5	100.0	98.0	100.0	96.0	97.9
Mauritius	83.9	48.1	95.9	99.0	91.0	97.6
Mexico	91.6	90.5	92.0	94.0	85.0	96.9
<b>Mozambique</b>	<b>52.9</b>	<b>97.5</b>	<b>38.1</b>	<b>47.0</b>	<b>17.0</b>	<b>50.3</b>
Namibia	78.0	98.1	71.3	92.0	33.0	89.0
New Zealand	96.3	86.5	99.6	100.0	--	98.7
Nigeria	57.8	99.2	44.0	58.0	32.0	42.0
Norway	96.0	84.4	99.8	100.0	100.0	99.5
Portugal	95.3	83.3	99.3	99.0	100.0	98.8
Qatar	75.4	4.0	99.3	100.0	100.0	97.8
Seychelles	--	100.0	--	--	--	--
Singapore	--	48.4	99.9	--	--	99.6
South Africa	74.3	49.2	82.6	91.0	77.0	79.9
Swaziland	51.8	14.6	64.2	69.0	55.0	68.5
Tanzania	61.8	100.0	49.1	54.0	24.0	69.3
Timor-Leste	60.9	45.8	65.9	69.0	50.0	78.8
Turkey	76.2	18.7	95.4	99.0	90.0	97.1
Uganda	67.6	100.0	56.9	67.0	48.0	55.6
United Kingdom	99.8	100.0	99.7	100.0	100.0	99.2
United States	91.6	68.5	99.3	99.0	100.0	98.9
Zambia	63.3	100.0	51.1	60.0	49.0	44.3
Zimbabwe	74.6	100.0	66.1	82.0	44.0	72.4

