

Natural Resources in g7+ Countries



About the g7+

The g7+ is a voluntary association of countries that are or have been affected by conflict and are now in transition to the next stage of development. The main objective of the g7+ is to share experiences and learn from one another, and to advocate for reforms to the way the international community engages in conflict-affected states.

To find out more about the g7+ visit www.g7plus.org

Disclaimer

The booklet is a product of the g7+ secretariat and not individual member states, although member states provided information for the country profiles. The views expressed in this paper are those of the authors and do not represent any official position of the g7+ or of contributory organisations.

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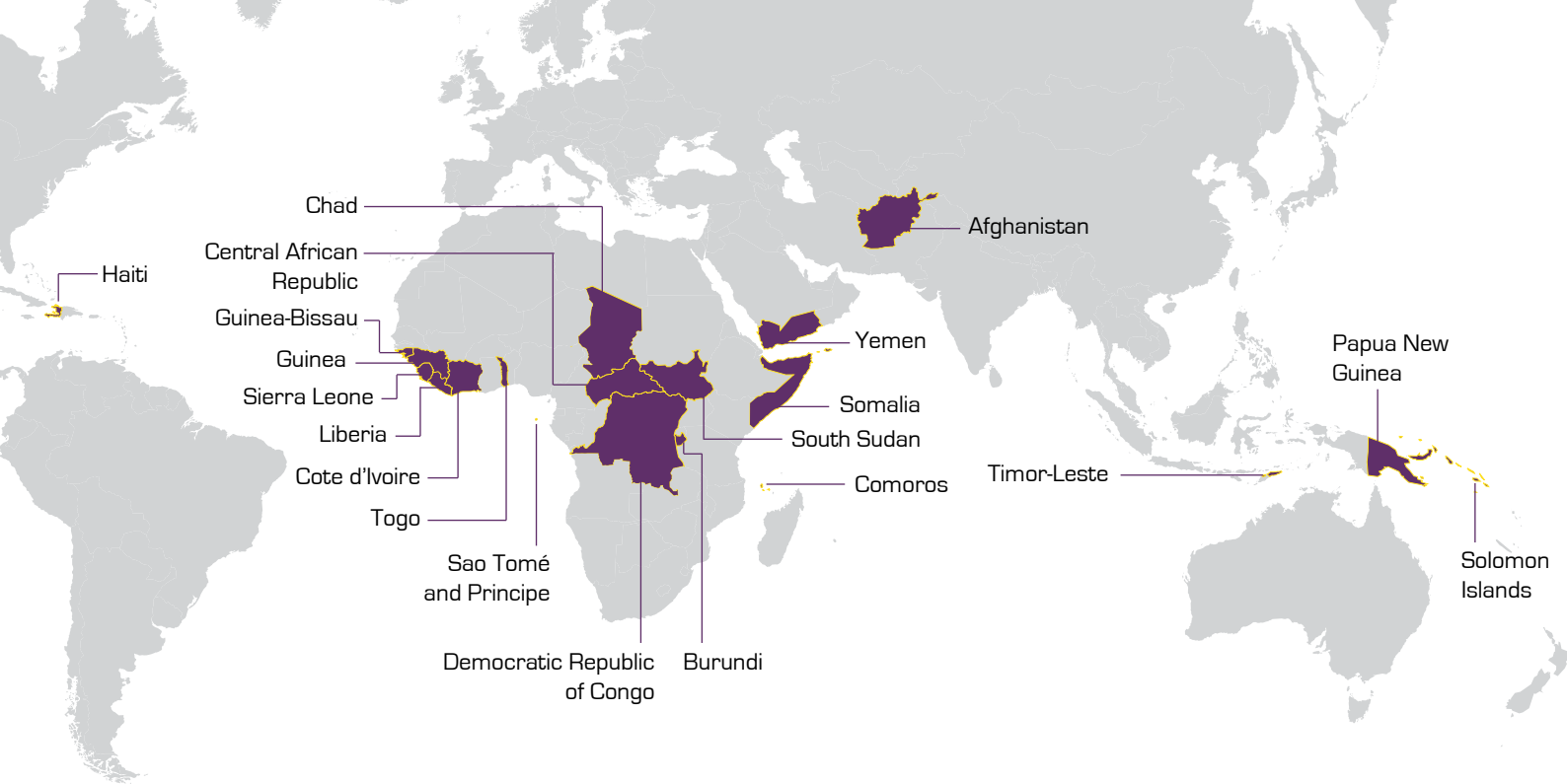
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Foreword

Dear Friends,

It is my great pleasure to welcome you to the first edition of “Natural Resources in g7+ Countries”.

It is often said of g7+ countries that we are poor. This is not true. As is abundantly clear from the data presented in this booklet, our countries are endowed with great wealth and potential. The challenge is realising and managing this wealth to the benefit of all our people.

Countries emerging from conflict face a wide range of challenges in realising the potential of their natural resources. However, those within the g7+ are making very notable efforts to address these challenges. The international community is also increasingly focused on the issues, providing a rare window of opportunity for progress.

The ‘New Deal for Engagement in Fragile States’, agreed in Busan in 2011, for example, provides an opportunity to do things differently and to address shared challenges collectively. Central to the New Deal is the call for greater transparency, country ownership, and mutual accountability.

Many of the issues and lessons are common across fragile states, which underscores the role that information sharing and peer learning can play in supporting countries to achieve progress and take greater ownership of developing their natural resource potentials.

Nonetheless, there is a paucity of good data and information on natural resources and there is no central repository. Lack of information and technical capacity, as well as poor accountability, has led g7+ countries to conclude poor mining and other resource lease agreements, and it has also limited the opportunities for peer-learning.

It is my hope that this booklet will provide a reference point for those wishing to research natural resource management in g7+ countries and will form the basis for peer learning among our member states.



Dr Kaifala Marah

Chair of the g7+ and Minister of Finance and Economic Development,
Sierra Leone



Glossary of Terms

MINERALS AND OTHER RESOURCES

Bauxite	A claylike substance, which can be transformed into aluminium after an energy intensive two-stage process. Guinea holds significant Bauxite reserves.
Cobalt	Cobalt in the Earth's crust is found only in chemically combined form, save for small deposits found in alloys of natural meteoric iron. This element is commonly found in the Democratic Republic of Congo, and is used in super alloys for jet engines, chemicals, and magnets among other things.
Coltan	Is a dull black metallic ore from which the elements niobium and tantalum are extracted. It is found in countries including the Democratic Republic of Congo and used in many electronic devices including cellular phones
Copper	Copper is a metal with very high thermal and electrical conductivity and commonly used in building construction, electronic products and motor vehicles. Papua New Guinea and Afghanistan have sizeable copper reserves.
Diamond	This form of carbon is used as a gemstone for jewelry but also in industry, for lasers, x-ray machines and vacuum chambers. So called 'blood diamonds' achieved notoriety from funding civil wars in West Africa in the 1990s.
Gold	A dense, soft, malleable metal with a bright yellow color and luster, used to make ornamental objects and jewelry. It is commonly used in the manufacturing of electronics and also as a medium of exchange or money.
Iron Ore	Refers to rocks and minerals from which metallic iron can be economically extracted. The ores are usually rich in iron oxides and vary in color from dark grey, bright yellow, deep purple, to rusty red. Iron in cast form has many uses but is mostly used as a component in steel.
Manganese	A metal with important industrial metal alloy uses, Manganese is commonly added in steel production to improve the strength and wear resistance of steels.
Natural Gas	Natural gas is a mixture of gases, which are rich in hydrocarbons and are naturally found in the atmosphere. Reserves are typically found deep inside the earth's crust and are mainly used as fuel to generate electricity and heat.
Nickel	This is a silvery-white colored lustrous metal. Nickel-containing materials are utilized for food preparation equipment, mobile phones and power generation among other things.
Petroleum	Petroleum is a naturally occurring liquid found in geologic formations beneath the Earth's surface and is commonly refined into various types of fuels. The name covers both naturally occurring unprocessed crude oil and products that are made up of

refined crude oil, including gasoline and diesel and byproducts such as plastics and pharmaceuticals.

Phosphate	Rock with high concentration of phosphate minerals is generally referred to as Phosphate rock. It is used in the production of phosphate fertilizers for agriculture.
Silver	Silver is a soft, white metal with the highest electrical conductivity of any element and the highest thermal conductivity of any metal. It is commonly used in the electronics industry and in coins, silverware and jewelry.
Timber	Timber is a product made of trees or wooded land. It is a source of wood, which is commonly used as a building material and as a fuel.
Tungsten	A hard, rare metal under standard conditions when uncombined, tungsten is found naturally on Earth only in chemical compounds. Tungsten is widely used in light bulbs and electronic tubes and as a filament in halogen tungsten lamps.

OTHER TECHNICAL TERMS

Artisanal mining	Small scale and generally informal mining activities, often taking place under difficult conditions, with technologically simple machinery. While irregular, artisanal mining often makes up an economically important sector, particularly in fragile states. The numbers of artisanal miners are hard to estimate as workers are often seasonal and occasional. While there is a lack of statistics to verify numbers, there are an estimated 8 million artisanal miners in Africa, 2 million of which are in the DRC.
Cadastre	An official register of licenses in the oil, gas and mining sector. Cadastres contain details on license holding companies and the coordinates of the licensed areas included. A cadaster often includes regulatory and technological aspects of mining administration and is an important tool for mineral resource management.
Dutch disease	This is a phenomenon wherein the value of a currency rises along with natural resource exports. This exchange rate overvaluation can lead to a reduction in the competitiveness of other sectors.
Extractive industries	Non-renewable natural resources, usually referring to oil, gas and mining industries. For the purposes of the G7+ extractive industry profiles, this definition also includes forestry. The extraction process involves the production of raw materials, which are then processed to add value and for exports.
Extractive Industries Transparency Initiative/EITI	An international initiative that promotes revenue transparency through monitoring and reconciling company payments and government revenues in the extractive industries. Governments, companies and national civil society groups oversee this process.
In-kind payments	In-kind payments are payments made in the form of actual commodities, such as minerals, instead of cash.

Mispricing or transfer pricing	The deliberate false invoicing of imports, under invoicing of exports or general undervaluing of resources, which is commonly done for the purpose of tax evasion.
Resource curse	A term referring to bad governance, increased corruption, conflict and generally poor standards of development as a result of a country's abundant natural resource wealth.
Royalty	A payment made to the legal owner of a resource by those who make use of it for the purpose of exploitation or generating revenue.
Special resource funds	Government accounts funded by resource revenues, and designed to facilitate development funding and mitigate the negative consequences associated with resource dependency. There are multiple varieties of resource funds, including 'stabilization funds', 'savings funds', 'sovereign wealth funds' or 'future generations funds'.
State-owned enterprises (SOE's)	An SOE is a company owned by a state and commonly involved in natural resource extraction to increase the share of revenue captured by the government. SOEs are criticized in many countries for having too close ties with government and for being non-transparent, poorly regulated and mismanaged.
Sub-national transfers	Payments from central governments to state, provincial, regional or local governments, which are relevant insofar as the distribution and fair management of resource revenues are concerned.
Value addition	The increase in value of raw natural resources, through processing beyond primary production. It necessitates the establishment of linkages with other sectors of the economy, and is often challenging in fragile contexts as it is capital and infrastructure intensive.

Executive Summary

One of the biggest challenges that fragile states face is in mobilising the resources required to adequately invest in their development. The natural resource sector in fragile states is critical to such resource mobilisation efforts, as if properly managed such natural resources can provide an important long-term stream of independent finance.

This booklet is the result of a request made at the 2nd Ministerial Meeting of the g7+, which took place in Port-au-Prince, Haiti, in November 2012. At that meeting, Professor Paul Collier delivered a paper on natural resources in fragile states, entitled 'Small Countries, Big Resources'. g7+ ministers requested that the g7+ secretariat facilitate greater peer learning between g7+ countries on the subject of Natural Resource Management, and a technical team was formed to deliver this report. The ongoing work has subsequently been discussed at g7+ technical meetings in Addis Ababa (July 2013) and Kinshasa (November 2013), where further direction was provided to the technical team. The final report was presented to the Third g7+ Ministerial Meeting in May 2014, in Lome, Togo.

This booklet offers an overview of natural resource management in all g7+ countries. It provides key information on the known natural resources in each country, the main extractive industries, the legal and fiscal frameworks in place for managing natural resources and issues related to governance and transparency. The booklet forms part of an emerging g7+ research program. It is designed to be a practical source of knowledge-sharing on extractives, and will be continuously updated and developed over time.

The booklet is structured as follows: 'Fast facts' presents some of the most noteworthy facts and figures about natural resources in fragile states. 'Key country data' pulls together in one table information on natural resources and revenues from each of the 18 g7+ countries. 'Emerging lessons, shared challenges and opportunities' draws together some of the emerging themes from the country profiles, linking natural resources to the New Deal for Engagement in Fragile States and the New Deal's five Peacebuilding and Statebuilding Goals. The chapter then uses the 'Natural Resource Charter' to structure an exploration of common challenges, opportunities and useful examples from the country profiles. The rest of the booklet then presents the 18 individual country profiles in alphabetical order.

A note on methodology: The country profiles have been generated through a combination of desk research to survey publically available secondary sources, information provided by Government sources, as well as conversations with civil society organisations, World Bank offices and other in-country experts. Research was conducted throughout 2013, and consequently certain information may be somewhat outdated. Data was often unavailable or of poor quality, and some g7+ countries have smaller extractives industries than others. As a result some of the profiles are relatively brief. In instances where figures were found to be conflicting the authors have either reconciled them or indicated the inconsistency.

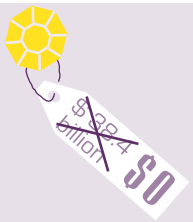
Fast Facts



At least 80% of fragile states listed by the OECD contain high value natural resources of strategic relevance to the global economy (UNEP)



International evidence suggests governments should be able to collect 40-60% of resource rents for mining and 65-85% for petroleum (Mo Ibrahim foundation)



Between 2008 and 2010 the average annual loss to Sub-Saharan Africa related to mispricing of natural resources is estimated at \$38.4 billion. This is more than the average annual level of Overseas Development Assistance (ODA) to the region over the same period, which was \$29.5 billion (Global Financial Integrity)



The African Development Bank estimates that natural resources will contribute \$30 billion per year to government revenues in Africa over the next 20 years (UNEP 2014)



80% of government revenue in Chad and 98% of government revenue in South Sudan comes from oil, while oil revenues contributed 90% of the Government's budget in Timor Leste.



Wood, wood products and charcoal constituted two thirds of the Solomon Island's exports in 2012 (ITC)



The DRC's natural resource wealth alone has an estimated value of \$24 trillion. DRC holds 60% of the world's cobalt, 80% of global coltan, and 30% of the world's diamonds. But between 2010 and 2012 around \$1.4 billion was lost in revenues from underpricing of mining assets (Africa Progress Panel)



Guinea has 30% of the world's bauxite, and accounts for 94% of African bauxite production. The country also has the highest grade of iron ore deposits found anywhere in the world.



Sierra Leone is expected to be one of Africa's largest iron ore producers within five years.



Current exploration in Somalia is expected to result in the discovery of very significant amounts of oil.



Key country data

	Principal Resource and Reserves	Production per year of Principal Resource	GDP (2012 US\$)*	Extractives as a % of GDP	Revenue as a % of GDP	Extractives as a % of Revenue	Resource Gov. Index (#/100)	EITI Status
	Oil - 851 mn bls	25.5 mn bls	1.3 bn	75%	10.3%	90%	68 ('partial')	Compliant
	Oil - 1.1 bn bls	109.5 mn bls	10.2 bn	60%	52% (2010)	98%	31 ('failing')	Non-member
	Cobalt - 15mn t (& Copper)	Cobalt 85,000 t Copper 500,000 t	17.2 bn	35%	23.4% (2010)	10%	39 ('failing')	Suspended
	Oil - 575 mn bls (& Natural Gas)	10mn bls	15.6 bn	32%	26.2%	35%	43 ('weak')	Candidate
	Iron Ore - 20bn t (& Bauxite)	Approximately 700,000 tonnes	5.6 bn	21%	19%	21%	46 ('weak')	Candidate
	Timber - 4.3mn ha (& Diamonds)	94,600m3 exported in 2011	1.7 bn	20%	24.8%	11%	62 ('partial')	Compliant
	Oil - 1.5 bn bls	38.3 mn bls	12.9 bn	16.5%	25%	80%	Not rated	Candidate
	Iron Ore - 14 bn t (& Diamonds)	15.4mt in 2013	3.8 bn	12.1%	11.4%	20.3%	46 ('weak')	Compliant
	Diamonds - 39 mn carats (& Gold)	371,000 carats exported in 2012	2.2 bn	10-15%	11%	88%	Not rated	Suspended
	Oil - 339 mn bls	14mn bls crude, 20mn bls refined	24.6 bn	7%	17.8%	10%	Not rated	Compliant
	Phosphate - 70 mn t	Phosphate 1.1 mn t	3.8 bn	4.4%	19.1%	4.8%	Not rated	Compliant
	Coltan - 200 mn t	Nickel, Cobalt production to start in 2014	2.5 bn	3%	13%	Negligible	Not rated	Non-member
	Iron Ore - 2.2 bn t	Production to begin at Hajigak mine	20.5 bn	0.6%	11.1%	2.8%	33 ('failing')	Candidate
	Bauxite - 113 mn t	5 mn t Expected	822 mn	Negligible	11%	Negligible	Not rated	Non-member
	Gold - Unknown	Exploration stage	7.8 bn	Negligible	13%	Negligible	Not rated	Non-member
	Significant oil reserves expected	No production	Not available	Negligible	Not available	Negligible	Not rated	Non-member
	Some oil exploration	Exploration stage	595 mn	Negligible	14%	Negligible	Not rated	Non-member
	Timber - 88% of Land area	No production	1 bn	Not available	32%	Not available	Not rated	Candidate

Note: The above table outlines the main extractive industry activities of g7+ members and is not an exhaustive summary. The figures reflect data collected in the g7+ extractive industry country profiles and have been complimented with World Bank, IMF and US Geological Survey data. The Resource Governance index measures resource governance performance of resource rich states and is produced by the Revenue Watch Institute. Countries scoring 40 or under are considered to be 'failing' in this regard.

* Using the most recent World Bank data <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD>

Information note: The g7+ member countries of São Tomé and Príncipe and of Yemen were unable to be included in this version of this booklet, having joined the g7+ most recently. It is hoped their country profiles will be included in any future editions.

Emerging lessons, shared challenges and opportunities

Introduction

Many g7+ countries are endowed with a wealth of non-renewable natural resources, including minerals, petroleum and forests. The extraction, processing and sale of these resources have the potential to generate large-scale revenues, and could provide the means to address urgent development needs.

There are many positive trends and opportunities that can be capitalized on in coming years. Firstly, much of the resource wealth of g7+ countries remains unexplored, but is estimated to be sizeable and leaves ample room for growth. In the long term, the extractive industries in most g7+ countries are also expected to expand in response to rising demand for resources across the globe. Demand across the world for metals is projected to grow at around 5% per year through to 2030, even after accounting for uncertainties such as possible moderations in Chinese demand for minerals. Worldwide energy demand is also set to increase by more than one-third by 2035.¹

Secondly, members of the g7+ are also signatories of the New Deal, and have through their participation in the International Dialogue for Peacebuilding and Statebuilding signaled their desire to address governance issues and actively turn a corner in their journey towards resilience. The New Deal framework, as discussed below, focuses international actors and governments on joint efforts to improve government capacity and address the underlying drivers of fragility. As demonstrated by the country profiles, g7+ countries are already taking positive steps to improve the benefits accrued from having natural resource endowments, for example through amending laws, reviewing contracts and building institutional capacity and accountability.

Finally, there are signs that the international community, partly as a result of the financial crisis, is more willing than it has been previously to change the rules governing the international extractives industry, close tax and transfer pricing loopholes and support developing countries to get a better deal from extractives companies.

Yet while the extractive industries hold much promise, they also present multiple economic, social and environmental challenges that can prove harmful for fragile states. A positive correlation between growth in extractive industries and socio-economic development is by no means self-evident. For example, **Papua New Guinea** boasts a developed mining sector and significant petroleum and forest resources, but still has a 28% poverty rate (2010) and among the highest maternal mortality rates in the world.

Findings from the g7+ extractive industries country profiles reveal a series of shared challenges facing resource-rich fragile states, which are each grappling with how to best make use of their natural resource wealth. These challenges will be looked at closer in this introductory chapter. Shared challenges include:

- Poorly managed extractive industries in several g7+ countries have underpinned grievances, incentivized rebellion, and financed violence and conflict.
- Many g7+ governments lack the capacity and the political will to produce accurate and relevant data on natural resource endowments and subject these to public scrutiny.
- g7+ governments often occupy disadvantageous positions in negotiations over concessions, resulting in lost revenue and limited public benefit.
- The ability of fragile countries to prevent and mitigate the social, environmental and economic impacts of natural resource extraction is limited. This highlights

Note: This chapter has drawn sources and information from the g7+ extractive industry country profiles, interviews with independent consultants, as well as material from The African Capacity Building Foundation (2013) Africa Capacity Indicators; World Bank (2011) World Development Report; Africa Progress Panel (2013) Equity in Extractives; Paul Collier (2012) Small Countries Big Resources; Revenue Watch International website; Transparency International website; and the UNEP paper 'Background Paper on Lessons Learned: Natural Resources, Peacebuilding and Statebuilding in Africa' (2013).

1 For more trends and projections, see Africa Progress Panel (2013) and the OECD statistics website

the need for g7+ governments to better define acceptable risk, improve monitoring, and enact safeguarding measures.

- External parties, including foreign corporations, often reinforce mismanagement in the extractive industries through mispricing, tax evasion and other corrupt practices.

Addressing these shared challenges is an important part of implementing the 'New Deal for Engagement in Fragile States', the international framework for international support to conflict-affected states agreed in Busan, Korea in 2011. An important foundation of the New

Deal is the Peacebuilding and Statebuilding goals (PSGs). As illustrated in the box below, the PSGs can serve as a useful framework to think about the impact of the extractive industries on peacebuilding and statebuilding.

The objective of this chapter is to look more closely at some of these shared challenges, and to identify trends and explore common themes found in the g7+ extractive industries country profiles. It also aims to illustrate the constraints and opportunities faced by fragile countries in their efforts to use their extractive industries to reduce fragility and promote shared prosperity.

Linking Extractive Industries with the Five Peacebuilding and Statebuilding Goals (PSGs)

Legitimate Politics: Fostering inclusive political settlements and conflict resolution

In resource rich fragile states, sustainable power-sharing arrangements and inclusive political coalitions are often contingent upon the fair ownership of natural resource endowments and equitable distribution of the revenues they generate. Thus, in fragile contexts, decisions regarding extractive industry development have the potential to create or fuel grievances but also promote trust and cooperation between the state and society, and between contending communities or interest groups.

Security: Establishing and strengthening people's security

Weak or predatory security services in fragile contexts often play a destabilizing role and act as an impediment to the development of viable and sustainable extractive industries. Their involvement in extractives may finance (and thereby incentivize) violence, deter foreign direct investment, divert revenues through informal taxation and limit accountability and industry oversight. Research undertaken for the extractive industry country profiles found that in certain countries the army, police as well as non-state rebel and armed groups are often funded by, and occasionally dependent on, extractive industry revenues.

Justice: Addressing injustices and increasing access to justice mechanisms

Poorly regulated extractive industries in fragile countries increase the risk of creating or perpetuating horizontal inequalities- provoking identity based (ethnic, religious etc.) and socio-economic grievances between groups. Defending and securing land rights, and increasing access to dispute-resolution mechanisms, particularly for vulnerable groups such as displaced people and women, are vital measures to promote equality and fairness in the extractive industries.

Economic foundations: Generating employment and improving livelihoods

Extractive industries in fragile countries are often characterized by a distorted concentration of ownership, with economic elites and foreign interests at the helm. Such arrangements often impede the allocation of natural resource revenues for sustainable development. Many g7+ countries also find themselves economically dependent on particular extractive industries and face the twin challenge of developing and benefiting from these industries while simultaneously encouraging economic diversification to promote exports and attract investment.

Revenue and services: Managing revenues and improving service delivery

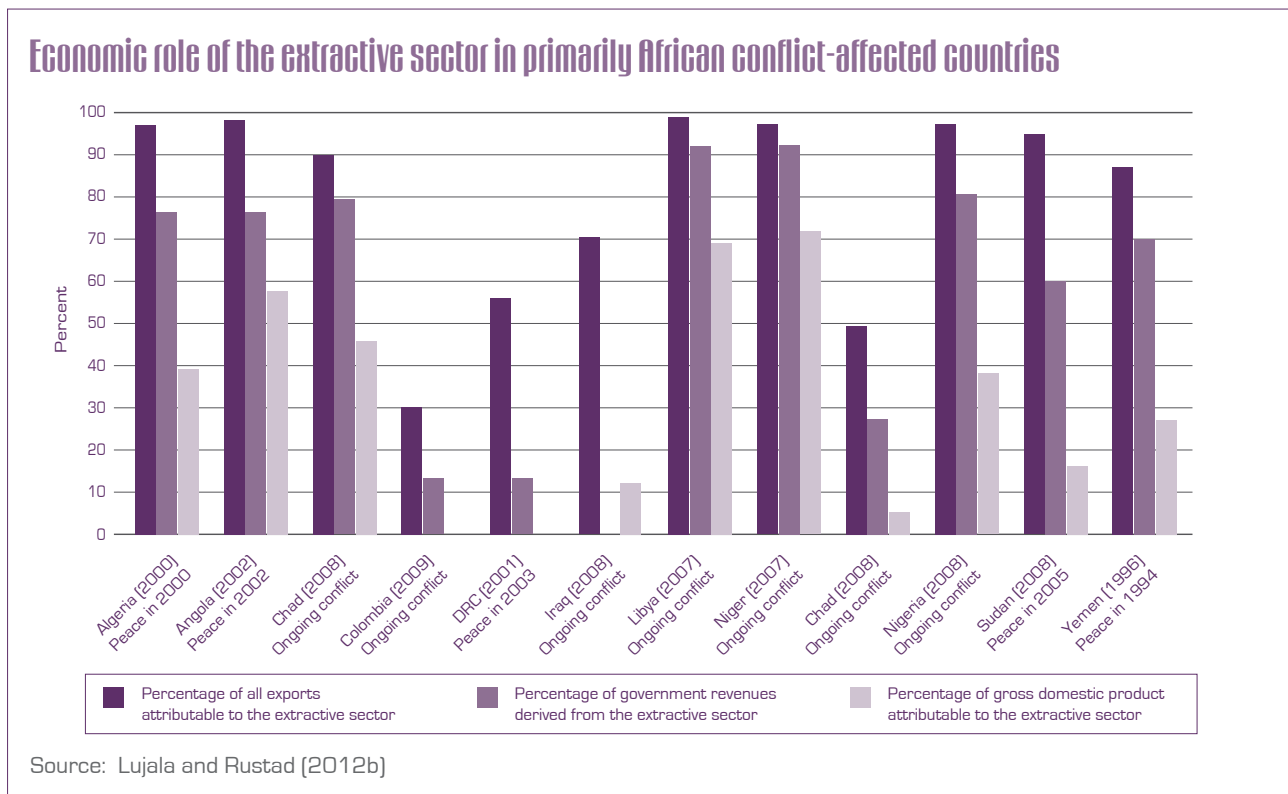
The fifth peace-and state-building goal concerns tax collection, public financial management and the delivery of essential services. Extractive industries can provide vital sources of government revenue that, if properly managed, can enable sustainable investments in infrastructure and vital public services. Effective public institutions are essential to the effective administration of natural resource concessions. In addition, addressing the undervaluation of resources, countering the illegal trade in extractives and the domestic capture of resource rents are equally critical to efforts needed to build citizen confidence in the state's ability to govern and reduce fragility.

De-linking conflict, fragility and the extractive industries

The primary challenge of fragile countries with substantial natural resource endowments is to sever the links that bind extractive industries with violent conflict. Between 1970 and 2008, more than one third of armed conflicts across the world were related to the extraction and sale of high value natural resources. These links are not always explicit, or acknowledged, but exist nonetheless. They can influence the outbreak and perpetuation of conflict, or contribute to factors that underpin and sustain conflict risk. Belligerents seeking access to natural resources and the economic benefit they generate have the capacity to distort the economy and cripple legitimate institutions. Unregulated competition for access to high value resources can also increase horizontal inequalities and create grievances among the individuals and communities who are perceived to 'lose out'.²

In several profiled g7+ countries, extractive industries have historically been linked to multiple forms of violent conflict. In the 1990's cross-border conflicts involving state actors and proxy forces operating across national borders were common. For example, **Liberia** and **Sierra Leone's** civil wars in the early 1990s were both interrelated and fuelled by the illegal diamond trade; resource-related grievance was a major driver of the conflict that divided the **Solomon Islands** between 1998 and 2003; and natural resources were used in **Afghanistan's** civil war and ensuing insurgency to finance militias and cross-border trafficking.

