



# Mozambique

mobilizing extractive  
resources for development



## Mozambique: Extractives for Prosperity, Volume II

Capstone Report:

School of International and Public Affairs

David Abrahamson  
Elizabeth Herb  
Justin Jee-Zen Lin  
Leena Khan, Esq.

Alexander LaBua  
James Meisenheimer  
Maree Newson, Esq.  
Carolina Ocampo-Maya

Paloma Ruiz Gonzalez  
Bettina Strickler  
WEI WEI

Supervised by Professor Jenik Radon, Esq.



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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 guarantee access for general freight and passengers, as well as for mining companies. With respect to Mozambique’s roads, an upgrade and significant extension of the network would decrease transportation costs for all parties. This, in turn, 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 and 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. The potential for clean production must be developed to provide electricity access beyond district centers, and to help reduce Mozambique’s reliance on unsustainable energy sources.

### **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”***

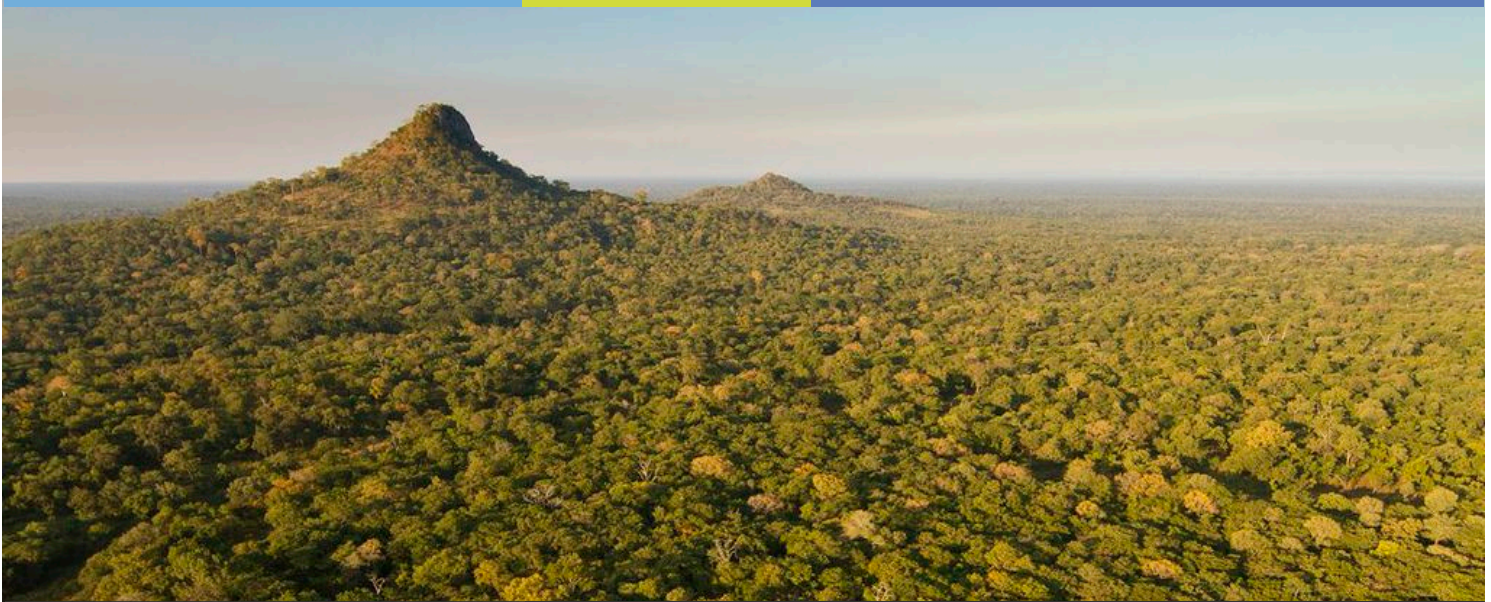
Once the coal has been mined, and the gas extracted, Mozambique will need to depend on its people, its land, and its waters for continued economic growth. Among others, Mozambique has the potential to develop a vibrant agricultural sector, and a world-class tourism industry. But both of these sectors 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.*



# Mozambique

mobilizing extractive  
resources for development



## Section 6

### The Need for Upgraded Mining Laws

Photo: Gorongosa National Park  
Mozambique  
Piotr Nasrecki



## 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—withstanding 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.



## Mozambique Capstone Project

Contact Jenik Radon  
SIPA, Columbia University  
New York, NY

[jr2218@columbia.edu](mailto:jr2218@columbia.edu)

Cover: Gorongosa National Park, Mozambique  
James Byrne.

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Piotr Naskrecki.