Source: Earth Institute, Columbia University

## Appendix 3E: Countries Very Dependent on Natural Resources

Country	Resources	Resource exports as % of total exports	Resource revenue in percent of total fiscal revenue	Commodity Revenue to Total GDP	Reserve horizon (in years)	GDP Per Capita PPP Level	Development level, HDI	Overall PIMI score (0-4)	Overcome Resource Curse	2012 GPI score	2012 GPI rank
Algeria	Oil	98	73	29.7	35.2	6,950	High	...	Success	2.255	121
Angola	Oil	95	78	35	20	5,632	Low	...	Unsuccessful	2.105	95
Azerbaijan	Oil	94	64	25.6	32.2	10,033	High	1.5	Success	2.360	132
Bahrain	Oil	81	82	23.1	16.7	26,852	Very high	...	Success	2.247	118
Bolivia	Gas	5	32	11.3	19.5	4,592	Medium	2.4	Success	2.021	84
Botswana	Diamonds	66	63	22.6	18.6	15,489	Medium	2.4	Success	1.621	31
Brunei Darussalam	Gas	96	90	45.2	...	48,892	Very high	...	Success		
Cameroon	Oil	47	27	6	...	2,170	Low	...	Unsuccessful	2.113	97
Chad	Oil	89	67	15.2	33.7	1,698	Low	1	Unsuccessful	2.671	145
Chile	Copper	53	23	6.2	27.3	15,002	High	...	Success	1.616	30
Congo, Republic of	Oil	90	82	32.6	18.2	4,427	Medium	0.5	Unsuccessful	2.148	104
Dem. Rep of Congo	Minerals & Oil	94	30	3	10.7	328	Low	...		3.073	154
Ecuador	Oil	55	24	7.4	34.1	7,776	High	...	Success	2.028	85
Equatorial Guinea	Oil	99	91	31.2	17.1	18,143	Medium	...	Success	2.039	87
Gabon	Oil	83	60	18.4	41.2	15,021	Medium	1	Unsuccessful	1.972	75
Guinea	Mining Products	93	23	3.7	...	1,046	Low	1.1	Unsuccessful	2.073	92
Guyana	Gold & Bauxite	42	27	7.7	...	6,964	Medium	...		1.937	69
Indonesia	Oil	10	23	4.5	27.2	4,394	Medium	1.5		1.913	63
Iran	Oil	79	66	17.3	134.9	10,865	High	...	Success	2.324	128
Iraq	Oil	99	84	69.2	150	3,538	...	...	Success	3.192	155
Kazakhstan	Oil	60	40	10.5	60.3	12,603	High	2.4	Success	2.151	105
Kuwait	Oil	93	95	61.9	114.2	37,849	High	...	Success	1.792	47
Libya	Oil	97	89	55.5	79.8	13,805	High	...	Unsuccessful	2.830	147
Malaysia	Oil	8	37	8.2	30.9	14,670	High	...	Success	1.485	20
Mali	Gold	75	13	3.2	...	1,252	Low	2.2	Unsuccessful	2.132	102
Mauritania	Iron Ore	24	22	5.7	63.6	2,093	Low	1.7	Unsuccessful	2.301	125
Mexico	Oil	15	36	8	10.1	14,430	High	...	Success	2.445	135
Mongolia	Copper	81	29	10	...	4,006	Medium	1.7		1.884	58
Nigeria	Oil	97	76	21.7	65.6	2,422	Low	1.1	Unsuccessful	2.801	146
Norway	Oil	62	29	15.3	13.6	52,013	Very High	...	Success	1.480	18
Oman	Oil	73	83	37	20.3	25,439	...	...	Unsuccessful	1.887	59
Papua New Guinea	Minerals & Petroleum	80	32	9.6	20 (gold)	2,300	Low	...	Unsuccessful	2.076	93
Peru (Minerals)	Minerals	8	19	3.8	35	9,330	High	2.6	Success	1.995	79
Qatar (Gas)	Gas	88	58	22.6	143.7	88,559	Very High	...	Success	1.395	12
Russia (Oil)	Oil	50	29	11	48.8	15,837	High	...	Success	2.938	153
Saudi Arabia	Oil	87	79	42	75.5	23,826	High	...	Success	2.178	106
Sudan (Oil)	Oil	97	55	10.8	37.8	2,492	Low	1.1	Unsuccessful	3.193	156
Suriname	Minerals	11	29	8.3	...	8,924	Medium	...	Unsuccessful		
Syrian Arab Republic (Oil)	Oil	36	25	5.7	21.9	5,208	Medium	...	Unsuccessful	2.830	147
Timor Leste	Oil	99	70	60.9	...	2,861	Medium	...	Unsuccessful		
Trinidad and Tobago	Gas	38	49	17.4	9.7	...	High	1.1	Success	2.082	94
Turkmenistan	Oil	91	54	10.6	149.6	6,785	Medium	...	Unsuccessful	2.242	117
United Arab Emirates	Oil	41	76	24.3	100	48,821	Very High	...	Success	1.785	46
Venezuela	Oil	93	58	18.7	226.7	11,829	High	...	Success	2.278	123
Vietnam	Oil	14	22	5.7	43.1	3,134	Medium	...		1.641	34
Yemen	Oil	82	68	22	42.8	2,598	Low	0.8	Unsuccessful	2.601	143
Zambia	Copper	72	4	0.8	26	1,512	Low	1.9	Unsuccessful	1.830	51

Sources: IMF staff estimates; BP 2011 Statistical Review of World Energy ; UNDP Human Development Index; Gupta et al., 2011

## Appendix 3E: Revenue Watch 2013 Resource Governance Index

Darker shading indicates better performance.