More recently, timber from eastern **Afghanistan** has come to occupy an important role in on-going instability.³ Oil wealth has boosted arms spending and exacerbated regional tensions in **Chad**, while access to petroleum resources played a key role in the 25-year inter-state war between **Sudan** and **South Sudan**. Exploitation of diamonds and ivory is helping to fund conflict in the **Central African Republic**. The charcoal trade in **Somalia**



2 Oil producing countries are between 1.5 to 2 times more likely to engage in armed conflict than countries without oil. Such conflicts last twice as long and result in twice as many combatant deaths. For more information on the links between conflict and extractives see African Capacity Building Foundation (2013)/ Lujala (2012), World Bank (2013) World Development Report, Natural Resource Charter (precepts 10-12)

3 To learn more see UN Environment Programme (2013) Natural Resource Management and Peacebuilding in Afghanistan

The Kimberley Process founded in 2002, brings together government, industry & civil society to ensure that ‘conflict diamonds’ do not enter private markets. To date seven g7+ countries have entered the scheme. While often lauded, it has been criticized for its limited enforcement capacity, especially in contexts where Governments have limited control over their territory [see KP website, Global Witness, 5 Dec 2011; UNEP 2013].

The Dodd-Frank Act, passed by the US Congress in 2010, is a much publicized piece of legislation, part of which [section 1504] allows for the identification of financial interests supporting armed groups in the DRC. Critics point out that while positive, it may impact livelihoods of artisanal miners [see Global Witness, Aug, 2011].

The Regional Initiative against the Illegal Exploitation of Natural Resources (RINR) is a regional certification scheme of the International Conference on the Great Lakes, and focuses on the regulation of cassiterite, coltan, wolframite and gold. It has faced some criticism for its slow progress [see Enough Project ‘Coming Clean’, Nov, 2013].

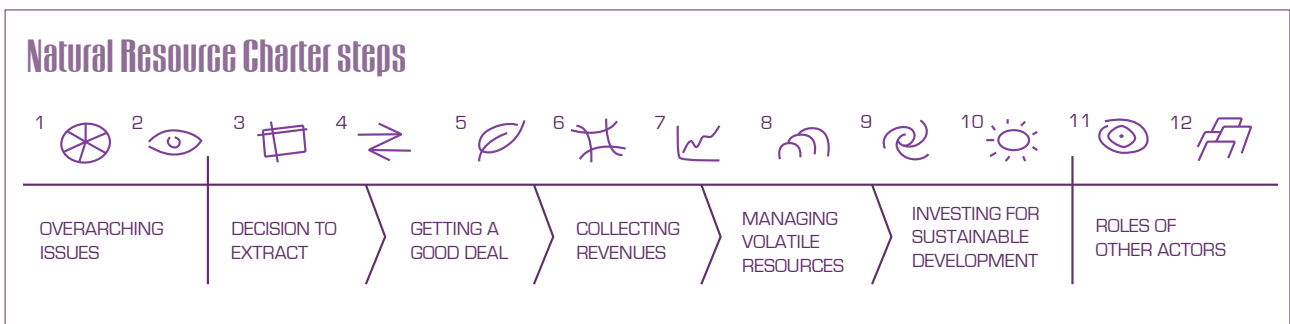
The Natural Resource Charter is a flagship program of the African Development Bank. It was launched in 2010 and sets out guidance on every step of the natural resource value chain, including: the decision to extract, how to get a good deal, challenges with collecting revenues and managing volatile resources, as well as longer-term investments for sustainable development. It is aimed mainly at governments, but is also relevant to citizens, natural resource companies and other external actors [for more information see (<http://naturalresourcecharter.org>)].

is thought to be a major source of revenue for Al Shabaab (UNEP 2014). The following graph shows the percentage of all exports, government revenues and gross domestic product attributable to the extractive industries in a range of conflict-affected countries:

Addressing the links between conflict and extractive industries is often a politically sensitive process. It requires tackling corruption within the state system, as well as obtaining commitments from unwilling parties, including governments, to stop certain forms of resource exploitation. It may also require offering difficult concessions to oppositional actors, such as economic benefits or political posts, to prevent a return to violence.⁴ One option to manage hostilities fuelled by natural resources is using wealth-sharing agreements. They were crucial components of the Comprehensive Peace Agreement as well as more recent deals between **South Sudan** and **Sudan**.

Regional and international initiatives designed to sever the links between conflict and natural resources, can also be effective. Regional initiatives are underway to improve governance of natural resource exploitation in the Great Lakes region [see information on the RINR in box below]. A number of international initiatives are also helping to address transparency and regulation challenges relating to natural resources [see box below]. Although these schemes are helping to achieve progress, they are, however, voluntary and have to date only had limited success in preventing conflict and addressing international demands for illegally sourced natural resources.

International institutions can also make a contribution towards addressing the conflict implications of natural resource exploitation. For example, the United Nations peacekeeping mission (UNMIL) to **Liberia** had an explicit mandate to support the transitional Government



4 See World Bank (2013) World Development Report, Africa Capacity Building Foundation (2013)

formed at the end of its civil war “in restoring proper administration of natural resources”. It pursued this mission by supporting institutional reform and capacity building across relevant sectors and providing security assistance. The UN Security Council also promoted the deployment of a panel of experts to monitor implementation of the natural resource sector reforms following the lifting of sanctions on **Liberia**’s timber and diamonds in 2006-7 (UNEP 2014).

The principles of the Natural Resource Charter – which is introduced in the box above - reflect experiences from successful natural resource management in other countries, and its ‘steps’ offer a useful framework for thinking about the natural resource value chain. As such, the remainder of this document has been structured around the key steps of the charter.

Decision to extract: issues with data and transparency

The dynamics of fragility and the institutional constraints they entail are vital considerations for fragile countries faced with the decision of whether or not to extract national resources. An important factor underpinning good decision-making is the availability of accurate and relevant information. Without accurate geological data and the capacity to produce estimates on deposits or production, it is difficult to weigh the costs and benefits of extraction, and to decide what to extract and at what price concessions should be granted. Information asymmetries between the data available to governments and that held by private interests can also mean governments lose out and face disadvantages in negotiations with often-powerful multinational companies.

Statistical weakness is part of a broader trend in African countries with limited capacity to gather, manage & disseminate data. This is often due to inadequate funding, fragmented data collection and economic and political incentives to present certain statistics over others. The problem concerns donors too, who often conduct statistical activities without ensuring consistency with the national statistical agencies they support. (see Shanta Devarajan’s World Bank [blog](#) ‘Africa’s Statistical Tragedy’)

Some g7+ countries have purposefully made the decision to delay or postpone resource exploitation until such a time as national data and institutions are strong enough to ensure maximum benefit can be derived. For example, **Timor Leste** has explicitly decided not to exploit the country’s many mineral deposits for the time being. Such decisions need to be carefully communicated to the public, which may be impatient for more immediate action.

Successful natural resource management, according to the Natural Resource Charter (2nd precept), also requires government accountability to an informed public. Advancing accountability in natural resource governance and promoting data transparency can address harmful impacts associated with secrecy such as the undervaluation of resources. It can also ensure public confidence in the integrity of extractive industry projects.⁵

Poor or non-existent data is a particularly acute problem in fragile states. This was demonstrated even in the drafting process for this booklet; throughout the research process, national as well as subnational data on natural resources was frequently limited, outdated or inconsistent. This was often a result of weak technical capacity at national statistical offices and ministries, as well failures to share data between government agencies. In some countries where transparency frameworks were in place, the public still lacked awareness of developments in the extractive industries.

However, efforts are ongoing to address data gaps in various g7+ countries. For example, **Liberia** has made notable progress in advancing information transparency. It was the first country in West Africa to pass a comprehensive freedom of information act and the first African country to reach compliance with the Extractive Industries Transparency Initiative (EITI). These efforts have contributed to its rise in Transparency International’s Corruption Perception Index from 137th place (out of 158) in 2005 to 75th place (out of 176) in 2012⁶. Other countries such as Timor-Leste have also made important strides in ensuring openness and access to information. Today Timorese government institutions publish up-to-date information on oil production, prices, revenues and investments, and disclose key decision making processes.

5 For more information on transparency in the extractive industries see Paul Collier (2012) – “Small Countries Big Resources”, presented at the g7+ Ministerial Retreat in Haiti, November 2012 and the Transparency International website.

6 For more information on the Corruption Perceptions Index, please visit <http://www.transparency.org/research/cpi/>

The Extractive Industries Transparency Initiative (EITI) is hailed as a catalyst for transparency reform. The voluntary scheme requires reporting on all extractive industry revenues, thereby forcing secret deal making out into the open. Its impact is evident in how all profiled g7+ countries stated their desire to achieve EITI compliance. Critics have highlighted gaps relating to its reporting requirements and its focus on national (not project) level reporting, factors that can potentially overlook corruption. But in May 2013, EITI approved a revised standard of performance requiring all member countries to release more detailed data, including on production volumes, license allocations, and transfers from central to local governments. [See EITI website]

The Liberian and Timorese examples demonstrate how appropriate laws, policies and institutional practice can promote transparency in the extractive industries, and ensure that good decisions are made consistently over time, beyond presidential mandates and changes in government. However, enacting laws and policies are not always enough to facilitate change. Even in g7+ countries with comprehensive legislative frameworks, implementation gaps have been frequent. To address these challenges and speed up the often-slow process of improving transparency, governments can work to strengthen their capacity for enforcement, clarify what information can be disclosed, and ensure adequate funding for relevant projects. This process can also benefit from international expertise and regulatory schemes such as the Extractive Industries Transparency Initiative.⁷

Getting a good deal and collecting revenues

Extractive industry concession and licensing agreements have the potential to bring great economic benefits to the host government and its citizens, and secure revenues at all stages of production. But governments also need to attract the private investments required to create these benefits. The challenge of attracting external investment is all the more difficult in fragile states, which can be seen as carrying a higher degree of risk for investors and which, in cases such as **Somalia**,

can face additional challenges in securing the state legitimacy that is required to negotiate and agree exploration or extraction licenses. Resource companies consequently tend to have limited confidence in the legal frameworks and tax regimes of g7+ countries. They also lack assurance of the ability of these governments to provide the opportunities needed to realize acceptable returns on investment.⁸ Historically, this dilemma has incentivized many g7+ countries to attract investment by signing overly generous contracts, waiving royalties and granting tax exemptions. Such arrangements tend to result in limited and inadequate collection of revenues and public benefit, and can in turn fuel grievances.

Until 2010 the average royalty payment on gold exports in sub-Saharan Africa was 3%, one of the lowest rates in the world. Ghana and Tanzania are among the countries that have adopted new mining sector reforms based on the African Development Bank's recommendation of 5% royalty rates.⁹ But in some g7+ countries, such as **Sierra Leone**, foreign resource extraction companies have been known to negotiate very low royalty rates and concessions agreements. Of the five major mining companies operating in **Sierra Leone**, only one paid corporation tax in 2011.¹⁰ **Sierra Leone's** Government is currently exploring the possibility of renegotiating some of its biggest natural resource contracts (UNEP 2014).

Countries like Botswana have led the way in maximizing the benefits of revenue flows from its natural resources. Largely as a result of its progressive natural resource policies, the southern African country has today reached upper-middle income status and is the second highest ranked Sub-Saharan African country in the Human Development Index.

To address this issue, many g7+ governments have moved to re-negotiate past contracts that are deemed unfair. In 2006 **Liberia** decided to review 105 contracts signed between 2003 and 2006. This process resulted in 36 contracts being recommended for cancellation and 14 for renegotiation. Similarly, in the **Democratic Republic of Congo** an inter-ministerial commission reviewed 60 contracts signed between 1996 and 2006. It found none to be acceptable, and recommended 39

⁷ To learn about the EITI and its national chapters see <http://eiti.org/countries>

⁸ See Natural Resource Charter (precept 3)

⁹ See AFDB (2012) Royalty Rates in African Mining Revisited

¹⁰ See Africa Progress Panel (2013) Equity in Extractives

contracts for renegotiation and 22 for cancellation. Most recently, **Guinea** has announced it will review all mining permits in the country, and will void those that do not meet certain standards.¹¹

International experts can play an important role in supporting countries to negotiate fair and beneficial natural resource exploitation deals. Sao Tome and Principe approached a number of international partners – including the World Bank, Earth Institute and International Alert - to support their capacity to negotiate and manage oil concessions. This support helped them to attract higher bids for oil concessions and to design and adopt a new Oil Law (UNEP 2014).

Improving (both old and new) contractual terms can help g7+ countries to improve revenue collection. In order to increase the credibility and capacity of resource rich governments to secure good deals the Natural Resource Charter (precept 4) also suggests the following:

- Set the terms of agreements in laws or regulations, where possible. This can enhance stability for the investor and reduce uncertainty for the government, thereby increasing the possibility of higher returns.
- Make as much information as possible public before contracts are awarded. This increases the potential to attract investors and can also improve public scrutiny, thereby increasing the legitimacy of the prospective deal.
- Reduce the informational disadvantage of governments by encouraging competitive bidding processes. Auctions and other open bidding mechanisms can reduce the need for governments to have comprehensive knowledge of the absolute value of their resources.

Revenues are often further diminished due to various rent-seeking activities, and these need to be tackled in concert with poor contracting in order to maximize public benefit from resource extraction. The disappearance of revenues is made possible by obscure financial management practices, limited oversight and weak auditing procedures of State Owned Companies (SOC's). For example, a significant majority of both diamonds exported from the **Central African Republic** and timber from the **Solomon Islands** are reported to

be illegal, while in the **Democratic Republic of Congo** the parastatal company Gecamines has been accused of extracting rents and benefiting political and economic elites at all levels of government by undervaluing assets and operating in an opaque manner.¹²

Competitive bidding processes can reduce secrecy in the award of contracts, and limits the opportunities for mispricing, tax avoidance and other forms of corruption, which have resulted in huge amounts of lost revenue in most profiled g7+ countries.

Managing volatile resources: 'Spend or save' decisions, and economic diversification

A common challenge faced by all countries with sizeable extractive industries is how to manage the revenues they generate. At the most basic level, this requires decisions on the degree to which revenue should be spent and invested today, or saved for the future, and there is little consensus on the most suitable courses of action in fragile contexts. Such decisions hinge on whether the accumulation of liquidity is a good means of withstanding 'boom-bust' cycles (stemming from volatility in natural resource revenues and fluctuating commodity prices) or if saving in the context of unstable political environments

The Timor-Leste Petroleum Fund- Opportunities and Challenges:

The governance structure of the Timor-Leste Petroleum Fund is defined by strict reporting requirements, a separation of duties and transparency, which allows it to pursue financial returns with due regard for risks. With its capital managed by international fund managers, it saw a near 4% net investment return in 2012. Among the political economy challenges facing Timor-Leste today is managing the level of transfers made from the Petroleum Fund to the Government. Government spending rose 587% between 2007 and 2012. The Government aims to diversify the heavily petroleum dependent economy by spending in the infrastructure, agriculture, education and health sectors, and meeting critical development goals.

(See ODI (2013) The T-L Petroleum Fund, and The T-L Petroleum Fund 2012 Annual Report)

11 See <http://www.bdlive.co.za/africa/africanbusiness/2014/05/05/guinea-defends-mining-permits-review>

12 Gecamines serves as the liaison between the government and mining companies, and has no independent production capacity. To learn more about concessions dealing in the DRC, please see Africa Progress Panel (2013) Equity in Extractives

will merely amplify shocks. Another challenge is to balance the urgency of a country's development needs against its often limited capacity to invest in long-term development objectives, as well as the expected value and longevity of natural resource reserves.¹³ Fragile states often have huge infrastructure gaps and hence investment can generate larger than usual returns, suggesting higher levels of expenditure may be wise as a country recovers from conflict. However weak institutions and governance can seriously compromise the quality of programme selection and implementation.

An increasingly common way of managing large-scale resource revenues in resource-rich countries is to create special resource funds. They can, where properly governed, improve macroeconomic stabilization and smooth government spending when resource revenues are volatile and uncertain, and provide a means to earmark funds or save revenues for future generations. Many g7+ countries with moderate extractive industry revenues, such as **Côte d'Ivoire**, **Papua New Guinea** and **Guinea** have yet to create any resource funds. In contrast, Timor-Leste has, as a result of effective management, benefited from its much-praised Petroleum Fund. The fund is designed to benefit both current and future generations and aims to offset some of the risks associated with Timor-Leste's high resource dependency, as 90% of government finances in 2011 were made up of petroleum revenues.

For countries dependent on resource income to fund the national budget, this can cause acute difficulties and instability. Resources are highly commoditized, meaning prices can change dramatically over time. Newly independent **South Sudan**, having recently emerged from decades of war, faces such a challenge. Nearly all public investment in infrastructure, education and poverty reduction is financed by petroleum, which makes up 97% of the current budget. But as oil reserves are expected to reduce steadily in coming years, the government faces a twin challenge: how to further invest in its petroleum sector while also making urgent efforts to expand its agriculture, and forestry sectors. Similarly, the **Solomon Islands** is heavily dependent on its forestry sector and is exploring the prospects of developing a viable mining industry.

Using revenues as a means to promote economic diversification, particularly in highly resource-dependent countries, is one way to mitigate the risks associated with highly resource-dependent budgets. Diversification is premised on the establishment of stronger links between the dominant extractives sectors and the rest of the economy, and using income from the extractives sector to support rather than substitute other parts of the economy. The government can play a useful role by helping create the investment climate and public goods that are conducive to private investment.¹⁴ Diversification policies should be informed by the strength of the extractive industries in comparison to other sectors, and the capacity to invest in value addition. In g7+ countries, immediate investments to add value to the extractive industries may be beneficial but should not be seen as a panacea. Premature expansion of particular industries runs the risk of creating dependency on the exports of one sector, causing Dutch disease wherein an exchange rate overvaluation reduces the competitiveness of other sectors.¹⁵ Spending on education or infrastructure is, in contrast, widely seen as a largely non-contentious way of spending resource windfalls.

Investing for sustainable development: managing the wider impacts of resource exploitation

Yet another shared challenge emerging from the extractive industry profiles relates to managing the wider social, economic and environmental impacts of extractive industries in fragile countries. While seeking to benefit from natural resource extraction, the very real possibility of detrimental economic, environmental and social impacts must be taken into account. Conflict can arise from the fact that while the benefits of natural resource exploitation generally accrue at the national level, the costs of this exploitation often accrue locally, within specific communities. This is all the more true in conflict-affected countries, where the differential impact of resource extraction on different regions and groups within a society can compound social grievances. For example, 'land grabs' by mining concessions in **Haiti** have caused land use challenges for local communities.

13 See IMF (2012) Macroeconomic Policy Frameworks for Resource-Rich Developing Countries

14 See Natural Resource Charter (precept 7, 10), Revenue Watch website and the Africa Capacity Building Foundation (2013)

15 In resource dependent countries overall, value addition accounts only for 11% of GDP and has undergone a downward trend in the past few decades. For more information see Revenue Watch website and the Africa Capacity Building Foundation (2013)

Such risks should, according to the Natural Resource Charter (5th precept), be identified, accounted for, mitigated or compensated for at all stages of the project cycle. In doing so, the following are appropriate principles on which to base decisions:

- Identify social and environmental hazards in an open and transparent manner.
- Publicly define what risks are acceptable and set standards based on the actual needs of affected communities and ecosystems.
- Clearly define who is to bear financial responsibilities¹⁶, and determine the government's oversight role to ensure social and environmental standards are upheld.

In several profiled g7+ countries, for example **South Sudan**, communities affected by oil and mining projects were found to be marginalized and faced significant social, economic and political pressures. Oftentimes, projects were approved without the knowledge or prior consent of communities, local economic benefit was limited and employment opportunities were scarce. Such conditions have the potential to underpin grievances, instigate disputes and drive violent conflicts such as those currently occurring in the **Central African Republic** and **South Sudan**.¹⁷ In other profiled countries there was evidence of environmental neglect, with forest, mining and petroleum projects harming lives and livelihoods. For example, in the **Solomon Islands**, logging, which has sustained its economy for decades, has been unsustainable and caused a rapid decline in natural forest cover and significant environmental degradation.

To prevent or mitigate the adverse consequences of natural resource extraction once the decision to

In Latin America the value of mining tripled from \$90 billion in 2001 to \$306 billion in 2011. But this mining boom has proved controversial, with 191 mining related conflicts and disputes involving 284 communities raging as of July 2013. [See Lyuba Zarska, 2013, World Politics Review]

extract has been made, the Natural Resource Charter (precept 5) suggests investing in environmental and social monitoring throughout a project's lifecycle. Such

monitoring efforts should always be transparent and subject to public scrutiny. Mitigating the detrimental impacts of extractive industries also requires allocating resource revenues in a way that improves the country's ability to invest in social and environmental protection.

By 'investing in investing', and building a country's capacity to make viable investments, g7+ countries can also ensure that the depletion of natural assets contributes to sustainable growth in the long term. This can help strengthen institutions to more effectively deliver services to affected populations and uphold socially responsible policies.

Yet another advisable measure is to actively involve affected communities and promote stakeholder consultations. Seeking public buy-in and encouraging a participatory process when enacting policies and laws can help reassure communities of their influence in the decision making process and rights to compensation. The social and economic costs of natural resource extraction, including unintended spillover effects, often disproportionately impact communities that are based close to the area of extraction. In instances where communities have been affected, it is advisable for governments and extractive companies to strike a reasonable balance between the benefits allocated to those directly impacted and other communities across the country to prevent real or perceived unequal treatment. As an example of good practice, **South Sudan's** new Petroleum Revenue Management Bill stipulates that oil-producing states are to receive 2%, while local communities are to receive 3% of net oil revenues. The **Democratic Republic of Congo's** 2006 constitution splits revenues 40%/60% between central and provincial levels, although there are questions about what volume of funding reaches the community level due to corruption and political manipulation (UNEP 2014).

Role of other actors: Improving international involvement in extractive industries

A final impediment to the development of viable extractive industries in g7+ countries is the often-detrimental role played by both foreign companies and governments. Mo Ibrahim, the founder of the Ibrahim

16 Paul Collier recommends that all costs be borne by extracting companies. See Collier (2012) Small Countries Big Resources

17 The detrimental impacts of extractive industries are analyzed at length in the African Capacity Building Foundation (2013)

Offshore companies not mining in the DRC

British Member of Parliament Eric Joyce recently released a series of [documents](#) showing the acquisition of Congolese mining assets by 9 of at least 45 'shell' companies incorporated in the British Virgin Islands. These companies had no identifiable experience in the mining sector, and obtained their shares at below market value before re-selling them to multinational firms at huge profits.

Index on African Governance, has noted that the illicit transfer of funds out of Africa is at least double the amount of aid that Africa receives every year, while Paul Collier maintains that money laundering through shell companies remains "ridiculously easy."¹⁸ All actors within the international community, including International Financial Institutions, play an important role in reversing these trends and enabling resource rich countries to realize their potential. This involves, according to the Natural Resource Charter (precept 11), advocating, supporting, monitoring and enforcing international best practice.

Across many of the profiled g7+ countries, foreign governments have frequently failed to demand transparency and exercise oversight over companies within their own jurisdictions. For example, the use of offshore tax havens remains a common practice. It has facilitated secret deal making, and is an important

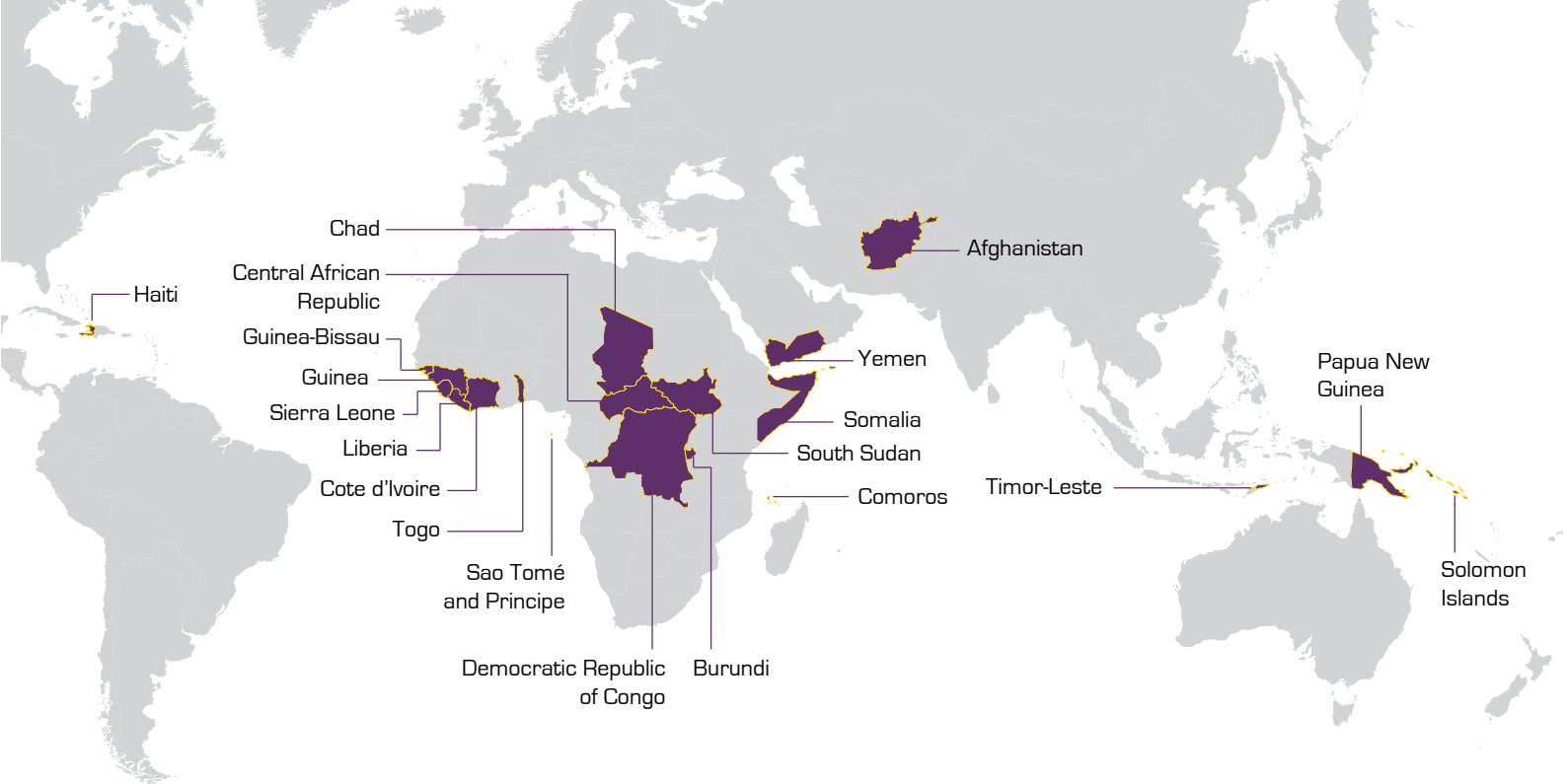
reason that lies behind the unmet revenue potential of many g7+ countries. The sanctioning of corrupt practices by foreign governments in the extractive industries is a serious challenge facing g7+ countries. As recently as 2000 many developed nations allowed, if not encouraged their companies to take tax deductions for bribes paid to officials of other governments. Today, some improvements have been made but according to Transparency International's evaluation of the OECD anti-bribery convention, only 7 of the 37 countries party to the convention are 'actively enforcing' it.¹⁹

Extractive industry companies and their home country governments have a crucial role to play in enforcing international best practice across as much of the value chain as possible, and should be encouraged to go beyond minimum legal requirements.²⁰ Addressing tax evasion, tax avoidance, and increasing global financial transparency were among the main themes of the 2013 G8 summit in the United Kingdom, and is likely to feature strongly in 2014's G20 meeting in Brisbane. It would be pertinent for all g7+ countries to encourage their international partners and counterparts to live up to the promises made at the G8. Tackling the incentive structures that allow for money laundering of bribes through shell companies would go a long way in helping g7+ countries benefit from their natural resource wealth.

18 See <http://skollworldforum.org/2013/07/15/how-and-why-africa-should-solve-its-own-problems/>, and Paul Collier (2012) Small Countries Big Resources

19 See www.transparency.org/whatwedo/pub/exporting_corruption_progress_report_2013_assessing_enforcement_of_the_oecd

20 See Natural Resource Charter precepts 11 and 12



Country Profiles



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Afghanistan

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: oil, coal, timber, gemstones

Main exploration: iron ore, copper, oil

Extractive industries as share of GDP: 0.6% in 2012, (est. potential for 35% by 2024)

Extractive industries as share of revenue: less than \$50 million (in year ending March 2012)

Summary

Afghanistan has extensive mineral deposits of copper, coal, lead, zinc, iron ore, gold, silver uranium and gemstones. It also has forest resources and the potential for significant oil and gas production. But due to conflict, political instability and inadequate infrastructure the extractive industries are generally under-developed. Informal extraction of natural resources in Afghanistan remains significant, and has in the past provided sources of illicit revenue that has supported war economies and sustained corruption. But investor interest in exploration and development has been on the rise in recent years. And the government has achieved some progress in managing large-scale extraction of mineral resources by international firms.

Overview of key sectors

Resources	Reserves	Status	Key companies
Iron ore	2.26 billion tonnes (1.8 billion tonnes estimated at Hajigak)	Contracts negotiated for Hajigak mine, signed after Minerals Law enactment	Steel Authority of India, Kilo Gold Mines
Copper	60 million tonnes (11.3 million tonnes estimated in Aynak)	Contract signed to develop Aynak (2008), development on hold pending archaeological work	Metallurgical Corp. of China
Oil	1596 million barrels (mean) in north Afghanistan	Production 1,950 barrels/ day in 2012, further exploration underway	China National Petroleum Corp.
Natural Gas	15,7 billion cubic feet (mean) Natural Gas, 562 million barrels (mean) Liquid Natural Gas	Production 1,950 barrels per day in 2012, further exploration underway	China National Petroleum Corp.
Forestry	1.35million hectares	Widespread illegal logging, smuggling	N/A

Source: US Geological Survey (2012), CIA Factbook website, Food and Agriculture Organization (2010)

Mining

Afghanistan hosts a rich variety of subsurface resources. These include precious and semi-precious gemstones (e.g. emeralds, rubies), uranium, common metals (e.g. copper, lead, chromite and iron), rare-earth metals (e.g. lithium), precious metals (e.g. gold and silver) as well as coal (US Geological Survey, 2011). Some state-owned extractive companies conduct limited, mainly coal mining operations, while there are approximately 200 smaller mines in operation. Currently there are no industrial-scale large mining projects in operation (The Economist, 2006).

Although current production is limited, it is widely believed that Afghanistan has an excellent discovery potential for minerals and hydrocarbons. Following extensive geological mapping in 2010, the U.S. Geological Survey announced large discoveries of iron, copper, and lithium. The estimated values of these resource discoveries range from \$1 trillion to \$3 trillion and could, if managed effectively, play a significant role in Afghanistan's future development (Revenue Watch website, UN Environment Programme, 2013). Recognizing this potential, the government has made the development of the mining sector a strategic priority. The most important agreement signed to date was with the Metallurgical Corporation of China to develop the Aynak copper mine. Once in production, Aynak is projected to generate an estimated \$300 million in tax and non-tax revenues, and create several thousand jobs. Negotiations are currently underway for four other major contracts, and the Ministry of Mines hopes to award exploration licenses by the end of 2013 to the following preferred bidders (Government of Afghanistan officials- interview):

- Hajigak Iron Ore – An consortium led by Steel Authority of India and the Kilo Gold Mines
- Badakhshan gold – Turkish-Afghan Mining Company (TAMC)
- Zarkashan copper/gold – Sterling Mining/ Belhasa International Co.
- Balkhab copper – Afghan Gold and Minerals Company
- Shaida copper mine – Silk Road Mining & Development

In the coal sector, the state owned Northern Coal Enterprise is a major contributor to the Ministry of Mines and Petroleum's revenue. It produced approximately 423,000 tonnes (161 million cubic metres) of coal in the year ending March 2012, with reported earnings

of \$42.9 million; an 88% increase from the prior year. Coal is produced in Laghman, Babyon and Samangan provinces and approximately 60% of output is exported, primarily to Pakistan (Central Statistics Organization, 2011-12, Pajhwok, 2012).

Petroleum

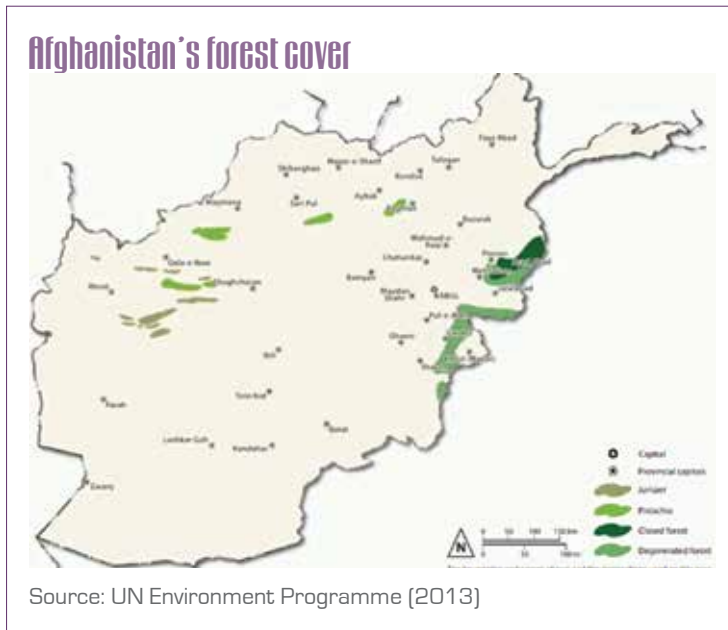
All crude oil and natural gas reserves, and much of the known petroleum resource potential is located in northern Afghanistan. While undiscovered petroleum reserves range between 391 and 3559 million barrels (1596 mean), economically recoverable reserves may be much smaller (US Geological Survey, 2006). In 2012 Afghanistan produced 1,950 barrels per day, none of which are currently being exported (CIA factbook website).

Oil exploration and production-sharing rights were granted in 2011 to the state-owned China National Petroleum Corporation (CNPC) to develop oil blocks in the provinces of Sar-e-Pul and Faryab (Asia Foundation, 2012). The first large-scale extractive project started limited operations in October 2012 at Amu Darya oil fields, which is estimated to contain 1.9 billion barrels worth of reserves. The venture between CNPC and its Afghan partner Watan Oil and Gas is today temporarily suspended pending a transit agreement with the Uzbek government (Reuters, 2013). Another major project is the Turkmenistan- Afghanistan- Pakistan- India pipeline (TAPI), which aims to connect Afghan gas to regional gas networks. It is supported by the Asian Development Bank, which expects it to reach completion by 2017 (Asian Development Bank, 2013).

Forestry

Forests cover 2% of Afghanistan's landmass. The east of the country has mixed oak and coniferous forests, while an open woodland belt (producing pistachios) stretches across the centre and north. Irrigated agro-forests (mainly poplar) exist in valleys throughout the country where water is available. These forests can, in contrast to oak and coniferous forests, be cut in a sustainable manner (Independent consultant- interview).

The UN Environment Program estimates that over the past three decades, Afghanistan's forest cover has decreased by about 50%. Illegal trade in high-value timber, particularly from the eastern provinces, is widespread and has created a lucrative shadow economy. Timber from eastern Afghanistan has become



some scrutiny, other regulations may provide additional investor incentives (Independent consultant- interview).

The government's vision for the mining sector is set out in the Ministry of Mines and Petroleum's Five-year plan and the National Extractive Industries Excellence Programme. The Ministry has also developed a set of policies, which were approved by the cabinet in 2012, and include national mining policies, commodity specific and supporting policies (e.g. environmental protection, access to geological data) (Ministry of Mines and Petroleum website). In addition, the government is developing an Extractive Industries Development Framework (EIDF), which will offer a vision for the sector in accordance with commitments made under

the [Tokyo Mutual Accountability Framework \(2013\)](#).

a classic 'conflict resource' and plays an important role in on-going instability in these areas (UN Environment Programme, 2013).

This illegal trade is fuelled by strong international demand for Afghan timber (Government of Afghanistan officials-interview). Another driver of deforestation is the domestic demand for fuel-wood in towns and cities. Despite the current absence of any formal timber industry, it is estimated that Afghanistan's forest resources could support a sustainable commercial logging industry worth between US\$40 and US\$80 million per year. The value of standing cedar in the province of Kunar alone is estimated at US\$828 million (UN Environment Programme, 2013).

Other initiatives include the World Bank supported [Second Sustainable Development of Natural Resources Project](#). Lasting from 2011 to 2016 and valued at US\$52 million dollars, this project is expected to increase capacity at the Ministry of Mines and the National Environmental Protection Agency (NEPA). It will also help implement requirements specified in the Minerals Law and Mining Regulations (World Bank, 2013).

Legal, Institutional and Policy Framework

Mining

[Afghanistan's Ministry of Mines](#) is responsible for the overall management of the mining sector, and the Minerals Law of 2009 and Mining Regulations determine ownership and control over mineral deposits. A new Minerals Law was approved by the Cabinet in May 2013 and is currently being considered by Parliament (Reuters, 2013). The proposed law seeks to improve social and environmental protection and safeguards, and it is likely to be enacted by late 2013. And while the strength of its security of tender²¹ has come under

Petroleum

The two official bodies in charge of the hydrocarbon sector are the Inter-Ministerial Commission and the Ministry of Mines and Petroleum. In February 2009 a [Hydrocarbons Law](#) was passed, designed to regulate the exploitation, utilization, commercialization, and ownership of oil and natural gas in Afghanistan. The Ministry of Mines and Petroleum's Legal Services Directorate is currently amending the law and associated regulations, including for contracts, licensing and oversight. Another law to manage the down-stream activities of the sector has also been drafted by the Ministry of Commerce and Industries and is currently pending approval (Government of Afghanistan officials- interview).

Logging

The timber industry is guided by the Forest Management Law from 2011, and is managed in accordance with

21 These are rules that allow companies exploring for minerals to automatically secure exploitation rights once a mine is found to be economically viable

a National Forest Policy Implementation Programme from 2006. The law sets out a framework for forest management that includes provisions for community management of forests, but its implementation has progressed slowly (UN Environment Programme, 2013). The [Ministry of Agriculture, Irrigation and Livestock](#) is the institution responsible for the development of responsible forestry practice and management.

Fiscal framework

Payments from resource companies are collected by the Ministry of Finance before they are transferred to the Treasury. In the year ending March 2011, the Afghan government recorded \$23.4 million dollars in revenue from the extractives sector. This was a 200% increase from the previous year, mainly due to increased coal production (Extractive Industries Transparency Initiative, 2012). The World Bank estimates that revenue from minerals and hydrocarbons could reach an average of US\$900 million a year by 2031 (World Bank, 2012).

The Ministry of Mines and Petroleum is in the process of building a new fiscal regime for extractive industries through a working group, consisting of its own officials and counterparts in the Ministry of Finance. And while there is currently no stabilization fund in place, the government is in the process of developing an Extractive Industries Revenue Management Fund. No conclusions have yet been reached on the percentage of extractive industry revenues that should be saved in the fund, while Afghanistan remains dependent on international aid (Government of Afghanistan officials- interview).

Transparency and accountability

The government has stated its commitment to manage extractive industries openly, transparently and in line with international best practice. An independent licensing process is in place and a recent presidential decree requires all contracts signed in the past three years to be made publically available. The [Ministry of Mines and Petroleum](#) is also required to compile statistics, but does not publish periodical reports. Well over 200 contracts have so far been published but not yet the contract relating to the Aynak copper project, which reportedly includes investments in other sectors such as transport (Ministry of Mines and Petroleum website, independent consultant- interview).

The process of building a transparent natural resource sector remains a work in progress. Relevant laws and regulations are published but there is no freedom of information law. Afghanistan receives continuously low scores on international indices on corruption control, democracy, accountability and the rule of law (Revenue Watch website).

The country is not yet EITI-complaint but did become a candidate country in 2010. It has since published two reconciliation reports and one validation report. In April 2013 EITI's Board agreed that Afghanistan had made meaningful progress in promoting transparency and implementing the EITI, and will retain its candidate status for 18 months. During this time Afghanistan will, with the assistance of an audit firm, prepare a second validation report to demonstrate compliance with EITI rules (Extractive Industries Transparency Initiative website, Government of Afghanistan officials- interview).

Afghan civil society organizations are also becoming more vocal on issues that concern the management of natural resources. The [Civil Society Natural Resources Monitoring Network](#) is an example of an active civil society coalition promoting sustainability and accountability in the extractive industries. It was formed in early 2013 and is made up of more than 20 organizations (Civil Society Natural Resources Monitoring Network, 2013).

Key issues

- **Afghanistan's large-scale mining projects hold much promise.** Today, they are not seen as a particular source of conflict, but natural resources were commonly used in Afghanistan's civil war and subsequent insurgency to finance militias and cross-border trafficking. The development of fully regulated and taxed mining industries has, however, been hampered by persistent insecurity and power struggles at the local level. Moreover, the impact of the forthcoming elections and the winding down of US and NATO forces in 2014 on the extractive industries remain uncertain.
- **At the regional level, the awarding of major mining contracts to regional powers such as China and India may on one hand affect enhance regional rivalries among China, India and Pakistan, and act as a source of regional destabilization that plays out in Afghanistan. On the other hand, Afghanistan's role as a regional transit corridor that facilitates gas**

and hydropower trade from Central Asia to South Asia may create positive economic opportunities that mitigate conflict, as well as creating access to cheap energy for Afghanistan and producing global environmental benefits by reducing coal consumption in South Asia.

- **Addressing social and environmental impacts of natural resource extraction has until recently been a low priority** in Afghanistan. Legal and institutional frameworks have now been put in place, and include the National Environmental Protection Agency (NEPA), which is the agency that signs off on the Environment and Social Impact Assessments (ESIA), required to start mining. Efforts are underway to improve its capacity, as well as the coordination between the Ministry of Mines and Petroleum and NEPA.
- **The government is making efforts to address fiscal and legal impediments to investment** in the extractives sector by developing investment-friendly legal and financial frameworks, based on international best practices. The challenges of implementing relevant laws and regulations are significant, and compounded by a perceived lack of local ownership of the country's natural resources, and resistance from local power holders and vested interests.
- **Social and economic infrastructure is scarce and inadequate** as a consequence of decades of war and civil strife. Lacking infrastructure, particularly outside of major urban areas, remains a major concern and is a serious impediment to the development of profitable extractive industries. Building infrastructure to expand the mining sector is particularly challenging, as Afghanistan is a landlocked country. Beyond limiting the potential of the extractive industries, lacking and inadequate infrastructure also brings serious environmental and social consequences for local populations.
- **Building and absorbing institutional capacity remains a significant challenge in Afghanistan.** Capacity constraints apply to geological surveying, building relevant expertise, and enhancing negotiating power vis-à-vis multinational companies. These limitations impact the ability to harness and manage resource revenues; a problem that may be augmented following the withdrawal of International Forces in 2014, and the reduction in economic activity and aid flows this will cause.

Key resources

[Afghanistan Extractive Industries Transparency Initiative \(AEITI\)](#) – The national chapter of EITI

[Afghanistan Mineral Tenders](#) – An overview of current mineral tenders and infrastructure development

[United Nations Environment Programme \(2013\) Natural Resource Management and Peacebuilding](#) – On the relationship between natural resource management and conflict prevention in Afghanistan

[Afghanistan Ministry of Mines and Petroleum](#) – Official website containing information on the mining and petroleum sectors

Annex: sources

Key natural resources / extractive activity	World Bank (2013) Second Sustainable Development of Natural Resources Project Asia Foundation (2012) The future of Afghanistan's resources UN Environment Programme (2013) Natural Resource Management and Peacebuilding CIA World Factbook website - Afghanistan Central Statistics Organization (2011-12) Industries Development
Mining	Tokyo Mutual Accountability Framework (2013) Senior Officials Meeting Joint Report World Bank (2012) Afghanistan in Transition: Looking Beyond 2014 The Economist (2006) Mining in Afghanistan Afghanistan Mineral Tenders website US Geological Survey (2011) Minerals Yearbook- Afghanistan Global Witness report (2012) Lifting the lid on Afghanistan's biggest mining deal Pajhwok News (2012) Coal mine revenue shoots up
Forestry	Illegal logging portal (2012) Afghanistan's forests a casualty of timber smuggling UN Food and Agriculture Organization (2010) Afghanistan country report
Petroleum	Reuters (2013) Missing refinery deal halts landmark China- Afghan oil project Ministry of Commerce and Industries website- Department of Petroleum US Geological Survey (2006) Assessment Significantly Increases Petro. Resource Base Asian Development Bank (2013) TAPI Project, Phase 3, Project Data Sheet Overview
Institutional structure / main government actors / capacity constraints	Revenue Watch - Afghanistan page World Bank website - Afghanistan country page Reuters (2013) Afghan cabinet gives preliminary approval to delayed mining law Afghanistan Ministry of Mines and Petroleum website
Fiscal regime	International Monetary Fund website- Afghanistan country page Afghanistan Extractive Industries Initiative (2012) Second EITI Reconciliation Report EITI Press release (2012) Afghanistan publishes mining reviews and contracts Afghanistan Ministry of Finance website
Transparency / account- ability	Civil Society Natural Resources Monitoring Network (2013) press release Afghanistan Extractive Industries Transparency Initiative (AEITI) website Extractive Industries Transparency Initiative website- Afghanistan Page Global Witness website - Afghanistan page

This profile was drafted with input from officials from the Government of Afghanistan, representatives of international financial institutions, as well as independent consultants.



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Burundi

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: Gold, timber
 Main exploration: Gold, coltan, nickel, rare earths
 Extractive industries as share of GDP: 3%
 Extractive industries as share of revenue: Negligible

Summary

Even if extractive industries do not currently play a significant role in Burundi's economy, abundant natural resources could boost growth and government revenue if developed and well managed. Currently the mining sector is characterised by artisanal and small-scale mining, which was estimated to employ approximately 20,000 workers in 2014. The ongoing formalization of the sector is expected to increase the importance of mining in Burundi.

Overview of key sectors

Resources	Reserves	Status	Key companies
Gold	Currently being assessed	2.8 tonnes produced by artisanal miners in 2013. Further exploration underway	Flemish Gold Ltd, Ets Jean Jbeili
Coltan and associated minerals	200 million tonnes (6% of global total – the world's second largest reserves)	Some production by artisanal miners, thorough exploration currently projected	Currently being evaluated for granting of exploration permits
Rare earth metal	Estimated 256,500 tonnes currently being evaluated	Production 1,950 barrels/day in 2012, further exploration underway	China National Petroleum Corp.
Nickel	6% of known nickel reserves in the world: 220 MT Musongati, 35 MT Nyabikere, 85 MT Waga	Mining licenses granted, mining permits currently pending grant	Burundi Mining Metallurgy Ltd, Consortium International d'Affaires de l'Alliance, Mondiale des Sports (CIAAMS)
Vanadium	11.8 million tonnes (primary and secondary ore)	No current activity	No concessions
Timber	6% of the total area (152 000 ha) is forested; 86% of this is forest plantation	Informal and artisanal activity	No major concessions

Source: Company websites, government sources

Six mining companies and three oil companies currently hold exploration licenses. Gold is the primary mineral produced in Burundi. Exports increased in 2013 to 2.8 tonnes; this contributed to 7.6% of total export earnings for the country. A de-facto embargo on the country since the enactment of conflict minerals legislation in 2010 (Dodd-Frank 1502) hindered traditional base metal exports, but these are now set to resume with the launching of the ITRI Tin Supply Chain Initiative (iTSCi).

Forest resources are important for livelihoods in Burundi. Their economic contribution is significantly underestimated, formally accounting for only about 1% of GDP and \$210,000 revenue in 2010 while actual income from forestry activities is estimated at around US\$20 million per annum. Value added in the forestry sector in Burundi in the 1990s was \$35-45 million per year (between 4 and 6.5% of GDP), but has dropped to \$1.8-3 million in recent years (just 2% of GDP).

Burundi has no proven oil or gas, although a number of petroleum companies have expressed interest in the four Burundian oil blocks located in Lake Tanganyika. Two of these blocks have been awarded to Surestream Petroleum, one to Signet Petroleum and one to AZ Petroleum.

Legal, Institutional and Policy Framework

The Burundi government is taking steps to formalise the country's largely artisanal mining sector. A new Mining Code (2013) promulgated by the President of the Republic is intended to encourage private investment. Under the new Code, mining permits will only be granted to companies with office representation in Burundi. The traceability and certification of minerals for export is being introduced in May 2014 in order to encourage large companies to invest.

The management of forests and forest products in Burundi is the responsibility of the Forestry Department of the Ministry of Water, Environment, Regional Planning, Tourism and Urban Development. The Forest Code 1985 is currently under review – updates to it are intended to encourage competition within the timber

industry, to tighten control of logging activity and to increase revenue from timber.

Transparency and accountability

The government has pledged to respect the ICGLR 2010 Lusaka Protocol on the illegal extraction of natural resources. This regional initiative includes the monitoring and certification of minerals, the formalization of the mining sector, the harmonization of mining legislation, the establishment of a database for regional trade and membership of the Transparency Initiative Extractive Industries Transparency Initiative (EITI). Burundi has also launched the iTSCi scheme in April 2014, with an MOU signed between the Government of Burundi and ITRI.

Burundi has expressed its intention to join the EITI and to publish national production statistics. Burundi has completed an EITI Scoping Study, visited the International EITI Secretariat to discuss the benefits of implementation, and plans to visit other countries in accordance with the EITI and submit an application soon.

Key issues

- Under the US Dodd-Frank Act 2010, Burundi was placed under embargo in 2012 due to its potential role as a producer and exporter of conflict minerals. Burundi has pledged to fight this illicit trade and to support the development of mineral supply chains unconnected with conflict minerals. The government has committed to track and trace all coltan, cassiterite and wolframite within its territory. Burundi also plans to trace other minerals in order to certify that they are produced within its territory.
- In order for Burundi to attract credible foreign investment in the sector, considerable further regulatory reform is required, including finalizing mining regulations, setting up a cadastre and regulation agency, and building the capacity of governance agencies.

Annex: sources

Key natural resources / extractive activity	http://www.africaneconomicoutlook.org/en/countries/east-africa/burundi/ World Bank (2014) Extractive Industries Scoping Study for Burundi
Mining	http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-by.pdf http://www.mkono.com/pdf/Mining%20and%20Upstream%20petroleum%20activities%20in%20Burundi.pdf World Bank (2014): Artisanal and Small-Scale Mining in Burundi 2009-2014
Forestry	http://www.sifi.se/wp-content/uploads/2012/02/Forest-plantations-and-woodlots-in-Burundi.pdf
Institutional structure / main actors / capacity constraints / fiscal regime	http://www.loc.gov/lawweb/servlet/lloc_news?disp3_l205403795_text
Transparency / accountability	http://www.globalwitness.org/sites/default/files/library/Putting%20principles%20into%20practice.pdf



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Central African Republic (CAR)

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: Diamonds, gold, timber

Main exploration: None

Extractive industries as share of GDP: 10-15%

Extractive industries as share of revenue: Unknown

Summary

The economy of the CAR is relatively dependent on the exploitation of the country's substantial natural resources, and the prospects for growth in this sector are generally good. The exploitation of natural resources has not yet, however, led to the structural transformation needed for stronger, sustainable growth.

Although most potential for growth may be in the forestry sector, growth has also been fuelled by the mining sector, which supported by a new policy framework and efforts to build the capacities of artisanal miners, grew by 10.7% in 2012. The potential for the CAR to further develop extractive industries for the benefit of communities and the nation, however, is currently severely constrained by ongoing violent conflict and insecurity.

Overview of key sectors

Resources	Reserves	Status	Key companies
Timber	227,550 km ² (36.5% of land area) in 2005	Eight concessions allocated to forest enterprises (either foreign, mixed foreign-national or national with foreign capital). Transportation has been estimated to represent up to 60% of the costs of production of timber from CAR	Eight concessions allocated to forest enterprises (either foreign, mixed foreign-national or national with foreign capital)
Diamonds	39 million carats high grade deposits in 2007	Exploitation of alluvial deposits using artisanal techniques. 371,917 carats of diamond worth \$62.1 million exported in 2012	Energem Resources, Pangea Diamondfields, Gem Diamonds
Gold	21.7 million metric tons at an average grade of 1.9 grams per metric ton gold	Exploitation of alluvial deposits using artisanal techniques; less than 100kgs produced in 2012	AXMIN Inc. of Canada shutdown gold exploration in 2012 due to political instability

Source: UNEP (2009), AEO (2013), USGS

The timber industry accounted for 46% of the CAR's export earnings in 2007 although the global financial crisis has since caused a major drop in timber exports. Diamonds are the most exploited mineral in the country, accounting for over 30% of export earnings in 2007.

From 2002 to 2007, timber accounted for an average of 48% of the CAR's export receipts, and prior to the coup d'état in 2013 the CAR was ranked 12th among the world's leading producers of rough diamond by value (14th by volume). The Passendro gold mine project would have produced approximately 6,400 kgs of gold per year during first 3 years of operation had it not been forced to close due to insecurity.

The CAR also has mostly unexploited deposits of iron, copper, zinc, tin, nickel, coltan and cobalt.

Legal, Institutional and Policy Framework

The CAR Ministry of Mines, Energy and Water is the government agency responsible for the mining sector. Production and trade of diamond and ++++gold are overseen by the Bureau for Evaluation and Control of Diamonds and Gold (BECDDOR). BECDDOR maintains the country's diamond and gold production database and assesses the value of diamond parcels that are to be exported from the country.

The CAR has a wide legislative framework for natural resource management, although many of the laws are in the process of being updated. Some key elements of the legislative framework lack the elementary norms, rules and regulations required for their proper implementation, although the Mining and Forestry Codes have been revised to adapt them to international standards and to foster the processing of natural resources.

The Forestry Code provides for the return of 40% of the tax on concession revenues from forest exploitation to be returned to the communities in the forest concession areas for productive projects. Implementation of this requirement has, however, so far been limited. In 2012, the CAR passed a law to create a dedicated government agency to manage forestry resources.

Transparency and accountability

The CAR became compliant with the Extractive Industries Transparency Initiative (EITI) in 2011, just two years after being admitted as a candidate country. In 2013, however, the EITI Board temporarily suspended the CAR's compliant status due to political instability.

The Ministry of Water, Forests, Hunting and Fishing (MEFCP) is working to improve the quality and availability of information on the CAR's forest sector and to build the country's remote sensing, GIS, and forest information management capacities.

The CAR signed a Voluntary Partnership Agreement on Forest Law Enforcement, Governance and Trade (FLEGT) with the European Union in 2010.

Key issues

The security and humanitarian crisis currently ravaging the CAR has substantially impacted the management and development of extractive industries. Although the CAR's natural resources should offer the potential to contribute to peacebuilding through supporting economic recovery and developing sustainable livelihoods, effort must be undertaken to ensure that armed groups do not capture, tax or illegally exploit high-value resources for income to sustain the conflict.

Revenue sharing of forest taxes has also been a significant source of grievance in the past. Minimizing the risk of this potential source of conflict require participatory management of forest resources.

The CAR must also develop more robust monitoring and tracking procedures to ensure control over the exploitation of its natural resources. Currently, 25-70% of the CAR's diamonds are reported to be exported illegally.

Annex: sources

Key natural resources / extractive activity	http://www.africaneconomicoutlook.org/en/countries/central-africa/central-african-republic/
Mining	http://minerals.usgs.gov/minerals/pubs/country/2012/myb3-2012-ct-to.pdf
Forestry	http://www.wri.org/publication/interactive-forest-atlas-central-african-republic-atlas-forestier-interactif-de-la
Petroleum	http://globaleledge.msu.edu/countries/central-african-republic/economy
Institutional structure / main government actors / capacity constraints / fiscal regime	http://postconflict.unep.ch/publications/UNEP_ECP_CAR_MissRep_August_2009.pdf
Transparency / account- ability	http://eiti.org/CentralAfricanRepublic



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Chad

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: oil

Main exploration: oil

Extractive industries as share of GDP: 16.5% in 2012

Extractive industries as share of revenue: 80% in 2012

Summary

The discovery of oil in Chad and the beginning of its extraction in 2003 changed the economic direction of the country. GDP doubled between 2003 and 2005, and the country's annual growth rate averaged an impressive 8% between 2000 and 2011. The GDP growth rate is now set to reach above 10% in 2014, supported by high oil prices and the coming on-stream of new oil-related projects in the country. Spin-off from the oil sector is potentially a major factor in the country's economic and industrial growth, but will depend on oil companies' ability to maintain production levels in coming years. Over the longer term, Chad must diversify its economy away from its current high dependence on oil.