Rank	Country	Resource measured	Composite	Institutional and legal setting	Reporting practices	Safeguards and quality controls	Enabling Environment
1	Norway	Hydrocarbons	98	100	97	98	98
2	United States (Gulf of Mexico)	Hydrocarbons	92	88	97	89	90
3	United Kingdom	Hydrocarbons	88	79	91	83	93
4	Australia (Western Australia)	Minerals	85	88	87	65	96
5	Brazil	Hydrocarbons	80	81	78	96	66
6	Mexico	Hydrocarbons	77	84	82	81	53
7	Canada (Alberta)	Hydrocarbons	76	67	72	74	96
8	Chile	Minerals	75	77	74	65	87
9	Colombia	Hydrocarbons	74	75	73	91	58
10	Trinidad and Tobago	Hydrocarbons	74	64	83	86	52
11	Peru	Minerals	73	88	83	56	55
12	India	Hydrocarbons	70	60	72	83	61
13	Timor-Leste	Hydrocarbons	68	77	82	70	28
14	Indonesia	Hydrocarbons	66	76	66	75	46
15	Ghana	Minerals	63	79	51	73	59
16	Liberia	Minerals	62	83	62	71	31
17	Zambia	Minerals	61	71	62	72	37
18	Ecuador	Hydrocarbons	58	70	64	65	28
19	Kazakhstan	Hydrocarbons	57	62	58	76	32
20	Venezuela	Hydrocarbons	56	57	69	67	18
21	South Africa	Minerals	56	69	31	75	72
22	Russia	Hydrocarbons	56	57	60	62	39
23	Philippines	Minerals	54	63	54	51	46
24	Bolivia	Hydrocarbons	53	80	47	63	32
25	Morocco	Minerals	53	48	60	56	42
26	Mongolia	Minerals	51	80	39	49	48
27	Tanzania	Minerals	50	44	48	68	42
28	Azerbaijan	Hydrocarbons	48	57	54	51	24
29	Iraq	Hydrocarbons	47	57	52	63	9
30	Botswana	Minerals	47	55	28	53	69
31	Bahrain	Hydrocarbons	47	38	40	59	58
32	Gabon	Hydrocarbons	46	60	51	39	28
33	Guinea	Minerals	46	86	45	43	11
34	Malaysia	Hydrocarbons	46	39	45	39	60

## Appendix 3E: Revenue Watch 2013 Resource Governance Index (Continued)

Rank	Country	Resource measured	Composite	Institutional and legal setting	Reporting practices	Safeguards and quality controls	Enabling Environment
35	<i>Sierra Leone</i>	Minerals	46	52	47	59	24
36	<i>China</i>	Hydrocarbons	43	43	46	46	36
37	<i>Yemen</i>	Hydrocarbons	43	57	46	52	16
38	<i>Egypt</i>	Hydrocarbons	43	40	44	48	40
39	<i>Papua New Guinea</i>	Minerals	43	59	34	50	38
40	<i>Nigeria</i>	Hydrocarbons	42	66	38	53	18
41	<i>Angola</i>	Hydrocarbons	42	58	43	52	15
42	<i>Kuwait</i>	Hydrocarbons	41	28	43	36	57
43	<i>Vietnam</i>	Hydrocarbons	41	63	39	31	30
44	<i>Congo (DRC)</i>	Minerals	39	56	45	42	6
45	<i>Algeria</i>	Hydrocarbons	38	57	41	28	26
46	<i>Mozambique</i>	Hydrocarbons	37	58	26	37	37
47	<i>Cameroon</i>	Hydrocarbons	34	63	33	25	17
48	<i>Saudi Arabia</i>	Hydrocarbons	34	30	35	31	38
49	<i>Afghanistan</i>	Minerals	33	63	29	38	8
50	<i>South Sudan</i>	Hydrocarbons	31	80	17	35	8
51	<i>Zimbabwe</i>	Minerals	31	48	23	56	6
52	<i>Cambodia</i>	Hydrocarbons	29	52	13	46	20
53	<i>Iran</i>	Hydrocarbons	28	26	33	26	23
54	<i>Qatar</i>	Hydrocarbons	26	15	14	20	66
55	<i>Libya</i>	Hydrocarbons	19	11	29	15	10
56	<i>Equatorial Guinea</i>	Hydrocarbons	13	27	14	4	4
57	<i>Turkmenistan</i>	Hydrocarbons	5	13	4	0	3
58	<i>Myanmar</i>	Hydrocarbons	4	8	5	2	2

Source: Revenue Watch.