Overview of key sectors

Resources	Reserves	Status	Key companies
Oil	1.5 billion barrels of proven reserves (2013)	Crude oil production estimated 105,000 bbl/d in 2012	Esso Chad, China National Petroleum Corp, Chevron, Petronas, Griffiths, Taiwan's Overseas Petroleum and Investment Corporation

Source: USGS

Chad holds the tenth-largest oil reserves in Africa. Although oil production declined by 34% between 2005 and 2011, the country is now expecting a second oil boom as new oil fields near Lake Chad come into production in 2014. The government expects output of crude oil to triple by 2015.

A new oil refinery at N'Djamena, 40% owned by government and 60% by the China National Petroleum Corporation, became operational in 2011. Its capacity of 7 million barrels per year is about twice what is needed to meet local demand, and the Chad-Cameroon export pipeline (completed in 2003) has enabled Chadian oil to

access international markets. By the end of 2010 the pipeline had already sent a total of 376 million barrels of crude to world markets. All oil companies operating in Chad are foreign owned.

Chad has experienced very little development of its mining sector. Small-scale domestic mining and quarrying produce most of the country's nonfuel minerals, although studies have outlined several areas which offer prospects for the development of gold, bauxite, uranium, silver and alluvial diamond mining.

Legal, Institutional and Policy Framework

The Ministry of Mines, Energy and Petroleum and the Petroleum Revenue Oversight and Control Committee have institutional oversight of the oil industry. The Petroleum Revenue Management Law 1999 (amended 2006) defines the allocation of petroleum revenues: 10% of direct revenues are set aside in a future generations fund while 90% are allocated through the Central Bank in Chad (BEAC). This 90% is distributed to seven priority sectors (80%), the producing region (5%) and to current government costs (15%). However, indirect revenues from fees, permits and duties surpass the direct revenues managed under this law (BICC).

Mining of minerals is regulated by the Mining Code 1995.

Transparency and accountability

Chad joined the Extractive Industries Transparency Initiative (EITI) in 2007 and became a candidate country in 2010. However EITI Chad published its 2010 and 2011 reports only after long delays, and limited information on oil revenues is published by government.

The Petroleum Revenue Oversight and Control Committee has limited independence from government.

Key issues

Chad's economy is heavily dependent on oil but the country lacks the requisite robust governance institutions to manage this resource.

There is also potential for oil wealth to impact on conflict dynamics in Chad. 'Oil for arms' accusations have been made against the government, and regional tensions have been exacerbated due to the lack of inclusion of local communities in the oil producing region of southern Chad.

Annex: sources

Key natural resources / extractive activity	http://www.eia.gov/countries/country-data.cfm?fips=cd
Mining	http://minerals.usgs.gov/minerals/pubs/country/2012/myb3-2012-cd.pdf http://www.mbendi.com/indy/ming/af/ch/p0005.htm
Forestry	http://www.fao.org/countryprofiles/index/en/?iso3=TCD
Institutional structure / capacity constraints / fiscal regime	http://www.africaneconomicoutlook.org/en/countries/central-africa/chad/
Transparency / accountability	http://eiti.org/Chad



Union of the Comoros

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: none

Main exploration: oil

Extractive industries as share of GDP: negligible

Extractive industries as share of revenue: negligible

Summary

Comoros has limited proven natural resources, although a number of exploratory studies have indicated the presence of various minerals including bauxite, olivine, spinel, zircon, peridot and copper. These resources have not yet been quantified, although studies are currently planned to further investigate upstream mining potential. In addition, offshore surveys carried out by an American company (GX Technology) have revealed the possible presence of hydrocarbons in Comorian territorial waters.

Overview of key sectors

Resources	Reserves	Status	Key companies
Oil	Unknown	Exploration contracts awarded	Bahari Resources Ltd and Discover Exploration Comoros BV; Safari Petroleum Indian Ocean Limited and Western Energy East Africa Ltd

Source: company websites, government sources

Comoros has negotiated two oil Production Sharing Agreement contracts, the approval of which by the Assembly of the Union in April 2014 has allowed them to enter into force. These contracts form renewable grant exploration licenses, the exploration phase of which may not exceed 11 years.

Legal, Institutional and Policy Framework

Comorian extractive activities are regulated by the Ministry of Industry and Energy in charge of hydrocarbons.

Law No. 12-019/AU on the Petroleum Code was passed by the Assembly of the Union and promulgated by Decree in February 2013. This Petroleum Code – comprised of 15 chapters and 92 articles – regulates the oil industry from exploration to exploitation. The Petroleum Code assigns state sovereignty over natural resources found across the basement of the Union of the Comoros – all such resources are and will remain the property of the state and all decisions in relation to their exploration and/or extraction must be taken by the Council of Ministers. This Petroleum Code also sets out the delimitation of the maritime territory into exploitable blocks.

A Mining Code is currently being prepared.

Transparency and accountability

All laws and decrees relating to the Petroleum Code are available in the public domain, as are the recently-signed Production Sharing Agreement oil contracts.

Comoros has not yet sought to join the Extractive Industries Transparency Initiative (EITI).

Key issues

The extent of extractive industries in Comoros is highly limited.

Annex: sources

Key natural resources
/ extractive activity /
governance

<http://www.africaneconomicoutlook.org/en/countries/east-africa/comoros/>
<http://www.upstreamonline.com/hardcopy/news/article1321016.ece>

Mining

<http://minerals.er.usgs.gov/minerals/pubs/country/2005/cnmpfrsemyb05.pdf>

Petroleum

<http://www.reuters.com/article/2012/03/28/comoros-exploration-idUSL6E8ES-1AB20120328>
<http://www.discover-exploration.com/assets/details/comoros>



Côte d'Ivoire

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: petroleum, timber, gold, granite, diamonds

Main exploration: petroleum, gold, iron ore, nickel, manganese

Extractive industries as share of GDP: 7% (2010)

Extractive industries as share of revenue: 10 % (2012)

Summary

The extractive industries, notably the oil and gas sectors, have made small yet important contributions to the economy of Côte d'Ivoire. And current growth projections make natural resource management increasingly relevant. In 2011, the extractive industries total contribution to the economy was \$323 million, the vast majority of which came from the petroleum sector (Extractive Industries Transparency Initiative, 2013). Côte d'Ivoire has significant oil reserves and an established, albeit limited refining industry. The mining sector has also demonstrated much potential, although high extraction costs have so far limited commercial activities. Exploration and development of the gold and iron ore sectors are ongoing, while forestry has a smaller but still notable role in the country's economy.

Overview of key sectors

Resources	Reserves	Status	Key companies
Iron ore	3 billion tonnes	N/A	Tata Steel Ltd., SODEMI
Nickel	390 million tonnes	N/A	Same Resources, SODEMI, Tau Group
Bauxite	1.2 billion tonnes	N/A	N/A
Manganese	3 million tonnes	43,600 tonnes of ore produced in 2011	SODEMI, China National Geological and Mining Corp., private interests
Diamonds	11,2 million carats	None	N/A
Gold	N/A	9.8 tonnes produced in 2011	Equigold, Newcrest, Société des Mines de tongon, Yaouré Mining, Cluff Gold

Oil	339 million barrels	14,8 million barrels of crude & 20 million barrels of refinery products in 2011	PETROCI, Canadian Natural Resources, Foxtrot, Vanco, Lukoil, Oranto Atlas, Edison, Tullow, C&L, Yam's, Al Thani, Jarikuma Marsaaf, Kufpec, Bouygues
Natural Gas	1500 billion cubic feet	130 million cubic feet per day	1.600 million cubic meters
Forestry	10.4 million hectares	\$241 million export value (2012)	N/A

Source: African Economic Outlook (2013) US Geological Survey (2011), EITI (2013)

Mining

Côte d'Ivoire's mineral deposits are today largely unexploited. But the mining sector has seen an expansion in recent years, and offers the potential for significant growth and job creation. Gold is the most significant mineral resource, and production in 2011 reached 9.87 tonnes (US Geological Survey, 2011). This figure is expected to increase to 20 tonnes per year by 2020 as new mines begin production (Mining Review, 2011). Semi-industrial and artisanal gold production are also extensive in Côte d'Ivoire, and likely more significant than reflected in official production figures. In efforts to regulate the informal gold sector, several local authorities announced a ban on artisanal mining in early 2012 (IRIN News, 2012).

The Society for Mining Development in Côte d'Ivoire (SODEMI) is the public company overseeing all prospecting and exploration activities in the mineral sector, and has engaged in joint mining ventures with multiple foreign investors. The agency has reported prospecting and exploring for nickel and cobalt as well as gold and iron ore in several locations. Manganese, phosphate rock and tantalum deposits also being explored (US Geological Survey, 2011). Proven diamond reserves in Côte d'Ivoire are significant, and thought to contain up to 11,2 million carats. (10,1 million located in Séguéla and 1,1 million in Tortiya region). None are currently exported as the UN Security Council has since 2005 put in place a sanctions regime, part of which applies to the export of Ivorian rough diamonds (UN Security Council, 2013).

Petroleum

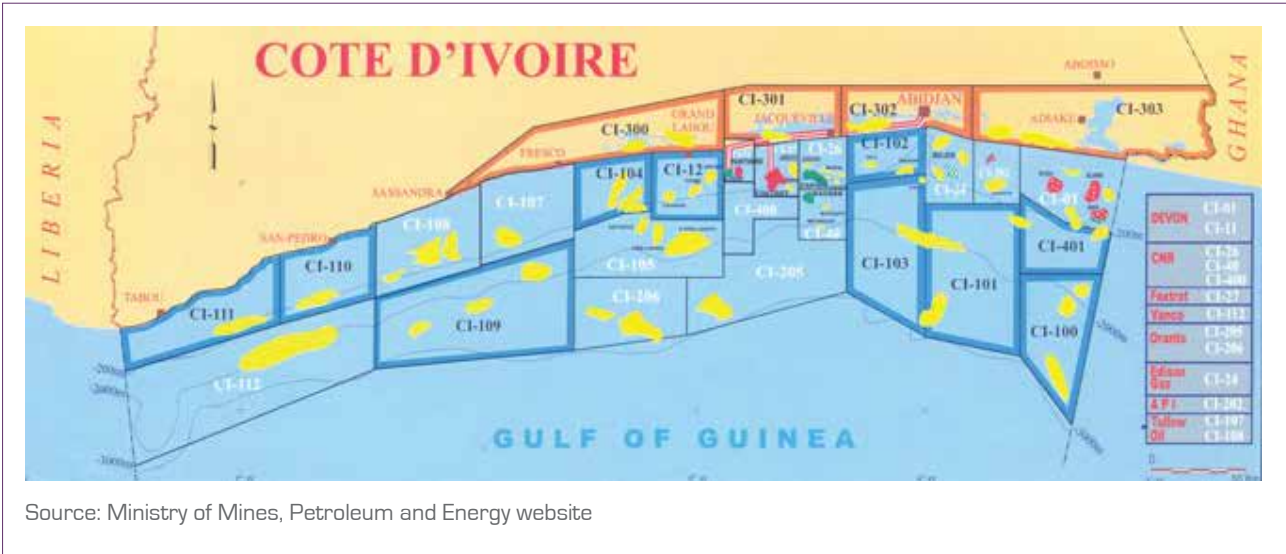
The Ivorian sedimentary basin is made up of two main sections: one onshore area, which stretches along the coast between the Liberian and Ghanaian borders, and

one an offshore area reaching depths of more than 3000 metres and stretching 150km out to sea. The main production fields in question are the Lion and Panther fields (Block CI011) in operation since 1994, the Foxtrot field (Block CI-27) in production since 1999, and the Hope and Baobab fields (Blocks CI-26 & CI40) in production since 2002 and 2005 (Ministry of Mines, Petroleum and Energy website).

Petroleum concessions in Côte d'Ivoire

Oil reserves are estimated to be 300 million barrels and natural gas reserves at more than 1,500 billion cubic feet. Production of crude oil amounted to 38,000 barrels per day in 2012 (Energy Information Association, 2012), while forecasts predict a daily oil production in excess of 65,000 barrels by 2020. Gas production is estimated to reach around 200 million cubic feet by the same year. These encouraging projections have inspired bilateral negotiations with Ghana and planning for a joint economic zone to enable further offshore exploitation (Extractive Industries Transparency Initiative, 2013).

Natural gas is mainly extracted for domestic production of electricity and for industrial purposes. Most crude oil, which is typically heavy and requires significant refining, has traditionally been exported abroad. In 2011, the state received \$300 million in direct tax revenues from oil and gas companies, compared to \$220 million in 2010 (Extractive Industries Transparency Initiative, 2013). Export revenues are projected to increase as Côte d'Ivoire's sole refinery, designed in the 1970's, is nearing obsolescence and the government is investing in upgrading the country's refining capacity. A second larger refinery and in Abidjan is being designed to accommodate the heavy crude oil found in the Ivorian seabed, and a \$7 billion refining complex in the port city of San Pedro is also being planned. Recent offshore



discoveries could, according to the government, boost production levels to 200,000 barrels per day by 2018, but will require significant investments (Reuters, 2013).

Forestry

Côte d'Ivoire has a relatively small forest cover. Of its 10.4 million hectares of forest, 3.4 million are considered natural production forest and 167,000 hectares are made up of industrial timber plantations (International Tropical Timber Organization, 2005). The logging industry is still the third most significant source of national earnings, mostly as a result of the export of processed products, including sawnwood, veneers and plywood. The export value of total forest products from Côte d'Ivoire in 2012 was \$241 million (Food and Agriculture Organization, 2013)

Legal, Institutional and Policy Framework

Mining

The principal piece of legislation relating to the mining sector is the Mining Code of July 1995, and its implementing decree from 1996. Compliance of the code is ensured by the Ministry of Mines, Petroleum and Energy. Holders of mining titles must pay taxes and fees in accordance with the general tax law, although the Ivorian state has exempted numerous mining companies from profit taxes. The process of obtaining mining permits tends to be slow, often as a result of bureaucratic delays (Bonn International Center for Conversion, 2009).

In 2012, the Minister of Mines launched a mining reform programme, and a revised mining law is expected to pass by late 2013. The proposed reforms would see the incorporation of international mining conventions, production sharing agreements and improved security of tender²² to create a more favorable environment for investors (The Economist, 2013). Beyond the current (and soon to be enacted) code, the sector is also subject to the Environment Code of 1996, and the Rural Land Law of 1998.

Petroleum

The legal frameworks governing the hydrocarbons sector (as well as other extractive industries) are market oriented and generally considered to be stable. The Petroleum Code, in place since August 1996 is the main law governing the sector, and its compliance is ensured by the Ministry of Mines, Petroleum and Energy. Few environmental obligations or safeguards exist in the code, and all responsibility for damages associated with exploration or extraction lies with the oil companies concerned and not with the state (Bonn International Center for Conversion, 2009). The Ministry of Mines, Petroleum and Energy are currently developing plans to reform aspects of the legal and regulatory framework for hydrocarbons.

The national oil company Société Nationale d'Opérations Pétrolières (PETROCI) holds a minority stake in all of the country's producing fields and almost all of the licensed blocks. Permits for exploration are granted by decree. And matters such as the share of output assigned to

²² This is the process by which exploring companies can automatically obtain mining rights once a deposit proves economically viable.

the state, and fixing of the assumed oil price, are not determined by law. Instead these are determined in specific contracts negotiated by the government and investors. Consequently, many important contractual details remain confidential and inaccessible to stakeholders outside the contract (Bonn International Center for Conversion, 2009).

Forestry

The logging industry operates under a Forest Code from 1965, Environment Code of 1996 and the Rural Land Law of 1998. A process to revise the Forest Code is currently underway. Proposed amendments aim to improve oversight of the chain of custody and legal origin of timber, as the current wood tracking system does not allow tracing timber from the point of harvest to the final destination (Forestry Governance Forum, 2012). The forestry administration answers to the Ministry for Water and Forests, which in 1998 adopted a Forest Master Plan for the period 1988-2015. This plan is today the basis of the country's forest development strategy (Food and Agriculture Organization, 2002).

Illegal logging and deforestation are thought to be widespread, and exacerbated by civil unrest. Côte d'Ivoire is attempting to tackle this by working towards a Voluntary Partnership Agreement (VPA) as part of the EU's Forest Law Enforcement, Governance and Trade (FLEGT) programme (Forestry Governance Forum, 2012). Other efforts to combat illegal trafficking in timber include reforming the concession process to reduce subcontracting and foster rational harvesting by way of long-term contracts, and strengthening capacity to enforce forest regulations (Food and Agriculture Organization, 2002).

Fiscal framework

The fiscal framework governing the extractive industries is set out in the Investment Code (1996), which exempts mining companies from profit taxes for a period of five years. A new investment code was adopted in 2012, and was designed to further improve the business climate and attract private investment, and has led to the establishment of commercial courts (International Monetary Fund, 2012). The government has also expressed its intention to reform the forest tax system, abolish logging quotas and introduce a new scale to increase the value of standing wood. Revenues from the forest industry are, along with revenues from all natural

resources pooled together in the general budget. There is no specific instrument or mechanism in place to manage extractive industries revenues, which amounted to \$390 million in 2011, and are predicted to increase (Extractive Industries Transparency Initiative, 2013).

Transparency and accountability

Transparency in the extractive industries is steadily improving, and regulations governing extractives are generally in line with accepted international standards of transparency and accountability in the oil and mining industries. Côte d'Ivoire was in 2013, recognized as compliant with the Extractive Industries Transparency Initiative, which concluded that its latest EITI report had adequately covered all significant contributions in the national budget (Extractive Industries Transparency Initiative, 2013). EITI compliance was achieved with the assistance of the World Bank and International Monetary Fund, and was a precondition for their continued assistance (Independent consultant- interview).

Proposals for updating the existing Mining Code include requirements on mining permit holders to comply with standards set by EITI and the Kimberley Process Diamond Certification Scheme. As a consequence of political turbulence over the past few years, Côte d'Ivoire was declared non-compliant with the Kimberley process, but the government remains committed to re-gain its compliant status (Norton Rose Fullbright, 2013).

Recent efforts to improve transparency in the extractive industries follow a history of graft and corruption problems. Corruption in the extractive industries fuelled Côte d'Ivoire's civil war and post-conflict violence through the diversion or embezzlement of resource revenues and the fight over resource control (UN Security Council 2010). According to Transparency International corruption still permeates all levels of society. In 2012 the country ranked 130 out of 176 countries surveyed in Transparency International's Corruption Perceptions Index (2013).

Key issues

- **Efforts to ensure transparency and create a business friendly environment in the extractive industries have created noticeable results**, particularly when accounting for Côte d'Ivoire's recent history of conflict. The country's petroleum industry is today comparable with the region's main oil exporter,

Ghana. There is, however, room for improvement. Reinforcing legal and policy frameworks, increasing openness and improving revenue management are all key priorities.

- **Strengthening Côte d'Ivoire's institutional and human capacity could remove bottlenecks** that constrain the ability of natural resources to contribute to the country's growing economy. Such measures include improving and publicising bidding processes, and increasing the government's share of mining and petroleum revenues. Côte d'Ivoire could also increase revenues by enhancing in-country value-addition, mainly through wood processing and the large-scale refining of petroleum products.
- **Increased revenue from the extractive industries could finance much-needed infrastructure.** Social and economic infrastructure projects are generally underfunded. A boost in resource revenues could help develop and expand the country's health and education sectors. It could also facilitate much needed development and maintenance of the power sector, as electricity shortages remain frequent. Overall, the relationship between the various extractive industries and other sectors of the economy tends to be weak.
- **Since its civil war (2002-2007) Côte d'Ivoire has suffered from insecurity and political unrest.** During the conflict, SODEMI abandoned all its mining activities in the country's north, but legal oil exports

did, however continue throughout the conflict. And while the most recent political violence in 2010-2011 caused a reverse in the decline of aid dependence, foreign investment was maintained (albeit with some delay). Today, the security situation is steadily improving, which has encouraged plans to relocate the African Development Bank headquarters from Tunis to its original seat in Abidjan.

Key resources

[Ministry of Mines, Petroleum and Energy website](#): Offers information about the ministry and the sector

[The Extractive Industries Transparency Initiative – Côte d'Ivoire page](#): Provides an overview of its validation process, innovations, as well as and the latest EITI report

[African Development Bank \(2010\) The ADB and Côte d'Ivoire](#): Highlights the country's relationship and projects with the regional body

[US Geological Survey \(2011\) Minerals yearbook: Côte d'Ivoire](#) - Offers an overview of mineral extraction

[Republic of Côte d'Ivoire - Strategic Development Plan: 2011-2030](#): Presents government plans to achieve significant development benchmarks and results over the next two decades.

Annex: sources

Key natural resources / extractive activity	African Economic Outlook (2013) Côte d'Ivoire overview Bonn International Center for Conversion (2009) Natural Resources in Côte d'Ivoire World Bank website - Côte d'Ivoire country page African Development Bank (2010) The ADB and Côte d'Ivoire
Mining	Mining Review (2011) Ivory Coast gold production to double by 2013 UN Security Council (2013) Resolution 2101 IRIN News (2012) Côte d'Ivoire: Authorities move to curb illegal gold mining Ministry of Mines, Petroleum and Energy website The Economist (2013) Didier for Gold US Agency for Intl. Development (2012) Artisanal Diamond Mining Sector Assessment
Forestry	UN Food and Agriculture Organization (2002) Forests and the forestry sector- Côte d'Ivoire UN Food and Agriculture Organization (2013) Statistics (FAOSTAT)- Côte d'Ivoire International Tropical Timber Organization (2005) Côte d'Ivoire Forest Governance Forum in Liberia (2012) The Potential Contribution of FLEGT VPA
Petroleum	IAS Group (2010) Côte d'Ivoire Oil Industry African petroleum website - Côte d'Ivoire US Energy Information Administration (2013) Côte d'Ivoire Reuters (2013) Ivory Coast aims to boost oil output after discoveries International Energy Agency (2009) Oil in Côte d'Ivoire Total (2013) press release - Ivory Coast Central Intelligence Agency Factbook website - Côte d'Ivoire Ministry of Mines, Petroleum and Energy website Republic of Côte d'Ivoire (1996) Petroleum Code
Institutional structure / main government actors / capacity constraints	Norton Rose Fullbright (2013) Côte d'Ivoire: Proposed amendment to the Mining Code Mining Review (2011) Ivory Coast gold production to double by 2013 Bonn International Center for Conversion (2009) Natural Resources in Côte d'Ivoire World Bank - Côte d'Ivoire country page
Fiscal regime	African Economic Outlook (2013) Côte d'Ivoire overview Extractive Industries Transparency Initiative (2013) Cote d'Ivoire Revenue Report for 2011 International Monetary Fund (2012) Côte d'Ivoire: Second Review Under the Three-Year Arrangement Under the Extended Credit Facility
Transparency / accountability	Extractive Industries Transparency Initiative website - Côte d'Ivoire page EITI - CI Extractive Industries Transparency Initiative - Côte d'Ivoire National Council Transparency International (2013) Corruption and Anti-Corruption in Côte d'Ivoire

This profile was drafted with input from officials from international financial institutions, and independent consultants



Democratic Republic of Congo

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: cobalt, copper, coltan, diamonds, tin, zinc, petroleum, timber

Main exploration: petroleum

Total natural resource rents as share of GDP: 35% (2011)

Extractive industries as share of revenue: 10% (2011)

Summary

The Democratic Republic of Congo is endowed with the world's largest deposits of cobalt and coltan. It also has significant reserves of copper, tungsten, gold, diamonds, tin, iron ore, zinc, uranium and petroleum, and vast tropical rainforests. The copper, cobalt, iron-ore and oil sectors are dominated by multinational companies, while the gold and diamond sectors consist primarily of small-scale alluvial miners. In the forestry sector, both large- and smaller-scale artisanal logging make up important industries. The scale and potential of DRC's natural resource wealth are enormous. Its resources are worth an estimated \$24 trillion. DRC's extractive industries have the potential to support economic growth, social and economic development, and are of strategic importance to the global economy (UN Environment Programme, 2011). They are, however, plagued by corruption and a culture of secrecy, and in spite of its abundant resources, the DRC lies at the bottom of the Human Development Index. In the country's troubled eastern provinces, illicit mining is commonplace, and has underpinned war economies that have impacted regional stability.

Overview of key sectors

Resources	Reserves	Status	Key companies
Copper	10% of global reserves	Production 500,000 tonnes in 2012	Freeport, Lundin, Ruashi, Boss, Kamoto, MUMI, Katanga, Anvil, Gecamines, TFM, KCC, SOMIKA
Coltan	80% of global reserves	380 tons (gross) produced for export in North and South Kivu in 2011	SAKIMA, COMINIÈRE, mainly artisanal exploitation
Cobalt	60% of global reserves*	85,000 tonnes produced in 2012	Freeport, Lundin, Ruashi, Boss, Kamoto, MUMI, Katanga
Diamonds	150 mn (WB) to 200 mn (GoDRC) carats, 30% of global reserves	20 mn carats exported in 2012 (including artisanal mining)	De Beers, MIBA, SACIM

Gold	850 tonnes	2.5 tonnes produced in 2012	Banro, Rangold, Anglogold Ashanti, Kibali Gold, CIC mining
Oil	180 mn barrels [^]	25,000 barrels/ day	Perenco, MIOC, Teikoku, Energulf Surestream, Total, Dominion, Soco
Forestry	100 mn hectares	\$241 million export value (2012)	N/A

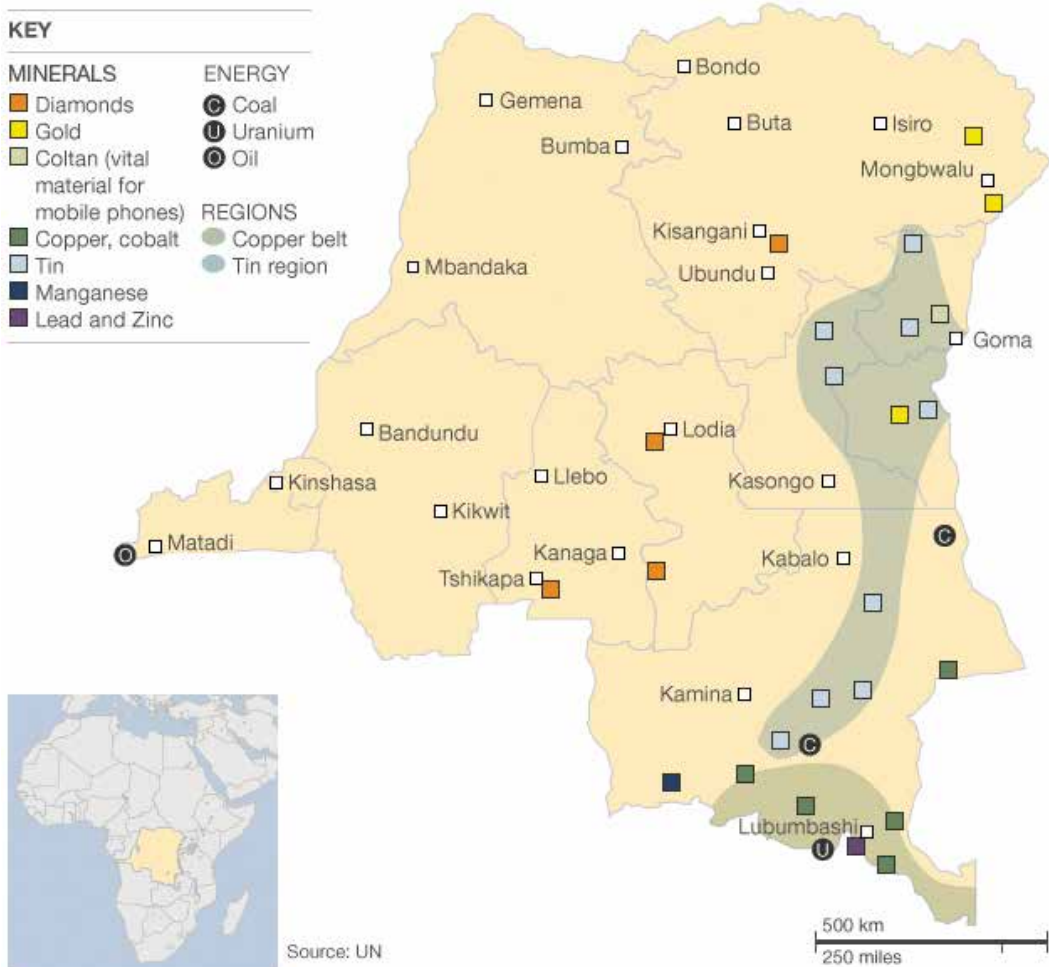
Source: DRC Government officials- interview, World Bank (2013), Kimberley Process website, US Geological Survey (USGS), African Economic Outlook (2013), Extractive Industries Transparency Initiative (2013)

Note: Mineral sector data is often presumed inaccurate or incomplete, including by government officials who noted discrepancies between e.g. central bank and customs statistics (a ministerial committee is tasked with centralizing information). Most figures also reflect central government revenue, and not all quotas allocated to provinces, which are often not published. The Constitution states that 40% of mining taxes are to be collected directly by provinces, while the Mining Code states that central government collects the relevant taxes first, making accurate revenue estimates even harder to estimate.