Notes: Resource-rich countries, as defined by the IMF, appear in italics.

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From 2009 to 2011, David worked as Project Manager for Intertek in Shenzhen where he developed services and delivered trainings on labor ethics and environmental sustainability to Chinese suppliers and international brands. Prior to Intertek, David worked at Business for Social Responsibility where he assisted with corporate ethics advisory work on Exxon Mobile's natural gas work in Papua New Guinea. David has also served as the Guangdong Program Manager for Concordia Welfare and Education Foundation (CWEF), the Communications and Philanthropy Associate for the Nature Conservancy China Program in Yunnan and has worked with other NGOs including Habitat for Humanity International, WWF China and Daytop Drug Abuse. and Rehabilitation Center.



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Elizabeth has over six years of private and public sector experience engaging stakeholders on four continents. She is passionate about oil and natural gas industry non-technical risk, sustainability, social performance, and energy policy. While at SIPA, Elizabeth has conducted applied research in Liberia, Uganda, Georgia, and Mozambique on the intersection between FDI mega-projects and community impact. She is trained in designing business solutions and integrated sustainable development to enhance social license to operate, with a focus in the energy industry



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In 2012, Justin served as the Cross-Cutting Issues Intern at the Secretariat of the International Conference on the Great Lakes Region (ICGLR) of East Africa. He focused on the development of policy frameworks and indicators for transnational issues. Prior to SIPA Justin spent 6 years as the V.P of Marketing for LZI, a Biotechnology Diagnostics Leader, and oversaw its transition to positive earnings. Justin was an Assistant Researcher for UCSD's Dept. of Anthropology, working with Geographic Imaging Systems and data modeling on Brazilian civil transformations of land ownership rights.



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Leena has practiced as an attorney in Washington, DC and New York City in the areas of corporate, immigration and political asylum law. She previously worked in Pakistan and Cambodia on a range of human rights issues, including securing land rights for marginalized communities and analyzing the gender impacts of discriminatory legislation. As a fellow with the Institute of Current World Affairs in Pakistan, Leena monitored and documented a range of human rights violations carried out against women and religious minority groups. She has also worked extensively with rural communities in Northwestern Cambodia, and conducted trainings which focused on educating indigenous women on their land and property rights. Her interests lie in the intersection of law, gender, human rights and equitable development policies.



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Alex will be graduating from SIPA with a degree in Sustainable Energy Policy. From 2009-2011, he worked in an operations management position for a start-up energy company in California that provided independent power generation across the state. Through his professional and academic experience, Alex has gained a comprehensive understanding of the energy industry and its impact on the environment. He hopes to pursue a career in the clean energy sector.



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This past summer James interned with UNDP and the United Nations Mission in Liberia where he researched governance structures in Liberia's commercial timber sector and provided recommendations to improve transparency and regulatory frameworks. Prior to attending SIPA, James worked with the Burmese NGOs Arakan Oil Watch and Shwe Gas Movement in Chiang Mai, Thailand. In his work with Arakan and Shwe, James focused on investigating CSR policies of companies investing in Myanmar's oil and gas resources, global transparency norms, and local human rights abuses that occurred alongside project development in Myanmar.

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Paloma is a MSc Civil Engineer with professional experience in the private sector and nonprofits. For the last 2 years she has pursued a masters degree at SIPA, Columbia University, focusing on development while gaining a deep insight into the field of international affairs. As an engineer, she has worked in international infrastructure projects, project finance and public private partnerships in Asia, Middle East, Africa, America and Europe. In the field of development she enjoyed a first experience when volunteering in Guinea Bissau in 2009. In 2012 she worked in Kisumu, Kenya, on a health infrastructure project and, more recently, she was selected to work as a consultant in the field of extractive industries, researching on the opportunities for development in Paraguay and in Mozambique. In both cases she focused her analysis on macroeconomics, competitiveness, and infrastructure-related challenges.



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