* Figures provided by GoDRC officials & African Economic Outlook, but according to EITI, DRC's has 40% of global cobalt reserves

[^] Reserves containing an estimated 2 million more barrels of oil are thought to exist in eastern DRC

DRC's mineral and oil exploration sites



Source: BBC News (2012)

Mining

The mining industry makes up a significant part of DRC's formal economy and is the largest source of exports²³. While estimates vary, African Economic Outlook reported that mining accounted for 12% of GDP, and 88% of export earnings in 2012²⁴. World Bank projections indicate a sharp increase in mining production, and the sector's future worth is estimated at between \$2 billion and \$3.8 billion per year by 2020.

Copper, iron ore and cobalt are the most important mining sub-sectors in the DRC. The country's copper and cobalt reserves are of global significance, with cobalt deposits estimated at approximately 15 million tonnes. The production of copper is expected to reach 1 million tonnes in 2014. Smaller-scale diamond and gold industries are also growing, with gold output expected to rise to 14 tonnes in 2014 (African Economic Outlook, 2013). DRC's diamond sector has become second largest global producer, although it is estimated that roughly a third of the DRC's diamonds are smuggled out of the country every year (KITKO website, Kimberley process website).

In spite of the DRC's large-scale mineral production, in-country value addition remains minimal, as a consequence of a lack of in-country skilled labor, know-how and poor infrastructure. Initiatives in support of in-country value addition have generally failed. Today, most of the raw minerals produced and exported are destined for China. Minerals are commonly traded with China (and likely with India in coming years) in exchange for financing in much needed infrastructure, including schools, roads, bridges and hospitals. A 2007 deal gave China interests in copper and cobalt mines that are expected to produce between \$40 and \$120 billion in revenues, in exchange for \$6 billion worth of infrastructure investments (Global Witness, 2011). These arrangements hold much promise, but minerals-for-infrastructure deals are often conducted with limited oversight and opaque reporting practices (Independent consultant- interview).

More than 500 companies have been issued research or mining permits in the DRC, the largest of which is the para-statal company Gecamines. Currently, it has no independent production capacity but manages the government's mining portfolio. Gecamines has been

accused of extracting rents by undervaluing assets and by operating in an opaque manner. Between 2010 and 2012 the DRC is thought to have lost at least \$1.36 billion from underpriced assets sold to offshore companies, equivalent to nearly twice the annual budget for health and education in 2012. The DRC also has the largest artisanal mining workforce in the world. It employs an estimated two million people, and up to 12 million people directly or indirectly depend on the sector (Africa Progress Report, 2012, Global Witness, 2011, Independent consultant- interview).

Petroleum

The DRC has oil reserves both onshore and offshore in the Congo River estuary, but oil exploration and output is still very small. Oil production was 7.83 million barrels in 2011 (African Economic Outlook, 2012), 70% of which was offshore (half owned by the Muanda International Oil Company, a subsidiary of Perenco Oil, and the rest by MIOC and Teikoku) and the remaining 30% onshore production operated by Perenco.

The DRC has proven reserves of crude oil amounting to 180 million barrels and exploration activities continue to be conducted by companies including Soco, Surestream and Energulf. It is estimated that oil blocks in the east of the country could yield over two billion barrels of oil. Output should rise in the next few years as new oilfields are brought on stream by Soco (Virunga National Park, Albertine Graben) and Total (Lake Albert). Although projected revenues are significant, Congolese oil is heavy-grade, which increases the cost of extraction and so limits revenue potential (African Economic Outlook, 2013).

Forestry

The DRC's tropical rainforests cover at least 100 million hectares and represent more than half of Africa's forest resources (Organization for Economic Cooperation and Development, 2007). Commercial logging concessions cover some 12 million hectares and produce 300,000 square metres of timber annually. They were valued at \$60 million in 2011. Artisanal logging is thought to account for eight times this amount. To capitalize on the significant earning potential of the forestry industry, the government has set ambitious growth targets. Up to \$900 million in annual revenue until 2030 can be generated, provided that forest resources are properly maintained (UN Environment Programme, 2011).

23 Informal production is also significant but figures are difficult to capture in GDP data.

24 Mining as a share of GDP was 30% in 2012 according to government sources, while African Economic Outlook noted a 12% share.

The formal logging sector is export-oriented and dominated by large industrial groups with large reserves of foreign capital. In 2012 the export value of all forest products was in the range of \$144 million dollars (Food and Agriculture Organization, 2013). The larger informal sector is mainly oriented to domestic markets and linked to the misuse of artisanal logging permits. These are commonly used by foreign loggers to exploit forests on an industrial scale, primarily for buyers in China (Global Witness). Illegal logging for domestic use has also proved problematic. Domestic energy demand alone leads to the loss of approximately 400,000 hectares of forest each year (UN Environment Programme, 2011).

Legal, Institutional and Policy Framework

Mining

The Mining Code (2002), Mining Regulations (2003) and the Investment Code (2002) are the main pieces of legislation guiding the sector. The mining code and mining regulations were drafted with the assistance of the World Bank, and are overseen by the Presidency, Ministry of Mining and a Mining Cadastre under the Mining and Finance Ministers, among others. The Mining Ministry's representatives at the provincial level grant artisanal mining permits, and the sector is regulated by the government body SAESSCAM- the small-scale mining technical assistance and training service. Traditional customary authorities (such as traditional chiefs) also play a role in managing land tenure and mining rights. This occasionally results in competing claims for control of mines and mineral resources, and contributes to insecurity, bureaucratic inefficiency and discourages investment (International Alert, 2010).

Mining activities regularly fall outside the remit of statutory law. And with limited institutional capacity to enforce existing legislation, the industry is vulnerable to corruption in small-scale mining as well as larger operations. Many state owned companies hold lucrative titles, contrary to the provisions in the Mining Code (Revenue Watch website). The government has made some attempts to address this issue, including through a review of mining contracts by an inter-ministerial commission which was published in 2008. This led to the re-negotiation of 60 mining contracts that had been signed during the first and second Congo wars (1996-1997, 1998-2003) and during the period of the country's transition to democracy (2003-2006) (Revenue Watch,

University of Stellenbosch/ CCS, 2009). And in February 2013, the Minister of Mines drafted a law revising the 2002 Mining Code. Its amendments include stricter conditions for obtaining mining rights and a limiting of investor incentives (McGuirewoods, 2013).

Petroleum

Key regulating institutions in the petroleum sector are the Ministry of Hydrocarbons and the state oil company Cohydro. A new Petroleum Policy has been drafted and a new legal framework is also under discussion, which will include a new hydrocarbon law and regulations to allocate petroleum exploration and production rights. According to the International Monetary Fund (2012), these reforms are needed for the petroleum sector to fully contribute to the country's economic growth. Recent oil deals have been come under scrutiny for their poor risk management and non-transparent and poorly negotiated contracts (Platform, 2010).

Forestry

The Forest Code (2002) sets the framework for forest policy in line with the 1973 Land Law, while the Ministry of Environment, Nature Conservation and Tourism is the main implementing body. Much legal ambiguity exists in the forestry sector, which led to a moratorium on new logging concessions in 2002, which is still in force. In 2007, the government created a priority forest reform agenda which focused on the development of an appropriate legal and regulatory framework. Challenges remain, however, as the Independent Observer of Forestry Control (REM) reported in 2013 ongoing institutional failures to regulate the logging industry (Organization for Economic Cooperation and Development, 2007).

Fiscal framework

Comprehensive legal tax and customs regimes are in place for all extractive industries, and the investment and tax codes for the mining sector are currently being revised. The Ministry of Finance collects all taxes, but in joint ventures with state-owned companies (SOCs) some proceeds from asset sales go directly to SOCs. In 2010, extractive industry companies paid the government \$876 million in taxes, fees and royalties, which is equivalent to \$13 per capita. Royalties, charges and fees in the mining and forest sectors are determined by the Mining and Forest Codes. In the petroleum sector, a decree from 2011 determines taxation; onshore oil royalties are

12.5% and paid in kind, while the distributable margin for offshore oil is 40% and paid in cash (Extractive Industries Transparency Initiative, 2010).

A projected 20%-25% increase in annual mining revenue by 2020 could bring in between \$186 and \$689 million in additional tax revenue (McGuirewoods, 2008). The International Monetary Fund (2012) projects a possible increase in mining revenues from 9% of fiscal revenues in 2010 to 25% in 2016, provided that taxation improves alongside the business environment. But so far the mining sector's contribution to fiscal revenue in the DRC has been relatively low when compared with its share of GDP. As many large mining projects have made significant investments in the past few years, only limited profit based taxes have been collected (International Monetary Fund, 2010). Low revenue levels are also a result of the undervaluing of assets. At present, there is no natural resource revenue stabilization fund in place.

Transparency and accountability

The DRC failed to reach EITI compliance in 2013 and has consequently been suspended from the scheme. This suspension comes in spite of attempts to come to grips with transparency and accountability gaps in the country. These include a government decision in 2012 to review the mining and oil laws and regulations to make them more transparent and stricter on bidding for contracts and protecting local communities. And as of 2011 the government is required by decree to publish all contracts for the purpose of exploration or exploitation of mining, oil and forestry resources. The Ministry of Finance also publishes quarterly information on royalties, bonuses and license fees, and the Central Bank publishes data on production volumes and prices in weekly reports (Revenue Watch website). In addition, the government recently joined a new mineral certification scheme with the International Conference on the Great Lakes Region (2013), and is undertaking capacity building efforts to improve oversight of export flows.

Despite such encouraging efforts, Revenue Watch gave the DRC a 'failing' score in its Resource Governance Index, due to an extremely low enabling environment and weak safeguards and quality controls (Revenue Watch website). There is no comprehensive law requiring company audits in DRC, and mining companies commonly underreport mineral quantities and circumvent tax obligations through legal loopholes. And even though the DRC qualified for \$12 billion in debt relief in 2010, the

International Monetary Fund suspended its programme in 2012 citing lack of transparency in the mining sector. Following suit, the African Development Bank also decided to withhold budget support. The International Monetary Fund has recommended measures to improve transparency in the management of mining SOEs. Implementation of these measures is according to the Fund 'generally moving forward' (International Monetary Fund 2012, Independent consultant interview).

Key issues

- **The extractive industries in the DRC face challenges regarding transparency and accountability**, as illustrated by the country's recent suspension from EITI. Allegations are common of key mineral and petroleum concessions being sold at below market value to questionable (foreign and local) companies. Reform efforts to improve transparency are hindered by weak and at times absent state institutions, and a large non-regulated artisanal mining sector. Institutional weakness combined with limited monitoring of concessions and enforcement against corruption result in significant revenue losses and/or resource mismanagement.
- **Data on mining activities and taxation are often incomplete or inaccurate**, which can result in gaps between what is owed and what is actually paid. Limited reporting by state owned companies to legislators, and irregularities in concessions trading is facilitated by inadequate statistical systems that monitor real and financial flows. Moreover, multinational companies often make use of commercial secrecy, complex corporate structures, and transfer pricing to negotiate favorable agreements with a view to minimizing their tax burden.
- **"Resource-based Infrastructure Financing" deals require careful scrutiny**. While such deals may be beneficial to the country, the government needs to ensure that such deals are in the country's best interest and in line with market principles. The country's social and economic infrastructure was destroyed during the periods of conflict. Moreover, the country's needs far exceed the available domestic revenues and external assistance provided by traditional donors. Hence, resource-based financing provides additional resource opportunities, but this form of financing involves additional risks but requires expanded and improved oversight mechanisms.

- The conflict in the eastern provinces have resulted in the expropriation and illegal taxation of mineral resources by armed groups (including UN allegations against the Congolese army) and thereby undermining the government's revenue generating efforts. Gold and diamonds are the most common 'conflict minerals', and can easily be smuggled across borders. Initiatives to de-link conflict from the mineral trade (including international efforts to curb demand) are often hindered by a lack of political will, as well as the strong links between armed groups and traders. Oil production in the east, which is not yet significant, but could be in coming years, also risks rekindling communal tensions and border disputes. Campaign groups, such as Global Witness, have also expressed concern about the potential social and environmental impacts of expanding the petroleum sector in the east.

Key resources

[Extractive Industries Transparency Initiative, DR Congo page](#) - Offers information on DRC's EITI implementation, as well as reports and innovations.

[Congomines resource page](#) - A website supported by the Carter Center, with comprehensive information on the mining sector in DRC, including data on contracts, revenues and license

[Democratic Republic of Congo - Ministry of Mines](#) - The official website of the DRC Ministry of Mines

[African Economic Outlook \(2013\) Democratic Republic of Congo](#) - Offers an overview of economic and political governance, and analysis of the DRC's extractive industries

[Democratic Republic of Congo - Ministry of Finance](#) - Contains data and information on DRC's finances

Annex: sources

Key natural resources / extractive activity	<p>UN Environment Programme (2011) DR Congo factsheet Congo Siasa (blog) - post on mining transparency in eastern DRC International Alert report (2010) The Complexity of Resource Governance World Bank Data website- Total Natural Resources Rents (% of GDP) BBC News (2012) Explore DR Congo in maps and graphs Africa Progress Report (2013) Equity in Extractives (DRC p55) UN Security Council (2013) Midterm report of UN Group of Experts on the DRC</p>
Mining	<p>US Geological Survey (2011) Minerals Yearbook - Congo (Kinshasa) Technical Cell of Coordination and Mining Planning (CTCPM) Kimberley Process website- Democratic Republic of Congo page Insitute of Security Studies (ISS) - Coltan Exploration in Eastern DRC Open Society Institute/ Southern Africa Resource Watch (2012) Conflict Gold KITKO website: Ranking of the world's diamond mines ICGLR (2013) Press Release- Launch of certificates of origin of minerals International Crisis Group - Background on conflict minerals in DRC Revenue Watch/ Univ. of Stellenbosch Center for Chinese Studies (CCS) report (2009) Mining weekly (2013) DRC copper export ban will have no real impact McGuirewoods (2008) Regulation of exploration and extraction: DRC McGuirewoods (2013) Current DRC Mining Code Under Revision</p>
Forestry	<p>Global Witness (2012) The art of logging industrially in the Congo World Bank (2013) Deforestation Trends in the Congo Basin Forests Monitor - The Timber Sector in the DRC: A Brief Overview Food and Agriculture Organization (2013) Statistics page (FAOSTAT)</p>
Petroleum	<p>Platform (2010) A Lake of Oil African Economic Outlook (2013) Democratic Republic of Congo International Energy Agency (2009) Oil in Democratic Republic of Congo Global Witness (2013) Congo's flawed oil law should be put on hold</p>
Institutional structure / main government actors / capacity constraints	<p>Revenue Watch website - DRC Overview US Institute of Peace (2007) Developing and Managing Congo's Resources Global Witness (2011) China and Congo: Friends in Need Organization for Economic Cooperation and Development/ African Development Bank (2007) Democratic Republic of Congo</p>
Fiscal regime	<p>International Monetary Fund (2012) 2012 Article IV Consultation- DRC Staff Report Central Bank of Congo website Economist Intelligence Unit (2013) DRC Economy Global Edge: DRC Economy EITI (2013) Press release- Sobering figures on revenues from natural resources</p>
Transparency / accountability	<p>Extractive Industries Transparency Initiative (2010) Democratic Republic of Congo Report Extractive Industries Transparency Initiative (2013) DRC temporarily 'suspended' Global Witness (2012) Corruption risk means IMF right to halt loan</p>

This profile was drafted with input from Government of DRC officials and independent consultants



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Guinea-Bissau

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: None

Main exploration: Bauxite, phosphate, oil

Extractive industries as share of GDP: negligible

Extractive industries as share of revenue: negligible

Summary

Guinea-Bissau has significant resources in the form of phosphates, bauxite, gold, mineral sands and petroleum, as well as deposits of clay, granite and limestone. While bauxite and phosphate deposits have been under exploration for several years, no mineral (or oil) resources have been commercially extracted in any significant quantities. Small-scale exploration is currently underway in the oil sector, but the level of economic activity remains very low.

Overview of key sectors*

Resources	Reserves	Status	Key companies
Bauxite	113 million tonnes	Pending preparation, expected production is 5 million tonnes per year	Bauxite Angola
Phosphate	64 m tonnes at 29% P2O5 [^]	Projected 600,000 tonnes raw phosphate per year	GB Minerals
Oil	Unproven	Exploration	PetroGuin, Eni, Sterling, Marmore
Forestry	2.1 million hectares	2.7 million CUM in 2010	N/A

Source: Guinea-Bissau government officials- interview, Rio +20 (2012), Food and Agriculture Organization (2012), GBminerals website, Mongabay website

* Data on production and exports of natural resources in Guinea-Bissau tend to be scarce and oftentimes conflicting

[^] These reserves also contain 46 m tonnes of phosphate at lower P2O5 levels

Mining

The only extractive industries actively operating in the country are small firms quarrying for construction materials and small-scale alluvial gold mining operations. Five potentially substantial bauxite reserves were

discovered in the southwest of Guinea-Bissau in the 1970s. Surveys conducted at the time suggested the presence of approximately 113 million tonnes of bauxite (African Economic Outlook, 2013). Little progress in terms of resource exploitation was made until 2007,

when the government signed a concession with the Angolan company Bauxite Angola. It paid an upfront fee of \$13 million for a leased mining concession and announced plans to invest \$321 million; a large part of which would be allocated to the development of, a road, and a port (African Economic Outlook, 2013).

The government of Guinea-Bissau only holds a 10% stake in the concession, whereas Bauxite Angola owns 70% and the Angolan government holds the remaining 20%. After Guinea Bissau's coup in April 2012, development of this project came to a halt. But the current government has recently indicated that it wishes to re-negotiate the terms of the contract with Bauxite Angola (Macauhub, 2012). No extraction has taken place to date and there are no indications as to when production is likely to commence.

Phosphate reserves were discovered in the 1970's but have until recently not been mined. A concession was signed in 1997 and a production agreement was in 2009 granted to the Canadian company GB Minerals. It is now focused on advancing a Phosphate Project in Farim in northern Guinea-Bissau, to the point at which exploitation can begin (GBminerals website). The opening of this mine, in addition to a second prospective mining centre in Boé, could have a significant effect on the country's economy and could generate thousands of direct jobs as well as indirect employment (African Economic Outlook, 2013).

Estimates indicate that exploitable high-grade mineral (mainly phosphate) reserves could last up-to 40 years. Lower-grade mineral reserves could last up to 200 years if proven commercially viable.²⁵ Exploration in 1997 also identified an estimated 100 million tonnes of high-grade clay and 400 million tonnes of low-grade limestone, but no concessions have been signed to mine these reserves (African Economic Outlook, 2013).

Petroleum

Several offshore oil discoveries have been made but their commercial viability remains uncertain. Oil companies including Eni, Sterling Energy and Marmore have also test-bored in the north of the country. Large reserves have been found but more tests are needed to determine their commercial viability. Some industry experts note that Guinea-Bissau could potentially produce between 30,000 and 60,000 barrels of oil

per day (African Economic Outlook, 2013). Studies undertaken in 1992 showed a potential of 1.1 billion barrels of heavy oil in a Block Management Zone shared with neighboring Senegal (Rio +20, 2012).

Forestry

Guinea-Bissau has a forest cover stretching across 2.1 million hectares. It makes up 64% of the total land area, which is still unexploited in terms of industrial logging. A gradual reduction of forest cover is occurring as a result of agricultural expansion as well as small-scale and artisanal logging, mainly for domestic use. Other factors that are increasing pressures on biodiversity include deforestation, soil erosion, irregular precipitation and increasing population levels in forest areas.

Some efforts have been made to protect forests throughout the country, including the creation of nature reserves and protected areas, which cover approximately 15% of the country. The government has set a target to reach 24% coverage by 2015 (Rio +20, 2012).

Legal, Institutional and Policy Framework

Mining

The mining industry in Guinea-Bissau is governed by the Mines and Minerals Act of 1999 and managed by the Ministry of Natural Resources and Environment. In 2012, new laws governing oil, minerals and quarry extraction were sent to Parliament, and come in the shadow of other initiatives, such as the ratification in 2010 of the International Convention for the Prevention of Pollution from Ships (MARPOL), applicable to the offshore transport of chemicals, in addition to guidelines for mining and quarrying ((African Economic Outlook, 2013), Rio +20, 2012).

In addition the government is establishing a natural resource management framework to guide the concession of development licenses (International Monetary Fund, 2013). It has also stated its intention to draft a minerals development plan, with the support of UN agencies, as political and social stabilization in the country increases (African Economic Outlook, 2013).

Petroleum

The oil sector in Guinea-Bissau is subject to the Petroleum Law (1982) and regulated by the Ministry of Natural

²⁵ No major geological survey has been undertaken for decades. Such a survey could possibly indicate more extensive deposits.

Resources and Industry. Exploration and production licenses may only be granted to the national oil company PetroGuin, or to PetroGuin in association with foreign companies. To improve good practice in the petroleum and other sectors, the government has expressed interest in collaboration with the Extractive Industries Transparency Initiative (EITI) (African Economic Outlook, 2013).

Forestry

Notable legislation on sustainable land management includes the Land Law of 1975, and a series of environmental laws that were passed in 2011. Among them are the law on the sustainable resource management of forests (Law No. 5) and the framework environment law of 2011 (Convention on Biological Diversity- website). A decree was issued in 2011 to update the legal framework on protected areas for community-based development and use of biological natural resources (African Economic Outlook, 2013). Recent updates to Guinea-Bissau's policy framework include a National Land Management Plan and a National Forest Management Plan (Rio +20, 2012).

Fiscal framework

Production from the bauxite and phosphate mines currently in development in Guinea-Bissau could have significant effects on the country's economy. World Bank estimates indicate that a future mining industry could produce annual tax revenue of \$40 million, \$70-80 million in export earnings and a GDP volume increase from \$90 million to \$170 million (or from 11% to 21% of estimated 2010 GDP) (World Bank, Guinea-Bissau website).

Government recommendations to increase tax rates and boost tax income from mining companies once production starts are under discussion. The government has undertaken other initiatives to promote investment in the country, including revising Guinea-Bissau's investment code. This has, according to the economy ministry, brought a near threefold increase in local and foreign private investment (African Economic Outlook, 2013).

Efforts to increase foreign direct investment have encountered multiple challenges. These include a severely constrained legal and administrative apparatus, political instability and insecurity, and a lack of infrastructure. Guinea-Bissau fell to 179th place (from

178th place in 2012) out of 185 measured countries in the World Bank's Doing Business 2013 report (World Bank, 2013).

Transparency and accountability

Overall, governance in Guinea-Bissau is characterized by a lack of transparency and accountability. Transparency International's Corruption Perception Index for 2012, ranked Guinea-Bissau 150th out of 176 measured countries (Transparency International, 2012). As mining and other natural resource revenues are negligible, Guinea-Bissau is not a signatory to the Extractive Industries Transparency Initiative (EITI), although the government has expressed its willingness to work closely with the scheme.

Civil society activists and organizations are fairly active in Guinea-Bissau, given the relative absence of extractives industries. For example, civil society organizations were vocal in their demands for the government to halt operations at the Saliquinhé phosphate mine in Farim until measures were taken to protect local inhabitants (African Economic Outlook, 2013).

Key issues

- **There are real opportunities for Guinea-Bissau to benefit from exploitation of its mostly untouched natural resources**, which also bring good prospects for job creation. Obstacles preventing the development of extractive industries include institutional and human capacity constraints, political instability, potential corruption in the licensing system, and very large infrastructure constraints. Any future significant mining operations are likely to have to arrange their own power supplies, roads and ports.
- **Guinea-Bissau has limited ability to control the impact of mining on the environment through social and environmental safeguards.** In an effort to reverse this trend, the Ministry of Energy and Natural Resources and the Working Group on Petroleum and Other Extractive Industries (GTP-IE) signed a Memorandum of Understanding in 2010. The MoU aims to promote good social and environmental practices in the development of extractive industries, and has created an office for environmental and social impact assessments.
- **Political instability has also hindered the development of the extractive industries.** A series of military coups,

a divided political scene and continued military influence in political and economic affairs have all dampened foreign investment and institutional transformation. Fragility in the context of Guinea-Bissau is also intimately linked with transnational drug trafficking, which has overwhelmed the ability of the state to perform its functions and deliver basic services.

- **Developing the mining and other extractive industries could bring much-needed infrastructure** to Guinea-Bissau. It could also spur opportunities for industrial diversification and value-addition of minerals. Today about 90% of the country's formal economy is made up of raw cashew nut production. There exists, however, significant potential to use mining revenues for the development of tourism, a biomass industry, as well as fisheries.

Key resources

[African Economic Outlook \(2013\) Guinea-Bissau](#) An overview of Guinea-Bissau's economy and extractive industries

[Rio +20 Conference \(2012\) Guinea-Bissau Report](#): On current development challenges in Guinea-Bissau

[Government of Guinea-Bissau \(2010\) Small Island Developing States Report](#) - Contains information on development in Guinea Bissau

[Government of Guinea-Bissau website](#): The official government online portal (under development)

Annex: sources*

Key natural resources / extractive activity	Economist Intelligence Unit (2013) Guinea-Bissau Government of Guinea-Bissau (2010) Small Island Developing States Report (French) World Bank- Guinea-Bissau website Rio +20 Conference (2012) Guinea-Bissau Report (Portugese)
Mining	GB Minerals company website Macauhub (2012) G-B government wants to renegotiate contract with Bauxite Angola Reuters (2013) Oil-rich Angola plans 3mIn t/yr Bissau Bauxite mine
Forestry	Mongabay (2006) Guinea-Bissau page Food and Agriculture Organisation (2012), Forestry Statistics: Guinea-Bissau Convention on Biological Diversity website- Guinea-Bissau Overview
Petroleum	US Energy Information Administration (2013) Guinea-Bissau data
Institutional structure / main government actors / capacity constraints	African Economic Outlook (2013) Guinea-Bissau page International Monetary Fund- Guinea-Bissau country reports
Fiscal regime	International Monetary Fund (2013) Staff Report for 2013 Article IV Consultation World Bank (2013) Doing Business 2013: Guinea-Bissau
Transparency / accountability	Transparency International (2012) Guinea-Bissau country page

* This profile was drafted with input from officials from the Government of Guinea-Bissau as well as independent consultants



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Guinea

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: bauxite, diamonds, gold, iron ore

Main exploration: oil, copper, base metals

Extractive industries as share of GDP: 21% (2013 est.)

Extractive industries as share of revenue: 21% (2012)

Summary

Guinea is endowed with abundant natural resources including an estimated 30% of the world's reserves of bauxite, vast deposits of iron ore, as well as substantial deposits of gold and diamonds that are mined industrially and by artisanal miners. While economic contributions from petroleum and forestry are currently negligible, the mining industry is a critical provider of both GDP and government revenue. The country has, however, struggled to reach its full potential to effectively manage its natural resources. This is largely a result of institutional constraints and political instability.

Overview of key sectors

Resources	Reserves	Status	Key producing companies
Bauxite	40 billion tonnes	18.5 million metric tons produced in 2011	Alcoa/Rio Tinto/Dadco, CBK
Diamonds	30 million carats	More than 80,000 carats produced in 2013	Gleiter Mining, Artisanat
Gold	More than 700 tonnes	495,000 ounces in 2013 (excluding artisanal production)	Société minière de Dinguiraye, AngloGold Ashanti, SEMAFO.
Iron ore	20 billion tonnes	700,000 tonnes in 2013	Rio Tinto, Bellzone, SMFG, West Africa Exploration (in development)
Oil	Indications of reserves	Exploration is ongoing	Hyperdynamics Corp, Simba Energy
Uranium	Indications of reserves	Exploration is ongoing	Forte Energy

Adapted from: Guinea Embassy USA, US Geological Service (2011) Kimberley Process website, African Economic Outlook (2013)

Mining

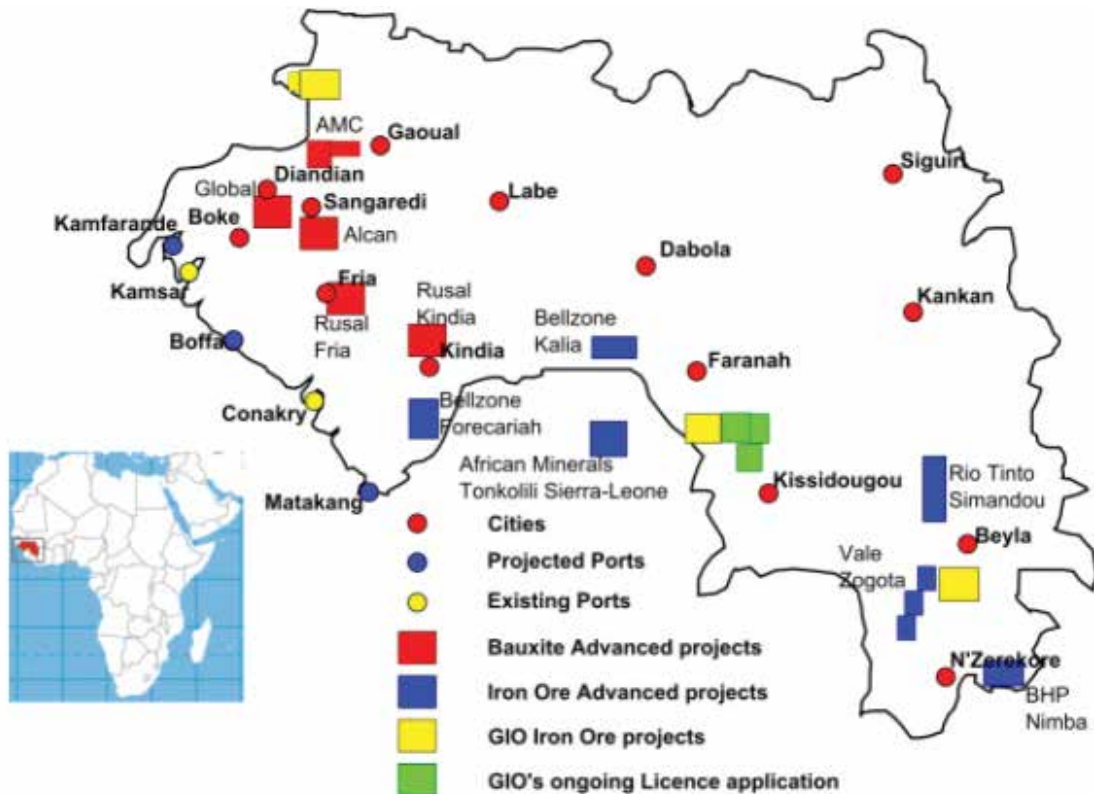
Mining currently makes up c. 13% of Guinea's GDP, 20% of public revenue and 80% of export revenue (GoG). The most important mineral resources are situated in two main geographic zones: the Corridor Bauxitique in the west contains rich bauxite deposits which large mining companies are actively exploiting. The south-eastern Corridor de Minerai de Fer contains over 4 billion tonnes of high grade iron; significant investments are needed to start mineral exploitation and the set-up of related infrastructures in this area. Some forecasts see the sector generating up to \$70 billion in investments, a rise in GDP and the direct or indirect creation of 600,000 jobs in coming years (African Economic Outlook, 2013). Such positive projections may, however, be premature in consideration of Guinea's infrastructure, capacity and governance challenges, as well as uncertain global economic conditions (Wall Street Journal, 2013).

In Guinea, mining potential also includes gold, diamonds, uranium, nickel, calcium, granite, hydrocarbons, petrol and gas. These enormous mineral riches could make

Guinea a choice destination for foreign direct investment; tens of billions of US dollars could be invested in the next 10 – 15 years. If these investments are carried out, the share of the mining sector in GDP could rise to over 50% by 2020 (GoG).

One of the main minerals sought after in Guinea is bauxite. The country holds 30% of the world's reserves and accounts for 94% of African bauxite production (Mbendi, 2013). Compagnie des Bauxites de Guinée, a partially government-owned company, dominates the industrial mining sector, which provides over 10,000 jobs directly and 100,000 indirectly. Little value addition of bauxite takes place in Guinea, but plans to scale-up in-country processing could offer significant revenues. The process, which involves the transformation of bauxite into alumina,²⁶ requires large-scale and economical supplies of energy. In 2012, the only alumina factory in Guinea was closed, but there are plans to build three new plants with a combined processing capacity of 4 million tonnes of alumina per year (Global Edge, 2013).

Major mining sites and companies operating in Guinea



Source: Guinea Iron Ore Limited website

26 This is the first stage in the two-part process of Aluminium production

Growth in the mining sector is also expected to come from the production of iron ore. Guinea has the richest undeveloped high-grade iron ore deposits in the world, and could become a leading producer in the next 5 to 10 years (International Monetary Fund, 2012). Proven reserves in just two (no's 3 and 4) of the Simandou mine's four blocks (held by [Rio Tinto](#)) contain 2 billion tonnes of high-grade iron ore, and the Mount Nimba range holds one billion tonnes (Guinea Embassy, USA).

The US Geological Survey (2011) estimates that production at the Simandou mine is expected to increase real GDP by 15%, although full production at Rio Tinto's Simandou blocks alone could result in a \$5-10 billion annual turnover, thereby doubling GDP. Rio Tinto has delayed the start of production of iron ore, which initially was expected to begin in 2015 (Financial Times, 2013). Production in the remaining two blocks (no's. 1 and 2) is currently on hold, pending corruption investigations and a review of the project's license. BSG Resources was awarded these blocks (which were originally held by Rio Tinto) by the government in 2008, after which it sold 51% of its stake to Brazilian company Vale at an enormous profit (The New Yorker, 2013).

Several gold mines exist in the northeast of the country, and diamond production also takes place in Guinea. Diamonds are mined by at least three semi-industrial operators, as well as artisanal miners. Other undeveloped mineral resources include graphite, limestone, manganese, nickel, and uranium (US Geological Survey, 2011).

Petroleum

The Petroleum Code dates from 1986 and has recently been updated with assistance from the African Development Bank. The new Petrol Code was presented to stakeholders in a workshop in July 2014. It will then be submitted to the relevant authorities for ratification and dissemination (MMG - Ministère des Mines et de la Géologie).

Forestry

Guinea's forestry code dates from 1999, and deals with property rights to forest resources (which are subject to government approved forest management plans), forest protection measures and confirms customary use rights of forest products (Republic of Guinea, 1999). The country also has a wildlife code, which sets out policy on the wildlife protection (Republic of Guinea,

1998), and an environment code, which is relevant to forests as it deals with protection and management of land and water resources as well as pollution control (Republic of Guinea, 1989).

Fiscal framework

The mining sector made up 20% of government revenue in 2013 (MEF 2013). The Guinean Government recently signed a US\$20 billion investment framework with Rio Tinto to develop the rich iron deposit in Simandou (MMG, 2014). These revenues – as with all other foreign revenues from mining companies – are transferred by the Ministry of Finance to the public Treasury account in the Central Bank. The applicable tax rates are set in the Mining Code (2011) and its amendment (2013), which also established a Fund for Local Development, which is to be financed by a share of royalties and fees paid by mining companies (Revenue Watch website).

The investment Code of 1987 (modified in 1995) defines the environment and conditions under which investors can operate in Guinea, as well as entitlements and incentives to attract private investment (Guinea Embassy, USA). The Code is currently under revision. Revenues accrued from investment in the extractive industries are currently not significant and are not placed in any fund designed to manage natural resource revenues. A Special Investment Fund, used to manage one-off revenue payments has however been in place since 2011. It has received \$700 million payment from Rio Tinto thus far (see above), and could be used as a framework for a future sovereign wealth fund (International Monetary Fund, 2012). As the value of the mining sector is expected to surge in coming years, the government has begun to discuss the prospect of establishing stabilization or savings funds for future generations (Independent consultant- interview)..

Transparency and accountability

Guinea has recently made important progress in making its extractive industries transparent and accountable. Access to information is constitutionally guaranteed and openness in the mining sector is steadily improving. Since February 2013 Guinea is auditing and making public all mining contracts (a key provision of the amended Mining Code). The Central Bank also publishes information on production volumes, prices, and the value of mineral exports, while the Ministry of Mines publishes data on reserves as well as the names of all mining companies operating in the country. Information

on production volumes, prices, and the value of mineral exports is provided by the Central Bank. Guinea is also a candidate for the Extractive Industries Transparency Initiative, and is expected to submit a second validation report by December 31, 2013 [Extractive Industries Transparency Initiative website]. In addition, the country is an active participant in the Kimberley Process certification scheme for rough diamonds [Kimberley Process website].

Among the 18 existing mining conventions under review by the technical review committee, one noteworthy agreement is the initial licensing deal for the Simandou iron ore deposit. In 2008, half of the rights for the mine were stripped from Rio Tinto and awarded to BSG Resources, which in turn sold 51% to the Brazilian firm Vale for \$2.5 billion (although only \$500 million has been paid to date). This was a highly controversial deal, and took place with no contractual disclosure or public review. Whatever its actual terms, the sale appears to have been significantly undervalued. The investigation into the BSGR - VALE contract, relating to mining titles and associated corruption charges, has been resolved by the withdrawal of the research permit in Simandou North and the termination of the Zogota agreement by the Guinean government in April 2014.

Key issues

- **Transparency and openness in the extractive industries are improving across the board**, and Guinea has been recognized for making its EITI reports disaggregated by company and revenue streams as well as for making EITI disclosures mandatory by Presidential Decree. Another aim of Guinea's EITI compliance process is for the scheme's data collection mechanisms to become standard government routine. The country publishes all existing mining contracts, and has through its new mining code limited the discretion of decision makers.
- **Mining has the potential to significantly impact the economy and development prospects of Guinea.** While large-scale production is still far off, annual projected revenues from current projects are substantial, and could help eradicate poverty if managed effectively.

But managing such projects (some of which are valued higher than the country's GDP) requires institutional and technical capacity, which is limited in Guinea. Institutional limitations impact its ability to negotiate with multinational companies to obtain fair and sustainable agreements, monitor compliance with existing laws and regulations, mitigate negative environmental and social impacts, and formalize the sector (entire communities still rely on the informal economy of small scale and artisanal mining of gold and diamonds). With large-scale revenues, the government will face additional challenges, including job creation, diversifying the economy and preventing Dutch disease.

- **Political instability has impacted the extractive industries in Guinea.** From as far back as 2006, political turmoil and violence has contributed to delays in much needed investments in Guinea. Conversely, the mining sector has also played a part in perpetuating Guinea's fragility. Mining communities are often reliant on private companies, and not the state, to provide their basic services. This has generated a sense of vulnerability, exclusion and has on occasion caused episodes of political unrest. Mining related tensions between communities as well as ethnic violence have been reported in the northern forest region bordering Liberia, Côte d'Ivoire and Sierra Leone, where high-grade iron ore deposits are found.

Key resources

[US Geological Service \(2011\) Minerals Yearbook - Guinea](#) - On mineral production and deposits in Guinea

[Extractive Industries Transparency Initiative - Guinea \(national chapter\)](#) - Information on transparency

[Republic of Guinea \(2011\) Mining Code](#) - Full text of the revised Mining Code of 2011

[World Bank \(2013\) Country Brief Guinea](#) - Offers an overview of the extractive industries in Guinea

[African Economic Outlook \(2013\) Guinea overview](#) - Gives economic and political analysis and updates

27 For example, tax on dividends are set at 10% and import tax for mining supplies at 8%

28 The Cour des Comptes, currently an arm of the Supreme Court, is expected to be made independent and play an important auditing role.

29 While Guinea is an active member of the Kimberley Process, in 2009 the US Department of State issued a warning of counterfeit certificates from Guinea

Annex: sources

Key natural resources / extractive activity	Global edge (2013) Guinea: Economy Embassy of Guinea in the United States - website African Economic Outlook (2013) Guinea overview Central Bank of Guinea (2010) Annual Report Republic of Guinea Ministry of Planning- National Institute of Statistics
Mining	US Geological Survey (2011) Minerals Yearbook-Guinea Financial Times (2013) Mining code setback to Guinea project Republic of Guinea (2013) Technical Review Committee for mining titles and concessions Global Witness (2013) BSGR's Guinea deal The New Yorker (2013) Buried Secrets Mbendi information services (2013) Mining in Guinea overview Republic of Guinea (2011) Mining Code Rio Tinto (2013) Simandou website International Development Research Centre (2009) Mining in Africa World Bank data website: Total natural resource rents (% of GDP) Guinea Iron Ore Limited website
Forestry	World Bank forestry data website (forests area- % of land area) Republic of Guinea (1999) Forestry code Republic of Guinea (1998) Wildlife code Republic of Guinea (1989) Environment code
Petroleum	Economist Intelligence Unite (2013) Guinea: Oil exploration continues Hyperdynamics website African Economic Outlook (2013) Guinea overview US Department of State (2012) Investment Climate Statement- Guinea
Institutional structure / main government actors / capacity constraints	Wall Street Journal (2013) Guinea Fears 30% Drop in Mining Investment World Bank (2013) Country Brief Guinea African Economic Outlook (2013) Guinea overview Revenue Watch website - Guinea overview West Africa Resource Watch (2008) Natural Resource Management in West Africa Washington Post (2012) Guinean security forces open fire on opposition leader's car
Fiscal regime	International Monetary Fund- documents on Guinea and the IMF African Economic Outlook (2013) Guinea overview International Monetary Fund (2012) Article IV Consultation Staff Report
Transparency / account- ability	Central Bank of Guinea website Extractive Industries Transparency Initiative website - Guinea page ITIEG - Extractive Industries Transparency Initiative - Guinea national chapter Global Witness (2013) BSGR's Guinea deal The Independent (2013) The corruption deal of the century Kimberley Process website- Guinea page US Department of State (2013) Extractives Transparency Partnership Announced

This profile was drafted with input from officials from international financial institutions, independent consultants and CSO's



Haiti

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: gold, nonmetallic minerals

Main exploration: gold, copper, oil

Extractive industries as share of GDP: negligible

Extractive industries as share of revenue: negligible

Summary

Natural resources account for a relatively small share of the Haitian economy. Current activity is mainly restricted to the mining of construction materials. With gold panning and various quarrying, the mineral industry contributed just 0.13% to the value of the country's GDP in 2011 (USGS). However, preliminary exploration results suggest the presence of significant copper and gold resources, which has recently attracted high level national and international attention, even if much more exploration is needed to certify reserves. The launch of production at Pueblo Viejo, a world-class gold deposit in Dominican Republic, and the similarities of the geology between the two territories suggest the mineral potential could be very significant and may bring substantial large benefits to Haiti. The Dominican side of the seam comprises one of the world's largest gold deposits: 23 million ounces worth approximately \$40 billion. Mining could therefore provide a substantial increase in tax revenues and employment.

At present, there are no known hydrocarbon reserves in Haiti and the country is completely dependent on oil imports, primarily supplied through PetroCaribe. The growing uncertainty in Venezuela combined with as of yet unsubstantiated reports that Haiti might hold large oil and gas reserves contributed to a spike in interest in hydrocarbons exploration in Haiti. Since 2012, an estimated 14 oil and gas prospection licenses (onshore and offshore) have been granted to small companies, including Petrogaz Haiti and Paret Petroleum in partnership with Caribbean General Trading. However, exploration has been very limited and there are no reports of seismic surveys being conducted. The legal and institutional framework for upstream petroleum will need to be updated as exploration further develops.

Overview of key sectors

Resources	Reserves	Status	Key companies
Gold	Yet unproven	Ongoing exploration	Eurasian Minerals, Newmont, Venture Limited Majesco/SOMINE, VCS Mining
Copper	Yet unproven	Ongoing exploration	

Oil	Estimates of 3 million barrels in shallow formation offshore	Three companies have applied for exploration permits: 1. A Haitian-Trinidadian consortium won six permits covering 2,991 km ² . 2. A Haitian-American consortium has applied for seven licenses (case finalized). 3. An American company has applied for one license (case under consideration)	Paret Petroleum in Association with Caribbean General Trading and, Petrogaz - Haiti
Source: media, company websites, government sources			

Legal, Institutional and Policy Framework

There is currently very limited oversight of exploration and extraction activity in Haiti. The Bureau of Mining and Energy (BME), part of the Ministry of Public Works, has limited capacity and needs to be strengthened in view of monitoring the development of the industry. The legal framework is also ill-prepared for the anticipated rapid growth in the mining sector. Haiti is currently in the process of drafting a modernized mining law with work on the regulatory regime to follow.

A Mining Forum organized by the Haitian government together with the World Bank in 2013 aimed to “develop the mining sector in a way that makes it a motor for the country’s economic takeoff.” This event brought together national stakeholders and international experts, and promoted dialogue on challenges and opportunities of developing the mining sector. Further consultations are expected in the coming months.

Transparency and accountability

Haiti is not a member of the Extractive Industries Transparency Initiative (EITI), and ranks 163 out of 177 on Transparency International's corruption index. As production is currently limited to quarrying and very small-scale artisanal mining, payments to the government in taxes or royalties are very limited and often not reported. Still, the EITI initiative has been raised when discussing the reform of the country’s mining sector.

Participation and inclusion of local communities in mining agreements has been extremely limited, but the new draft Mining Law promotes community engagement by proposing site-specific Community Development Agreements (CDA), which will be signed between the mining companies and representatives of mining local communities.

Key issues

- In order to attract investors and ensure maximum benefit to all Haitians from exploitation of the Country’s mineral resources, a new mining law reflecting international best practice needs to be finalized. The approval of such a law by the Parliament would be a major step towards the development of the mining sector.
- In addition, there is a significant need to build institutional capacity. A better equipped and trained public administration is needed to ensure that the sector is managed in an open, transparent and sustainable way. Typically, setting up a mining cadaster based on non-discretionary procedures and open to public consultation is essential to ensure transparency in the management of mining rights and investment security.
- Also, to promote the responsible development of the mining sector, the government needs to improve its geological knowledge base. This entails the implementation of a geological program to improve knowledge of Haiti’s mineral potential and enhance the understanding the country’s sub-soil, including potential geohazards.
- Dialogue with stakeholders should be promoted to improve the general understanding of the sector, manage doubts and expectations it creates, promote a shared vision of the exploitation of national resources, and seek ways to maximize the beneficial impact in the long term. Building capacity for social and environmental mitigation of impacts and implementation of benefit-sharing arrangements with affected communities, using mechanisms such as CDAs, will be critical.

Annex: sources

Key natural resources / extractive activity	http://www.huffingtonpost.com/2012/05/12/haiti-gold-mining-_n_1511485.html http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-dr-ha.pdf
Mining	http://www.theguardian.com/global-development/poverty-matters/2012/may/30/haiti-gold-mining http://politicsofpoverty.oxfamamerica.org/2013/06/mining-development-in-haiti-a-golden-dream-or-nightmare/
Forestry	http://www.theguardian.com/world/2013/mar/28/haiti-plant-millions-trees-deforestation
Petroleum	http://www.paretpetroleum.com/foreign-operations/haiti-oil-gas-exploration
Institutional structure / main government actors / capacity constraints/ Fiscal regime	http://www.mining.com/ngo-warns-upcoming-mining-law-in-haiti-will-leave-20bn-of-mineral-wealth-in-foreign-hands-73216/ http://www.globalresearch.ca/haiti-grassroots-groups-afraid-attractive-mining-law-could-open-country-up-to-systematic-pillage/5345211
Transparency / accountability	http://www.theguardian.com/global-development/poverty-matters/2014/jan/21/haiti-untapped-mining-resources-benefit-poor



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Liberia

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: Timber, iron-ore, gold and diamonds

Main exploration: iron-ore, gold, diamonds and petroleum

Extractive industries as share of GDP: 20% (2012)

Extractive industries as share of revenue: Approximately 11% (2012)

Summary

Today mining and forestry account for sizable shares of the Liberian economy – with mining at 12.5% of GDP and forestry at 7.5% of GDP in 2012 (International Monetary Fund, 2013). These figures are expected to rise further as mines that are currently under development enter production and the logging industry reaches its full potential. Multinationals dominate the iron-ore industry, while the gold industry mainly consists of small-scale alluvial mining. Mining activities constituted almost 25% of GDP and more than 60% of exports in the 1960s and 70s, but all large-scale mining activities ceased during the Liberian civil war and a UN ban on Liberian diamond exports stopped much of the alluvial diamond mining. Logging contributed 20% of GDP in the early 2000s, but declined after a UN moratorium was placed on logging in 2003 to prevent revenues from fuelling the civil conflict. In 2006, the government also undertook a major review of all existing concessions. Out of 105 contracts reviewed, it recommended 36 for cancellation and 14 for renegotiation (African Capacity Building Foundation, 2013). Logging activities resumed in 2009 but a temporary moratorium affecting timber exports harvested with Private Use Permits (PUPs) is currently in place.

Main minerals, hydrocarbons and timber under production or exploration

Resources	Exports	Status
Iron-ore	26% of total exports, valued at \$117m (2012)	One iron-ore mine is currently exporting iron-ore and four are in the development stage.
Gold	6% of exports, valued at \$20m (2012)	Alluvial gold production is in progress. Several exploration companies are currently exploring the potential for industrial scale production.
Diamonds	40,000 carats, valued at \$15m (2012)	Alluvial diamond mining in progress.
Forestry	94,600m ³ , valued at \$3.4m (2011)	80 contracts awarded, of which 6 are active in 2013. Moratorium on Private Use Permits limiting exports
Petroleum	N/A	17 oil exploration blocks contracted off Liberia's coast.

Sources: African Economic Outlook (2013), Ministry of Finance (2013) 2012 Economic Review

Overview of key sectors

Mining

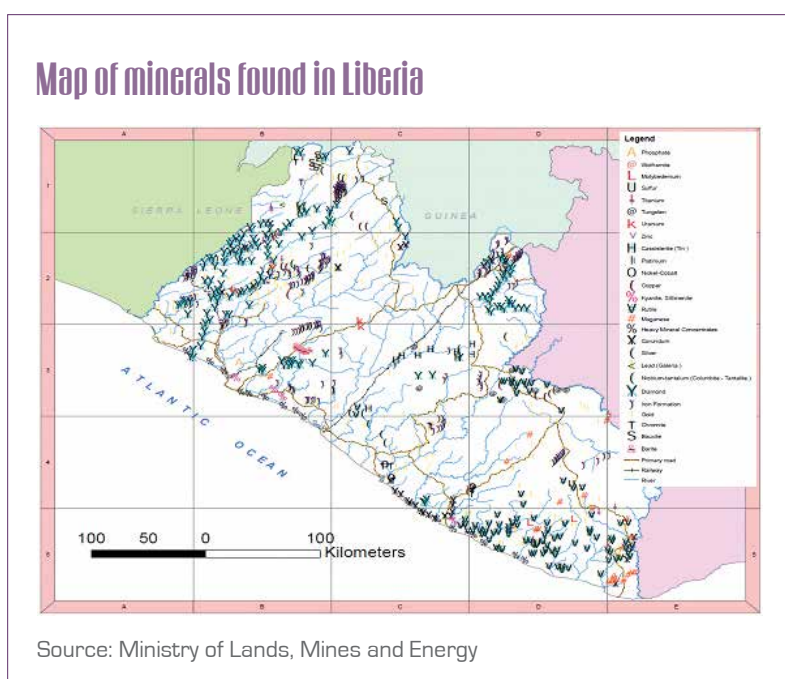
Liberia has a rich mineral endowment, and production currently includes iron-ore, diamonds, and gold. Other mineral resources not currently being mined include base metals (copper, zinc), platinum group metals, uranium, coltan, bauxite, and phosphate (World Bank, 2008). The Liberia chapter of the Extractive Industries Transparency Initiative (LEITI) lists 590 Class C mining license holders (small-scale), 20 Class B license holders (semi-industrial), and 43 exploration license holders.

Iron-ore

Iron-ore exports from the Yekepa mine in Nimba county reached 4 million tonnes in 2012. Several other iron-ore projects are under development, which will substantially increase production in the medium-term. Royalties rose from approximately \$0.65 million in 2011 to more than \$6 million as of December 2012. This upward trend may, however, be tempered by a decline in demand for iron ore, particularly in China which is one of the main export destinations (Ministry of Finance, 2013). The Iron-ore industry is nevertheless rapidly growing and likely to be a major contributor to the economy in the medium-term. The Yekepa mine is currently exporting iron ore and four additional companies hold development agreements, with total investments in the range of \$8 billion (Arcelor, 2013, Ministry of Finance, 2013).

Gold

Gold production in Liberia is centered on alluvial gold mining, and carried out by small-scale miners, making the sector an important source of employment. It still makes up a relatively small share of the economy with royalties on gold in the range of \$750,000 in 2012. Several prospective large-scale (class A) gold projects are under way. The farthest advanced is the Aureus New Liberty mine, but AmLib and Hummingbird Resources also hold commercially viable projects that are likely to go into production (Ministry of Finance, 2013, Aureus, 2013)



Current Mineral Development Agreements for Iron-Ore

Resources	Reserves	Status	Key companies
Diamonds	40 million carats	304,000 carats produced in 2011	West African Diamonds, Stellar Diamond plc
Gold	Est. 1000 tonnes	15,695 kgs produced in 2011, (not including artisanal production)	Nord Gold, AngloGold Ashanti, SEMAFO.
Iron ore	9.4 billion tonnes	Anticipated 10 Mt/yr by end 2013	Bellzone Mining, China International Fund, Rio Tinto, Vale, BHPB, Newmont, Sable Mining
Oil	None	Exploration is ongoing	Hyperdynamics Corp, Dana Petroleum, Simba
Uranium	17.7 tonnes	Exploration is ongoing	Forte Energy NL

Adapted from: Guinea Embassy USA, US Geological Service (2011) Kimberley Process website, African Economic Outlook

Main Gold Projects

Project	Company	Size of Deposit	Total investment	Status
New Liberty	Aureus (UK)	924,000 ounces (26t) at 3.4g/t*	\$100m	MDA in place, exploration phase
Kokoya	AmLib (Liberia)	77,600 ounces (2.2t) at 3.7 g/t	\$35m	MDA in place, exploration phase
Dugbe	Hummingbird (UK)	3.8 million ounces	N/A	Exploration phase

Source: Company websites

* This deposit also includes 1,143,000 ounces (32t) at 3.63 g/t and 593,000 ounces (17t) at 3.2 g/t

Diamonds

In 2007 the UN lifted its moratorium on Liberian diamond exports. Today, the diamond industry is dominated by alluvial diamond mining by small-scale miners, but is poorly regulated, as laws are inadequately enforced. Approximately 50,000 - 100,000 artisanal diamond producers work in Liberia (Africa Progress Report, 2013). Exports were roughly \$15 million in 2012, and gave rise to royalty payments of about \$300,000 in the same year. As of 2007, Liberia is a member of the Kimberley Process certification scheme to prevent trade in so called 'blood diamonds'. In recent years, the country has been criticised for a lack of commitment to its implementation (Kimberley Process, 2013, AllAfrica, 2012).

Petroleum

Liberia has 17 deep-water offshore oil blocks available for exploration. Ten of these are currently under contract, two are under review, and five have not yet been awarded (NOCAL website). Although exploration is proving promising, no confirmed commercial reserves have been discovered yet. Even if commercial reserves are confirmed, it would take at least five years before production could begin (Frontpage Africa, 2012).

The National Oil Company of Liberia (NOCAL), is Liberia's state-owned enterprise in the oil sector. It was established in 2000 and manages all national interests in the hydro-carbon sector. It also conducts the contract management for all current exploration blocks. Principal contract holders include African Petroleum, Anadarko, Chevron, ExxonMobil, and Canadian Overseas Petroleum (Liberia Connection Africa, 2012).

Forestry

The country has a total of 4.3 million hectares of forest, which make up 40% of West Africa's total forest reserves (Liberia Forestry Development Authority). Liberia is also in the process of establishing a network of protected areas, which will encompass 30% of the current forest cover. The forestry sector is a historically important source of revenue and employment in Liberia, and has expanded since the UN moratorium on timber exports was lifted in 2009. This upward trend was, however, muted by a government issued moratorium on Private Use Permits (PUP's), which has again limited timber exports.

According to a report by a UN Panel of Experts, the use of PUP's provided an unregulated and often illegal

Forestry contracts in Liberia

Category of concession	Total hectare	Active	Inactive	Total contracts
Forest management contracts	1,007,459	3	4	7
Timber sales contracts	50,000	3	7	10
Private use permits (suspended)	2,532,460			63
Total	3,589,919	6	11	80

Source: Ministry of Finance (2012) 2013 Economic Review

means of bypassing the formal concessions process (UN Security Council, 2012). Illegal logging, even after the moratorium was put in place, remains a significant challenge in Liberia. Laws to prevent the illegal felling of timber are often bypassed, and in many instances local communities sell forestland to palm oil firms without the prior approval of the government (Government of Liberia officials- interview).

Liberia's formal forestry sector is nevertheless significant, and has attracted investment from both foreign and domestic firms. A total of 80 forestry concessions have been awarded since 2009, covering 3.6 million hectares of land and contributing about 7.5% of GDP, or \$161 million (Ministry of Finance, 2012).

Legal, Institutional and Policy Framework

Mining

The Ministry of Lands, Mines and Energy is the overall regulator of the mining sector, which has seen a revamp of policies and laws in recent years. Notable examples include the Mineral Policy (2010), which sets the overall policy for the mining sector, and the Minerals and Mining Law (2006). The law, which outlines legal requirements for the industry, is in the process of being revised with assistance from GIZ. Miners, as well as other stakeholders, are currently participating in consultations with the government to ensure that the law reflects current needs and realities (Government of Liberia officials- interview).

Petroleum

The governance structures for the petroleum sector are still under development. A new National Petroleum Policy was completed in 2012, and an updated National Reform Petroleum Act is expected to become law shortly. It was approved by the Liberian Senate and is currently out for public consultations. The law contains sections on transparency that may influence the future drafting of sector legislation, and would if passed, allow for the sale of future offshore and onshore oil blocks (The New Dawn, 2013). It also mandates the separation of regulatory and operational functions between NOCAL and a new independent regulatory body (Global Witness, 2012).

Forestry

The tender process for forest management and timber sales contracts is conducted by the Forestry

Development Authority (FDA), which is the agency that issues licenses and oversees regulations, in accordance with the amended Public Procurement and Concessions Act (2010). The National Forestry Reform law of 2006 and the community rights law of 2009 are also important parts of the legal framework for forestry management. While these laws have been described by the UN Security Council (2012) as "a model for post-conflict resource management", the moratorium on PuP's demonstrate that they are not being adequately enforced. Establishing a robust legal and regulatory framework for forestry was a condition for lifting the UN sanctions on Liberian forestry products.

Fiscal framework

The Liberia Revenue Code (revised in 2010) is the main framework for taxing the mining sector. The IMF has labeled it an adequate code that can "yield returns comparable to international standards" (International Monetary Fund, 2012). However, many concession agreements, particularly in the forestry sector, have been signed with more generous terms than those provided for in the revenue code (African Capacity Building Foundation, 2013). Concerns exist about compromised due diligence, resulting in exploitative arrangements and non-payment of tax to the government (Global Witness, 2012). As of March 2013, logging companies were claimed to owe the government \$35 million in back taxes (UN Security Council, 2012).

In efforts to improve fiscal management, a Natural Resource Tax Unit is in the process of being established in the Liberian Revenue Authority, with Australian technical support. It is expected to improve the monitoring of concessions and the auditing of natural resource companies operating throughout the country (Australia - Africa Partnership Facility, 2013). Fiscal conditions are also set in the Liberia Revenue Code, (revised in 2010) as well as in the Model Mineral Development Agreement. The Amended and Restated Public Procurement and Concessions Act (2010) is the law that governs the system for concessioning known state mineral assets.

Transparency and accountability

Over the past few years, Liberia has witnessed an improved climate of transparency, and improved its position in Transparency International's annual Corruption Perception Index. From being ranked 137th

out of 158 countries in 2005 it reached 75th place out of 176 surveyed countries in 2012 (Transparency International, 2013). And in a display of commitment to transparency, Liberia was the first West African country to pass a comprehensive Freedom of Information Act, and the first African country to become EITI compliant. LEITI, the Liberian chapter of EITI publishes annual reports on all resource revenues, and most recently released a Post contract award process audit report (LEITI, 2013).

The report demonstrated that while comprehensive legal frameworks do exist, corruption and accountability in the extractive industries remain serious challenges. The audit looked at 68 contracts awarded between July 2009 and December 2011 by the Ministry of Agriculture, NOCAL, the FDA, and the Ministry of Land, Mines and Energy. It found that only about 10% of the contracts awarded were in compliance with applicable norms, 37% were partially compliant, and 53% did not follow a significant number of applicable regulations, including competitive bidding (LEITI, 2013).

Key issues

- Liberia's extractive industries are becoming increasingly transparent. LEITI's Post Contract Award Process Audit Report has received much praise and spurred national debate, although there has been no action on audit recommendations as of yet. But institutions still lack the mandates and resources to combat corruption and promote participatory decision-making. In addition, there is a general lack of information about the market value of the Liberia's natural resources. This can have a detrimental impact on the ability of officials to negotiate favourable agreements with powerful companies.
- The credibility of Liberia's forestry reform programme is under threat. Despite achievements in building institutions, adopting laws, devising policies, and combating corruption in the sector, the practice of granting large logging rights under PUPs has

allowed for companies to circumvent concessions procedures. A moratorium on PUPs is currently in place, but failure to address the causes of illegal logging can jeopardize revenue flows and prospects for a sustainable logging industry.

- Liberia faces the challenge of building a solid revenue management regime, ahead of prospective large scale resource flows, mainly from the oil and iron-ore industries. Managing rising revenues will require not only capable and responsive institutions but the capacity and legitimacy to implement the laws, policies, and projects they undertake. Optimizing taxation and finding an appropriate balance between saving and spending are among the principal challenges ahead.
- Little value addition to Liberia's natural resources takes place in-country, limiting both revenue prospects and employment opportunities. The government is keen to promote processing of resources in Liberia, but poor infrastructure and the high cost of utilities makes it difficult to attract the right forms of investment. Liberia remains among the most aid-dependent countries in the world, despite its natural resource wealth.

Key resources

[Ministry of Mines, Lands and Energy](#) - Offers a sector specific overview, including policies and laws

[Forestry Development Authority](#) - Provides information and documents on forestry in Liberia

[National Oil Company of Liberia \(NOCAL\)](#) - Offering company information and an oil sector overview

[Liberia Extractive Industries Transparency Initiative \(LEITI\)](#) - A key resource on transparency in Liberia

[Ministry of Finance](#) - Website with information about the ministry, acts, rules and financial reports

Annex: sources

Key natural resources / extractive activity	World Bank (2008) Diagnostic Trade Integration Study on Liberia Ministry of Finance (2013) 2012 Annual Economic Review National Investment Commission - Concessions in Liberia Africa Progress Report (2013) Equity in Extractives African Capacity Building Foundation (2013) Africa Capacity Indicators, 2013
Mining	Kimberley Process (2013) Liberia website Arcelor Mittal (2010) Building a world class mining business Ministry of Mines, Lands and Energy website CNW Newswire (2010) Restated and Amended Mineral Development Agreement Amlib Holdings (2012) press release Aureus mining (2013) New Liberty gold project Allafrica.com (2012) Liberia: US threatens pullout
Forestry	Forestry Development Authority website Global witness (2013) Logging in the shadows Global Witness 2012) Signing their lives away: Liberia's Private Use Permits UN Security Council (2012) Final report of the Panel of Experts on Liberia
Petroleum	Frontpage Africa (2012) 'Significant' Oil Discovery in Liberia The Liberia Connection Africa (2012) Liberia's oil blocks National Oil Company of Liberia (NOCAL) website National Petroleum Policy for Liberia (2012) The New Dawn (2013) House Convenes Emergency Oil Session Global Witness (2012) Liberia's Draft Petroleum Policy Paper
Institutional structure / main government actors	Mineral Policy of Liberia (2010) Revenue Watch website, Liberia page
Fiscal regime	Ministry of Finance website - Fiscal reports page Ministry of Finance (2013) 2012 Annual Economic Review International Monetary Fund (2013) 2012 Liberia Article IV consultation report Australia-Africa Partnership Facility (2013) Activity start-up brief
Transparency / accountability	Liberia Extractive Industries Transparency Initiative (LEITI) website LEITI (2013) Post Contract Award Process Audit report Transparency International (2013) Corruption Perceptions Index Policy Innovations (2013) Combating Corruption in Liberia

This profile was drafted with input from officials from the Government of Liberia, independent experts and consultants



Papua New Guinea

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: Oil, gold, copper, timber

Main exploration: Natural gas, copper

Extractive industries as share of GDP: 32% in petroleum and mining (2010)

Extractive industries as share of revenue: Approximately 35%

Summary

Papua New Guinea has a well-developed mining sector, which has been the mainstay of the formal economy for some time. Gold and copper are the country's principal mining exports but Papua New Guinea also boasts a significant petroleum sector, as well as substantial forest resources, which are mostly unexploited. Natural resources make up an important part of both GDP and government revenue. Total oil, natural gas, mineral and forest rents accounted for 36% of GDP in 2011 (World Bank, 2011). While recognizing these contributions to the economy, there is ample scope to improve institutional governance as well as revenue management in the various extractive industries.

Overview of key sectors

Resources	Reserves	Status	Key companies
Oil	575.5 million barrels	Produced 27,500 thousand barrels per day in 2012	Talisman, ExxonMobil, Oil Search, InterOil
Gas	22.5 trillion cubic feet*	In development, and expected to begin production late 2014	ExxonMobil, Oil Search Ltd, Santos Ltd
Gold	Estimated reserves 26.6 million ounces	Produced 57 tonnes in 2012	Morobe Mining Joint Ventures Barrick Gold, Central West Gold
Copper	Estimated reserves 9 million tonnes	Produced 130,4 tonnes in 2011	Bougainville Copper
Silver	N/A	Produced 90 tonnes in 2011	Newcrest Mining
Timber	29 mn ha forest cover, 62 ha plantations	\$153 million in revenue per year	Rimbunan Hijau

Source: Chamber of Mines and Petroleum (2012), Thomson Reuters (2013), PNG Forest Authority website, Transparency International (2011), US Energy Information Administration, PNG Treasury (2010)

* This figure is commonly cited by international organizations and NGO's, but Revenue Watch puts it at 8 trillion cubic feet

Mining

PNG is rich in gold, copper and silver and has a well-developed mining sector, which accounts for the majority of export earnings. Mineral revenues were estimated at 6.1% of GDP in 2012 but are projected to shrink to 5.1% in 2013 and 3.2% of GDP in 2015 (International Monetary Fund, 2012). As of 2010 there were nine major mines in active operation, four of under development, and eleven at an advanced stage of exploration (PNG Treasury, 2010). In recent years there has been major capital expansion at three world-class mines, and exploration activity is also on the rise. There were 282 exploration licenses in place in 2012, as well as 394 outstanding applications (PNG Chamber of Mines and Petroleum, 2012).

The mining sector formally employs over 30,000 individuals. Conversely, the informal sector is estimated to employ approximately 80,000 artisanal miners, most of which mine for gold (PNG Chamber of Mines and Petroleum, 2012). The formal mining sector in PNG may see an expansion from an increase in deep-sea mining. In the face of some criticism from campaigners, the government approved the world's first commercial deep-sea mining project in 2012. Canadian firm Nautilus Minerals was granted a 20-year license to extract high-grade copper and gold from an area 1.6km beneath

the Bismarck sea, and 50 kilometres off the coast (The Guardian, 2012).

Petroleum

Historically, PNG has been a modest oil exporter. PNG began crude oil production in 1991, and commenced production from its first oil refinery in 2005. Net exports were estimated at no more than 7400 barrels per day in 2012. In the same year crude production amounted to 27,000 barrels per day, while refinery capacity was 33,000 barrels per day (US Energy Information Administration, 2012).

Although oil production has been in slow decline for some years, exploration is still at an all-time high. Work is underway to commercialize the country's estimated 22.5 trillion cubic feet of natural gas reserves through the construction of a liquefied natural gas (LNG) production facility. The PNG LNG project will add about 20,000 barrels per day of liquids once production commences in late 2014. It is expected to reach full capacity in 2015, and yield a maximum of 6.6 millions tonnes of LNG annually. This large undertaking is estimated to boost real GDP by about 20%, with fiscal revenues projected to materialize in 2018 and peak in 2024 (International Monetary Fund, 2012).

Map of minerals found in Liberia



Source: Ministry of Lands, Mines and Energy

Forestry

PNG is estimated to have more than 29 million hectares of forest cover. More than 62,000 hectares of these forests are made up of plantations, while 59% of the country's land area is covered by primary forest³⁰. This abundance of forest resources makes the sector an important contributor to PNG's economy. It employed approximately 7000 people in 2007 (PNG Forest Authority website) and annually generates around \$153 million dollars to state coffers (Transparency International, 2010). However, a significant part of commercial logging activities are believed to be illegal. In 2004, the World Bank put that figure at 70%, a claim that is strongly denied by PNG authorities (Greenpeace PNG website).

In addition to the prevalence of illegal logging, the commercial timber industry put the official forest depletion rate at 2.6% per year in 2010 (PNG Treasury, 2010). 29 forest concessions are currently in production, most of which are dominated by large multinational corporations.³¹ Export figures from the Food and Agriculture Organization of the UN show a sharp increase in the export of total forest products, which were estimated to be worth \$754 million in 2012.

Legal, Institutional and Policy Framework

Mining

The mining Act of 1992 and the [Mineral Resources Act of 2005](#) are the main pieces of mining legislation, and include specific requirements and principles that guide the sector. Central institutions include the Mineral Resources Authority, which acts as the industry regulator, and the Chamber of Mines and Petroleum, which is the industry body representing the mining and petroleum industries. Another important actor in the mining sector is [Petromin PNG Holdings Ltd](#), a state-owned company managing the government's equity in mineral and petroleum projects (Independent consultant- interview).

Petroleum

The Chamber of Mines and Petroleum has an official representative function in PNG's petroleum industry, while the Department of Petroleum and Energy is responsible for its management, in accordance with the [Oil and Gas Act of 1998](#) (amended in 2001). This act has drawn a degree of controversy, with regards to inadequate representation of landowners, as well as the regulation and distribution of benefits (Australian National University, 1998). Questions of ownership of minerals and petroleum resources in PNG have been difficult for some decades due to the country's distinctive form of land tenure. Approximately 97% of PNG's land mass is designated as customary land; technically owned and controlled by communal or clan commons (PNG Treasury website, 2010), Independent consultant- interview).

Forestry

PNG's Forest Authority has regulatory and administrative responsibility for the management of PNG's forest resources. The forestry sector is subject to the [Forestry Act 1991, most recently amended in 2010](#), in addition to the National Forestry Development Guidelines. Other important standards and regulations include the Planning, Monitoring and Control Procedures, the Key Standards for Selection, the PNG Logging Code of Practice, the National Forestry Plan, Procedures for Exporting Logs, and the Forestry Regulations of 1996.

This comprehensive legal and policy framework, while extensive, suffers from frequent gaps in implementation and compliance with logging legislation (Forest Trends, 2006). A lack of capacity among institutions such as the Department of Environment and Conservation, the Registrar of Land Groups, and the [PNG Forestry Authority](#) has also limited stakeholder participation in regulation processes (Transparency International, 2011).

Customary land ownership is guaranteed by PNG's constitution and is a key factor influencing the use of the forests. Traditional landowners participate in the

Papua New Guinea	Forest Products + (Total)				
	2008	2009	2010	2011	2012
Export value (1000 US\$)	558,878.00	369,177.00	513,930.00	759,356.00	754,186.00

Source: Food and Agriculture Organization Statistics Website (FAOSTAT)

³⁰ This figure refers to non-disturbed, aged forest, surveyed in 2010

³¹ Five companies control approximately 80% of PNG's total forestry market

processes by which the Forest Authority purchases timber rights but are, however, not very involved in the management and development of the resources. In recent years, a significant amount of customary land has been leased to private interests under a controversial Special Agricultural Business Lease (SABL) scheme. This program has been met with much opposition from campaigners who argue that it will fail to benefit customary land holders, and further compound illegal logging (Greenpeace, PNG website).

Fiscal framework

The mining and petroleum industries contribute over one third of government revenue, according to the [PNG Chamber of Mining and Petroleum \(2012\)](#). In 2010, oil and gas alone accounted for 23% of the government's take (Revenue Watch PNG page). Government equity backing allows the state to acquire up to 30% equity interest in mining projects (Pacific Community Secretariat, 2011).

In spite of these relatively high figures, PNG's tax intake from natural resources is on the low side, compared to other fiscal regimes across the world (International Monetary Fund, 2012). The country does not have a clear framework for revenue collection (Revenue Watch PNG website). In addition, windfall savings from natural resource exports have not been well managed. According to the World Bank there are over 20 ineffective and insecure trust accounts in operation (World Bank Institute, 2012). In 2012, however, the National Parliament passed legislation to create a consolidated pool of two offshore funds. The government has stated that these funds, one for stabilization purposes and one for development, will be designed in accordance with international best practice. The Treasury is also considering the prospect of setting up a sovereign wealth fund for gas and minerals to mitigate the effects of global market price shocks (Economist Intelligence Unit, 2013).

Transparency and accountability

PNG has officially expressed interest in implementing the Extractive Industries Transparency Initiative (EITI) but it is not yet a signatory. The government has set a target to become an EITI Candidate country by end-2013, but thus far, mining contracts are not published, and the details of negotiations are not disclosed. Neither the Mineral Resources Authority nor the

Internal Revenue Commission publishes information on resource revenues (Revenue Watch PNG website). Moreover, audits tend to be conducted on an ad hoc basis and independent monitoring is not commonplace. These limits on openness are not in any direct violation of specific laws, although freedom of information is recognized by PNG's Constitution.

While it is difficult to measure the extent of corruption in the extractive industries, a Transparency International survey found that 76% of respondents identified corruption in the public sector as a serious problem. Corruption in the forestry sector is particularly common and involves inadequate regulation and licensing. Only 10% of all exported timber is subject to random inspection, and royalty payments to resource owners are rarely inspected or audited by an independent body (Transparency International, 2011).

To address these issues, PNG put in place a National Anti-Corruption Strategy in 2011, which is accompanied by a National Anti-Corruption Plan of Action to support its implementation. A key part of this strategy is the creation of an Independent Commission Against Corruption (ICAC), which parliament is expected to approve in late 2013. The commission, if created, would receive and consider complaints of alleged corruption and have the power to prosecute offenders (National Anti Corruption Strategy, 2013).

Key issues

- **Papua New Guinea has an unusual and complex land tenure system**, which has led to disputes over resource ownership. Such disputes have the potential to discourage investors and complicate revenue management. Today, approximately 5 million hectares of customarily owned land, roughly 10% of the country's landmass, has been leased to foreign companies under Special Agricultural Business Leases (SABLs). Most leases run for 99 years, and campaign groups argue that they will fail to benefit the customary, mainly indigenous landowners and contribute to already widespread illegal logging. A commission of inquiry into the scheme was established in July 2011. It has released an interim report, but not yet presented its final findings, thereby drawing further criticism from campaigners.
- **Corruption is a major challenge in PNG**, particularly in the forestry sector. The country was ranked 150

out of 175 countries surveyed in Transparency International's 2012 Corruption Perceptions Index. Insufficient independent monitoring and auditing of exports, the exploitation of loopholes in the legal system and weak policy implementation have all led to the loss of state revenue, and reduced benefits for resource owners.

- **Illegal logging and deforestation in PNG are common**, although there is some disagreement surrounding the actual scale and scope of the problem. Most commentators still agree that the problem is significant, and is fuelled by weak institutions, corruption and insufficient oversight. There is also a lack of information about forest resources, logging activities and major contracts among the general public.
- **There is a risk of elements of Dutch disease developing** as a result of the construction of the LNG project, which is strongly driving exchange rate appreciation. This may come to hurt the rural sector if agricultural prices are unable to keep up with these

new developments. The IMF suggests infrastructure support for rural areas and a sequencing of projects to avoid capacity constraints and mitigate the risk of Dutch disease.

Key Resources

[Papua New Guinea Forestry Authority website](#) - Offers an overview of the management of PNG's forests

[International Monetary Fund \(2013\) Macroeconomic Effects of Natural Resource Extraction: Applications to Papua New Guinea](#) - Reviews the economic benefits and shortfalls of resource extraction

[Transparency International \(2011\) Forest Governance Integrity Baseline Report: PNG](#) - A comprehensive study on the forest sector in PNG

[Revenue Watch website: Papua New Guinea page](#) - An overview of institutional and fiscal challenges

Annex: sources

Key natural resources / extractive activity	World Bank PNG country website Energy Pubs (2013) Annual PNG Industry Overview World Bank (2011) Natural Resource Rents International Monetary Fund (2013) Macroeconomic Effects of Nat. Res. Extraction
Mining	PNG Treasury (2010) Dept of Planning and Monitoring: Med. Term Development Plan PNG Chamber of Mines and Petroleum (2012) mining page The Guardian (2012) Papua New Guinea's seabed to be mined for gold and copper US Geological Service (2011) Minerals Yearbook: Papua New Guinea PNG Mineral Resources Authority website Mineral Resources Act (2005) Thomson Reuters (2013) Gold Survey Mineral Resources Authority (2012) Geological framework and mineralization of PNG Petromin PNG Holdings Limited website
Forestry	International Tropical Timber Organisation (2005) PNG Country profile Greenpeace website: forest destruction in Papua New Guinea Papua New Guinea Forestry Authority website Transparency International (2011) Forest Governance Integrity Baseline Report: PNG Forest Trends (2006) Logging, legality and livelihoods in Papua New Guinea Illegal logging portal, website: PNG overview Food and Agriculture Organization statistics website (FAOSTAT) PNG United Nations - REDD Programme website
Petroleum	The Oil and Gas Act of 1998 PNG Chamber of Mines and Petroleum - Petroleum page Australia's National University (1998) Land Groups in the Oil and Gas Act 1998 (Ch.8) US Energy Information Administration website - PNG country page
Institutional structure / main government actors / capacity constraints	Economist Intelligence Unit (2013) Papua New Guinea page Transparency International website - PNG page New York Times (2010) Riches May Not Help Papua New Guinea
Fiscal regime	PNG Treasury (2010) Dept of Planning and Monitoring: Med. Term Development Plan PNG Treasury (2013) 2013 Recurrent budget estimates of revenue and expenditure World Bank Institute (2012) Strengthening Natural Resource Revenue Management International Monetary Fund (2012) Article IV Consultation - Staff report Revenue Watch website: Papua New Guinea page Secretariat of the Pacific Community (2011) PNG ready for seabed mining
Transparency / account- ability	EITI (2013) Papua New Guinea reaffirms commitment U4 (2013) Papua New Guinea Overview Transparency International (2011) Forest Governance Integrity Baseline Report: PNG National Anti-Corruption Strategy (2013) Technical Working Group

This profile was drafted with input from independent consultants



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Sierra Leone

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: diamonds, gold, iron ore, bauxite, rutile

Main exploration: oil

Extractive industries as share of GDP: 13% (2013)

Extractive industries as share of revenue: 21.6% (2013)

Summary

Sierra Leone is still in the early stages of its resource extraction. Its extractive industries have the potential to generate huge revenues, with more than 80% of the country covered by mining, forestry and oil concessions. The mining sector, which in the past funded war efforts and achieved notoriety through the infamous 'blood diamonds', has more recently become a driver of the national economy. Diamonds and iron ore make up a significant portion of government revenue, and oil exploration could also prove to be lucrative in the future. As Sierra Leone moves further away from fragility the extractive industries have the potential to generate significant revenues and bring important development opportunities.

Overview of key sectors

Resources	Reserves	Status	Key companies
Diamonds	9.5 million carats estimated at Koidu (6.3 million), and Tongo (3.2 million)	609,758 carats exported in 2013	Koidu Holdings, Stellar Diamonds
Gold	4.64 million ounces estimated at Kangari (2.4million) and Nimini Hills (2.24 million)	3,099 ounces exported in 2013 (\$3,6million) All from Artisanal Miners. Companies still at Feasibility Study stage.	Cluff Gold (Amara), Nimini Mining
Bauxite	100 million tonnes at Port Loko, (77.3 million proven), 32 million tonnes at Mokanji	616,000 tonnes produced in 2013. Production projection for 2014 based on actual performance to July 2014 is 1,094,000 tonnes.	Sierra Minerals (Vimetco)
Rutile	600 million tonnes	120,349 tonnes produced in 2013	Sierra Rutile
Iron ore	12.8 billion tonnes found at Tonkolili, and 1 billion tonnes found in Marampa*	12.1 million tonnes exported in 2013 by African Minerals and 3.3 million tonnes exported in 2013 by London Mining.	African Minerals, London Mining, Cape Lambert Resources (Feasibility Study stage)

Oil	None proven	Ongoing exploration	Anadarko Petroleum
Forests	2.7 million hectares	N/A	N/A

Source: Government of Sierra Leone officials- interview, Company websites, US Geological Survey (2011)
 * An additional 681 million tonnes has also been reported in the greater Marampa area

Mining

Mining is a key driver of the economy in Sierra Leone, and by all accounts the sector is booming. The contribution of mining to GDP more than doubled from 5.4% in 2011 to 12.1% in 2012 (African Economic Outlook, 2013). Mining generates around 80% of Sierra Leone’s export income with diamonds alone accounting for 60% (Sierra Leone EITI).³² The medium term outlook for iron ore production is particularly encouraging. The main active companies are in the process of expanding projects estimated to have a life span in the range of 25-60 years (International Monetary Fund, 2012).

Sierra Leone is the world’s tenth-largest producer of diamonds by volume (Revenue Watch website), with diamond fields covering an area of about 7,700 square miles, equaling one quarter of the country’s landmass. The country also has the largest natural rutile reserves in the world, which account for a third of global production, and make it the world’s leading rutile producer (Government of Sierra Leone officials-interview). Two large iron ore projects at Tonkolili and Marampa were initiated in 2012. They will boost iron ore exports in 2013 and 2014 and are expected to make Sierra Leone one of Africa’s largest iron ore producers within five years. Exploration activities of other potential iron ore deposits are also underway (African Economic Outlook, 2013).

The mining sector in Sierra Leone is comprised of some 265 companies, and three sub-sectors. Iron-ore, diamonds, rutile and bauxite are produced on a large scale, whereas smaller scale mechanized mines produce mostly diamonds. Artisanal and alluvial production of diamonds, and to a lesser extent gold is also common. The larger mining operations in Sierra Leone are all foreign-owned, and in-country value addition is very

limited although there are plans for the construction of a \$400 million alumina refinery in Sierra Leone. The mining industry has undergone an expansion in recent years. It employed around 1% of the total work force between 2007- 2010. This figure increased to 5.4% in 2011, while in 2012, 6.9% of the work force was employed by the mining sector (Government of Sierra Leone officials-interview, African Economic Outlook, 2013).

Petroleum

A number of offshore oil discoveries were announced in 2009 and 2010. The development of these reserves, which could be significant, is ongoing but commercially exploitable oil or gas deposits have not yet been confirmed. In spite of this, interest in the oil sector has steadily increased over the past few years. In December 2011 the government announced the launch of a new oil-licensing round, covering nine exploration blocks, most of which are located in deep water (African Arguments, 2012). Provisional awards were announced in the summer of 2012, but are subject to further negotiations. They cover an area in excess of 19,000 square kilometres and include eight of the originally offered nine exploration blocks³³ (Deloitte, 2012).

Sierra Leone’s offshore oil exploration blocks



Source: Deloitte, 2013

32 EITI puts the mining sector’s share of GDP at 30%, noting that the vast majority of this activity is artisanal and illegal

33 Successful bidders include African Petroleum, Kosmos Energy, Elinlto, Signet, Minexco, Masters, Chevron, Noble, ODYE, GNBH Sierra Leone and Varada

Forestry

Sierra Leone has an approximate forest cover of 2.7 million hectares, making up 38% of its total land area. Approximately 4% of this area consists of protected areas, including three national parks: Outamba Kilimi, Gola Rainforest and Western Area Peninsula (REDD desk, 2013). In spite of this large endowment, the forest industry is relatively small, and the export value of all forest products in 2012 was approximately \$8.4 million according to the UN's Food and Agriculture Organization (2013).

In the absence of a well-regulated formal forestry industry, illegal artisanal logging dominates the sector, and government has not been immune from claims of involvement. This contributes to deforestation, alongside an expansion of agricultural activities, small-scale and industrial logging and wood harvested for construction and fuel-wood. Annual deforestation rates were in 2010 estimated at 20,000 hectares or 0.7% of total coverage. In efforts to address the issue of illegal logging, and to control the exploitation of other forest resources, a ban on timber exports was imposed in 2008. After a partial lifting of the ban in 2010, the government ended it in 2012 (Government of Sierra Leone officials- interview).

Legal, Institutional and Policy Framework

Mining

Comprehensive legislation regulates the mining sector in Sierra Leone. The passing of the Mines and Minerals Act of 2009 was a milestone and signified, according to the government, a new era for the development of Sierra Leone's Mineral Sector. Receiving significant support from donors, the law introduces new provisions affecting exploration, mining companies, communities, citizens and the government. In addition, it introduces new mining licenses and regulations for license holders and applicants (Independent consultant- interview, Government of Sierra Leone officials- interview).

The Ministry of Mines and Mineral Resources develops mining policy, which is guided by the Minerals Advisory Board, and the [National Minerals Agency \(NMA\)](#). This agency, established by the National Minerals Act Agency (2012) implements ministry policy and promotes the development of the minerals sector by managing the administration and regulation of mineral rights and

trading. It also provides technical and other forms of support to the sector, including geographical survey data and collection activities. Notable policies include the Core Mineral Policy, which aims to provide an enabling legal and fiscal regime for all mining operations.

The legal and policy landscape has expanded in recent years, and steps have been taken to address challenges relating to coordination and capacity. The various Acts and Regulations governing the sector, including the Environment Protection Agency Act (2008), the Mines and Minerals Act (2009) and the National Mineral Agency Act (2012) clearly outline the roles and responsibilities of the major Government institutions. The Ministry of Mines is responsible for policy formulation, while the National Minerals Agency is responsible for implementing those policies and regulating the sector. The Environment Protection Agency deals with the environment. Also, as a major step to address the capacity gap, the NMA was established as a professional technical regulatory organization, staffed with well remunerated qualified professionals outside the civil service structure to regulate the mining sector. The legal framework was strengthened further in 2013 with the passing of the Mining Operational Regulations and Environmental and Social Regulations. Further improvement will result from passing of the Precious Minerals Trading Act planned for 2014.

Petroleum

The [Petroleum Act of 2011](#) outlines rules for awarding petroleum licenses, bidding processes and revenue and license publication. The Act also establishes the Petroleum Directorate, which is responsible for enforcement and monitoring, and gives the state the right to participate in oil ventures with 10% carried interest (Revenue Watch website). Provisions are also being made for state participation in the industry through the creation of a national oil company. And reflecting growth in the oil sector, the creation of a petroleum ministry is in the planning stages, and a strategic environmental assessment of potential oil and gas development has recently been undertaken (African Economic Outlook, 2013).

Forestry

The Ministry of Agriculture, Forestry and Food Security regulates the forestry sector, and the 1988 Forest Act is the main piece of legislation that governs forestry

practices. Its implementing instruments, the Forestry Regulations of 1989 and the Wildlife Conservation act of 1982, are currently under review. Their updated versions are expected to reflect issues such as environmental conservation and carbon trading. Current environmental safeguards applicable to forest concessions, such as Environmental Impact Assessments, are included in the Environmental Protection Agency Act of 2008 (REDD desk, 2013).

Fiscal framework

Sierra Leone's extractive industries generate a large share of public revenues through royalties, taxes and profit sharing. Mining royalties and licenses contributed 20.3% of domestic revenues in 2012 (African Economic Outlook, 2013) and the government received a total of \$100 million in revenues in 2013 (MRP Dept, NRA). Mineral exports remain Sierra Leone's principal foreign exchange earner, but export values have suffered in recent years. A regional harmonization of export duties is presently being considered, and is hoped will reverse this downward trend.

The official tax rate is 30% for mining companies but this rate is oftentimes re-negotiated. Mining companies are also subject to additional taxes on profits, and varying mining royalties. But foreign companies have been known to negotiate highly favorable royalty rates and advantageous concessions agreements with the government. Of the five major mining companies operating in Sierra Leone, only one paid corporation tax in 2011 (Africa Progress Report, 2013).

The taxes and export duties that in the end are collected are done so by the National Revenue Authority, while the Mines and Mineral Resources Ministry collects other payments. Most revenue is used for budgetary support, although the Diamond Area Community Development Fund (DACDF) transfers a small portion of diamond revenues from registered artisanal mining licensees to mining communities. This amount equals 0.75% of the revenues raised by the diamond export tax (National Minerals Agency). There is currently no stabilization fund in place to manage natural resource revenues.

Transparency and accountability

Efforts to create openness in Sierra Leone's extractive industries are progressing. Until recently, basic data on contracts, transactions and payments were

either missing or not accessible to the public. But today, information on licensing processes and fiscal arrangements can be found on government websites. A freedom of information act was recently passed, and a Mining Cadastre System, linked to an [Online Repository](#) (the first of their kind in Africa) give access to information on mining concession agreements and revenue (Africa Progress Report, 2013). The National Minerals Agency also made all mining agreements public in mid 2014 by uploading them on its website, www.nma.gov.sl. Other noteworthy examples include new transparency requirements placed on the Ministry of Mines and Mineral Resources by the Minerals and Mines Act of 2009. This act also requires performance in health and safety, community development and environmental protection to obtain and keep mineral rights licenses (Ministry of Mines and Mineral Resources website).

Implementing these new legal frameworks poses a significant challenge. For example, the National Advocacy Coalition on Extractives (NACE) claims that the agreement with London Mining for the Marampa iron ore mine is inconsistent with the Minerals and Mines Act, and sets a worrying precedent (NACE website). And while the National Audit Service examines state accounts and publishes annual reports, it conducts no specific reviews of mineral revenues. The National Revenue Authority also provides very little information on mining receipts, although the Ministry of Finance and Economic Development and the Bank of Sierra Leone does disclose information on the mining sector's operations and revenues (Revenue Watch website).

The National Minerals Agency and the Sierra Leone Extractive Industries Transparency Initiative Secretariat are however working to address some of these issues. Sierra Leone's suspension from the Extractive Industries Transparency Initiative was lifted in June 2014, and the country is now a full EITI member. This status was attained after remedial actions were taken to address issues relating to full and accurate disclosure of revenues from the sector. The work of other stakeholders will also be crucial to promote transparency and accountability. However, the capacity of civil society organizations to monitor and hold the government accountable remains low as, historically, Sierra Leone has not had a culture of transparency in the mining sector (African Capacity Building Foundation, 2013).

Key issues

- **Sierra Leone has achieved notable progress by building relatively effective institutions** and generating economic growth from its natural resources, which in the past were used to sustain its civil war (1991-2002). The country has also improved practices in transparency and accountability through the establishment of its Mining Cadastre and passing of the Mines and Minerals Act of 2009. The NMA and the SLEITI Secretariat have worked to address issues leading to the suspension of Sierra Leone from the EITI, and the country has now been reinstated as a full member. The Ministry of Mines and Mineral Resources is now reviewing the country's Core Minerals Policy to align it with the Natural Resources Charter and the African Mining Vision.
- **Building the Capacity of National Institutions in mining sector governance:** Sierra Leone has also taken steps to build capacity to effectively implement laws, collect revenues, and monitor mining operations. The establishment of the NMA outside the civil service structure has ensured the recruitment and retention of competent technical professionals to effectively implement mining policies and regulations and enforce compliance. The Agency recently recommended for the cancellation of 60 mineral rights for non-compliance. The Agency also supports the National Revenue Authority in revenue collection by accurately calculating royalties and other payments, and alerting the Authority of all payments due from mining companies. Also, the EPA has improved upon its financial position through retention of fees collected, and the Agency has not only increased its staff strength, but has also engaged the services of additional experts to review environmental impact assessment.
- **Providing for Local communities affected by mining activities:** The 2009 Mines and Minerals Act imposes obligations on mining companies to assist in the development of mining communities affected by their operations. The NMA has worked with development partners and other stakeholders to develop a model Community Development Agreement that will serve as a template for development agreements to be signed between mining companies and host communities. This will require mining companies to sit with host communities and agree on a number

of development projects to be implemented and financed by company revenue. Mining companies are also required to secure land lease from local land owners, at a mutually agreed annual rent amount, before mining licence can be issued. As a benefit sharing mechanism, the 2009 Act further requires this rent to be distributed as follows: 50% to Land Owners; 15% to Paramount Chief; 15% to Local Council; 10% to Chiefdom Administration and 10% to Constituency Development Fund. One of the mining companies, African Minerals Ltd. recently paid Le.1.8 billion to land owners in two districts as surface rent. The 2009 Mines and Minerals Act also promotes local content (sections 163 and 164) by requiring mining companies to give preference to Sierra Leonean materials, products and services; and also give preference to Sierra Leoneans, with the requisite education and experience or skills, for employment. Importation of unskilled labour is prohibited. Finally, there is also a Diamond Area Community Development Fund into which 0.75% of export duties on all diamonds is set aside and paid to local authorities for development of their communities.

Key resources

[Ministry of Mines and Mineral Resources](#) - The official portal for information on the mineral sector in SL

[Sierra Leone Extractive Industries Transparency Initiative \(SLEITI\)](#) - Sierra Leone's national EITI chapter

[Sierra Leone Investment and Export Promotion Agency](#) - Promoting and offering information aimed at investors and exporters

[Ministry of Mines and Mineral Resources online repository](#) - Containing data on mineral rights, export licenses and related payments

[Dan Watch \(2011\) Not Sharing the Loot](#) - An investigation of tax payments and corporate structures in Sierra Leone's mining industry

Sierra Leone Mines and Minerals Act 2009

Annex: sources

Key natural resources / extractive activity	World Bank website, Sierra Leone page African Economic Outlook (2013) Sierra Leone Bank of Sierra Leone (2012) Annual Report Africa Progress Report (2013) Equity in Extractives
Mining	Kimberley Process website - Sierra Leone page World Bank (2008) Sierra Leone Mining Sector Reform US Geological Survey (2010) Minerals Yearbook - Sierra Leone Sierra Rutile Ltd. website Government Gold and Diamond Office (GGDO) website Ministry of Mines and Mineral Resources website - Legislation International Monetary Fund (2012) Fourth Review Under the Three-Year Arrangement Under the Extended Credit Facility
Forestry	Global Witness Press Release (2008) Power struggle and Illegal logging Illegal logging portal, Sierra Leone Food and Agriculture Organization (2010) Sierra Leone Forest Resources Assessment Food and Agriculture Organization (2013) Statistics page (FAOSTAT) REDD desk (2013) country database- Sierra Leone statistics summary
Petroleum	US Energy Information Administration website - Sierra Leone page Government of Sierra Leone (2011) Petroleum (exploration and production) Act African Arguments (2012) Oil: Sierra Leone calling all takers Deloitte (2012) Petroleum Services: 2011/2012 Petroleum Bid Round results announced
Institutional structure / main government actors / capacity constraints	Revenue Watch website - Sierra Leone page Global Witness (2010) A Near Miss? CIA World Factbook website - Sierra Leone
Fiscal regime	Ministry of Finance and Economic Development Bank of Sierra Leone (2012) Annual Report IMF Sierra Leone country page Extractive Industries Transparency Initiative (2012) Sierra Leoneans' revenues
Transparency / account- ability	Natural Resource Charter: Sierra Leone's concessions management system Sierra Leone Extractive Industries Transparency Initiative (SLEITI) website Sierra Leone Extractive Industries Transparency Initiative (2012) 2nd Reconciliation Report Revenue Watch website - Sierra Leone page National Advocacy Coalition on Extractives (NACE) website National Advocacy Coalition on Extractives (2009): Sierra Leone at the Crossroads African Capacity Building Foundation (2013) Africa Capacity Indicators, 2013

This profile was drafted with input from Government of Sierra Leone officials, civil society representatives and independent consultants.



South Sudan

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EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: oil

Main exploration: oil

Extractive industries as share of GDP: 60% pre-shutdown (in Jan 2012)

Extractive industries as share of revenue: 98% pre-shutdown (in Jan 2012)

Summary

South Sudan has significant natural resources including gold, silver, iron ore, copper, diamonds and timber, all of which remain virtually untapped. The most significant resource and primary driver of the economy is, however, oil. South Sudan is the most oil-dependent country in the world. Even prior to the outbreak of violent conflict in December 2013 the country faced significant challenges in managing its oil resources and maximizing returns while enabling stability and promoting development. These challenges will remain critical to the future of the country once stability is regained.

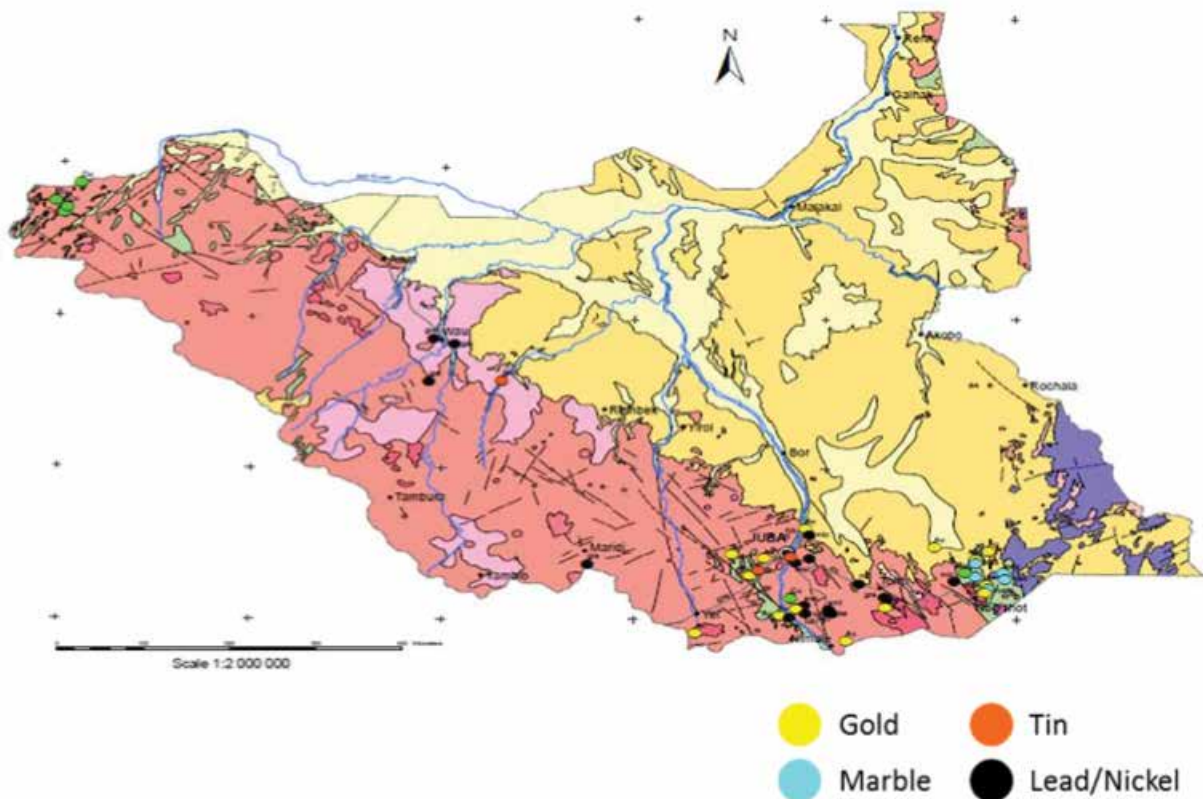
In July 2011 South Sudan seceded from Sudan following a decades-long civil war. Roughly 75% of the petroleum resources of the former Sudan are today located in South Sudan, whereas the pipelines and infrastructure needed to evacuate the oil passes through Sudanese territory. Continued disagreement after independence about the transit fees for transporting South Sudan's oil through Sudan, led South Sudan to completely shut down its oil production in January 2012. Production resumed in April 2013 but has yet to reach pre-shutdown volumes, partly due to threats from Sudan to shut down the pipelines.

Overview of key sectors

Resources	Reserves	Status	Key companies
Oil	1.1 billion barrels	Approximately 300,000 barrels per day in 2012	China National Petroleum Corp, Petronas, ONGC Videsh
Natural Gas	3 trillion cubic feet	No production	N/A
Forests	19,166,700 hectares	No exports in 2012	Nile Trading and Development, Equatoria Teak Company

Source: South Sudan Government official (interview), Wall Street Journal (2013), Agriculture Fair S. Sudan (2012), Company websites

Main mineral deposits in South Sudan



Source: South Sudan embassy, USA

Mining

South Sudan has deposits of gold, silver, iron ore, copper and diamonds. As the mining sector is not developed in any formal way, artisanal gold mining is commonplace. A moratorium on mining licenses for foreign investors has been in place since 2010 was recently lifted, allowing for licenses to be granted to foreign firms to explore South Sudan's deposits (US Institute of Peace, 2013). Gold and diamond deposits will likely be explored first and, if developed on an industrial scale, could become viable sources of revenue alongside the petroleum.

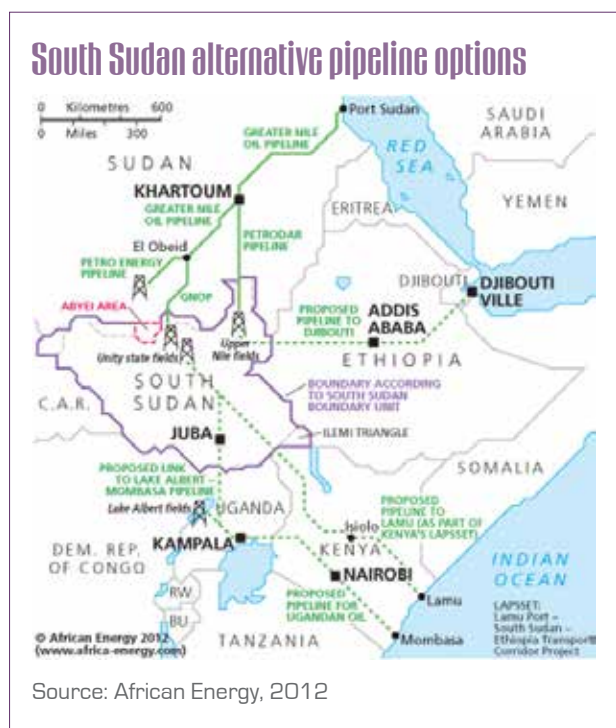
Petroleum

South Sudan has the resources to produce nearly three-fourths of the formerly united Sudan's total oil output of nearly a half million barrels per day (CIA factbook). The Palouge oil field in the northeastern state of Upper Nile accounts for roughly 80% of this production. At independence, oil made up nearly all exports and approximately 60% of GDP (National Bureau of Statistics, 2011), although the World Bank and others put this figure closer to 80%. At the time, oil revenues were also

estimated to make up 98% of the government's budget, excluding international aid (World Bank, 2013)

South Sudan ceased oil production six months after independence as a result of ongoing disputes with Sudan, which has the required infrastructure for exporting South Sudan's oil. What followed was an unprecedented and dramatic economic shock; GDP contracted by 52% in 2012 (The Economist, 2013) and GDP per capita shrunk from \$1,858 in 2011 to \$785 in 2012 (World Bank, 2013). The country restarted oil production in April 2013, gradually ramping up production levels to an average of 200,000 barrels a day. Output reached 240,000 barrels per day by September 2013, and the government aims to restore full-scale output to 350,000 barrels per day by the end of the year (Wall Street Journal, 2013).

In June 2013 Sudan threatened to shut off the oil pipeline by August due to the on-going dispute between the two countries, but later deferred the deadline. Significant uncertainty remains as to whether South



Sudan will be able to continue its oil production, and mediation between the two countries is still taking place. With tensions ongoing, South Sudan is examining the prospect of building alternative pipelines through Kenya, or possibly through Ethiopia and Djibouti. Such a move could have a serious impact on bi-lateral relations with Sudan and alter the political and economic balance of power in the region (Think Africa Press, 2013). Notwithstanding such developments, oil resources in South Sudan will decline if no new discoveries are made or extraction methods improved. World Bank forecasts indicate that production from current oil fields will reduce steadily in coming years, and be negligible by 2035 (World Bank, 2013).

A [report](#) published in 2014 claimed that relations between local people and government authorities in South Sudan's oil-producing areas appear to be deteriorating even prior to the outbreak of conflict in December 2013, in part due to limited community engagement on the part of oil companies and a widespread associated mistrust.

Forestry

Forests cover approximately 29% of the country. Industrial logging could help diversify South Sudan's oil-dependent economy if properly managed, although its potential is very small in comparison to that of the petroleum sector. The World Bank identified Southern

Sudan's forest resources as a "latent wealth", which offers significant potential for economic recovery and poverty reduction (World Bank, 2010). Mahogany and teak forests in particular may become the cornerstones of a nascent, yet currently undeveloped forestry industry (African Arguments, 2013). Revenues could also be generated from the export of gum arabic, which is harvested from the Acacia tree and used in soft drinks and sweets. Such an industry could be lucrative, as Sudan has since the mid 1990's accounted for over 20% of its global export value, and generated more than \$51 million in exports in 2012 (UN Commodity Trade Statistics, 2012).

An estimated 45% of South Sudan's forests have, however, been lost since the outbreak of war in 1983, mainly due to illegal logging and other forms of deforestation (African Economic Outlook, 2013). Rural as well as urban populations also depend on forests as a source of energy, for building materials, hunting and other livelihoods, which further reduces stocks. Forest conversions and often-controversial land-deals can also pose challenges to forest preservation. The most noteworthy such deal was signed with Nile Trading and Development Inc., which leased 600,000 hectares of land for 49 years for the price of \$25,000, plus 40-50% of profits to local entities (Oakland Institute, 2011).

Legal, Institutional and Policy Framework

Mining

The 2012 Mining Act established the Ministry of Petroleum and Mining as the sector's regulator, and declared a mining cadastre to issue and manage mining licences. It also allows the government to hold an optional equity stake of up to 15% in large mining operations. The Mining Act has been welcomed as a means to develop the mining sector, but also highlights existing the tensions between mineral rights claimed by the government and the rights of individuals and communities found in other laws (US Institute of Peace, 2013).

A Policy Framework for the Minerals and Mining Sector, drafted in 2013, is also awaiting parliamentary approval. This mining policy has been [criticized](#) for failing to follow best practice, particularly in terms of the creation of resource wealth management funds.

Forestry

In 2009, a Land Act dealing with the forestry sector was passed, but it has yet not been implemented. South Sudan also has a forest policy, currently in draft form, but it has also not to be formalized. The country is emerging from decades of war, and has very limited capacity to develop and enforce regulations in the forestry sector. While its legal framework is still in the early stages of development, efforts are currently underway to ensure that timber production and processing is done locally, to stimulate job creation. In addition, plans are being developed to ensure that a percentage of logging revenues are allocated to local communities in producing areas (SS Government official- interview).

Petroleum

Among the key institutions governing the oil sector are the National Petroleum and Gas Commission, which approves licenses and determines policy, and the Ministry of Petroleum and Mining, which negotiates contracts and regulates the sector. The state-owned [Nile Petroleum Corporation \(NILEPET\)](#) is the commercial arm of the Ministry and participates in all existing oil contracts. A joint Petroleum Monitoring Commission is responsible for monitoring the implementation of the 2012 oil deal with Sudan. It is made up of a chairperson appointed by the African Union and representatives from both governments (African Union, 2013).

The Petroleum Act of 2012, is an important piece of legislation in the oil sector and contains requirements to prevent corruption and mismanagement (Global Witness, 2012). Such directives are expanded in further detail in the [Petroleum Revenue Management Act](#), passed by the Legislative Assembly in July 2013. This bill established an Oil Revenue Stabilization Account (ORSA), a Future Generations Fund (FGF) as well as procedures required to manage these funds. The President has not yet signed the bill into law (European Union official, interview).

And while it is hailed as a vital step for the responsible management of the oil sector, campaign groups have stressed the need to create a robust institutional environment to ensure its implementation (Global Witness, 2013a). To this end the government is developing a series of targeted regulations, and is receiving technical assistance from the World Bank, and financial assistance from the International Monetary Fund. The African Development Bank is also offering

support through capacity building in the banking and economic sectors. When enacted, these regulations may encounter a degree of opposition with investors (SS Government official, interview).

Fiscal framework

The Petroleum Revenue Management Bill provides the framework for the management and allocation of oil revenues. Once signed into law by the President, oil-producing states are to receive 2%, and local communities within the oil-producing states will receive 3% of net petroleum revenues. (Global Witness, 2013a). The law also establishes a Petroleum Revenue Management Account where all petroleum revenues will be deposited prior to being transferred to the Consolidated Fund for spending or to the ORSA and FGF for saving. In addition, a mining taxation regime is being planned. It will outline royalties, minimum exploration expenditures, as well as annual rents and fees- all payable under the Mining Act of 2012 (SS Government official- interview).

In accordance with the recent Transitional Financial Arrangement agreement (TFA) between South Sudan and Sudan, the fees paid by South Sudan for use of Sudan's export infrastructure will range between US\$9.10 and US\$11 per barrel. In addition, South Sudan has agreed to pay Sudan an amount of US\$3.028 million over the next 3.5 years. Based on a projected average of 150,000 barrels per day, this would equal a temporary rate of \$15 per barrel (International Monetary Fund, 2012, Republic of SS negotiation team, 2013).

Transparency and accountability

The Petroleum Act of 2012 requires transparent contract allocation, publication of production and revenue data and implementation of the Extractive Industries Transparency Initiative (EITI). South Sudan has committed itself to become EITI compliant, and a multi-stakeholder group has been appointed to oversee the process (Extractive Industries Transparency Initiative, 2011). The Petroleum Revenue Management Law also includes a broad range of measures to improve procurement practices and anti-corruption efforts in the oil-sector. These include the publication of publically available quarterly and annual reports on oil revenues. Passing the law was also crucial to unlock urgent funding and receive technical and other forms of assistance

from the international donors. It enabled the IMF and EU to provide much needed budget support, and funding for the health and education sectors, which suffered as a consequence of the oil pipeline closure (European Union official- interview, SS Government official- interview).

Implementing these new legal measures and initiatives will not be easy. Very little information on concession agreements is currently available, and civil society and oversight bodies have limited capacity to carry out effective checks on the oil sector. Meanwhile, the risks of corruption and mismanagement in the oil sector remain high (Global Witness, 2012, 2013b). With regards to contractual transparency between Sudan and South Sudan, mutual suspicion persists. Both countries have however agreed to appoint an independent auditor to report on operating companies, in addition to working on the Petroleum Monitoring Committee. However, no reports are required to be published (Global Witness, 2012).

Key issues

- **South Sudan has since its independence in 2011 achieved significant milestones**, which include the establishment of executive, judiciary and legislative institutions. It is also in the process of creating investor friendly legal and policy frameworks, and has begun the process of becoming EITI compliant. But as a newly independent country recovering from decades of war, South Sudan faces challenges ensuring the implementation and enforcement of its laws and policies and the effective governance of its extractive industries. Over the coming years, it faces the twin challenge of sustainably reducing its dependence on oil exports while diverting and re-investing revenues to support the development of other sectors, including mining and forestry.
- **On-going violent conflict within South Sudan, plus disputes and political tensions with Sudan, have a significant impact on the country's oil sector.** Inter-

communal violence and tension undermine the predictability of oil production and damage investor confidence. The government has taken steps to promote capital investment, including guarantees against expropriation (which include the right to compensation), protection of intellectual property as well as the free repatriation of capital, profits and dividends.

- **A new legal framework for petroleum management has been adopted**, including the new Petroleum Revenue Management Law, but has yet to be implemented. The regulatory framework for non-extractive natural resources is also developing, but remains incomplete. South Sudan's own fragility assessment, undertaken as a part of its commitments under the New Deal for Engagement in Fragile States, has been an important means of identifying these needs. It calls for improved management of the oil and mining sectors through the development of capable, responsive institutions.

Key resources

[Government of South Sudan](#) - The official website with information on laws, institutions, and ministries

[South Sudan Statistical Yearbook \(2011\)](#) South Sudan's primary source of national statistics

[South Sudan Fragility Assessment \(2012\)](#) This summary identifies drivers of fragility and priority actions

[African Economic Outlook \(2013\) South Sudan](#) - Overview and analysis of economic, political governance

[Global Witness \(2013\) South Sudan and Sudan](#) - Overview and analysis of oil sector in South Sudan

Annex: sources

Key natural resources / extractive activity	National Bureau of Statistics (2011) South Sudan Statistical Yearbook World Bank (2013) South Sudan Overview CIA World Factbook - South Sudan
Mining	US Institute of Peace (2013) Establishing a Mining Sector in Postwar South Sudan The Guardian (2013) South Sudan: mining act passed but nation too must benefit Reuters (2013) Sudan made \$2.2 billion from gold exports in 2012 South Sudan Embassy, USA: Mining and minerals sectors Sudd Institute Policy Brief 13 (2014): South Sudan's Mining Policy and Resource Curse
Forestry	Oakland Institute (2011) Understanding land investment deals in Africa Agriculture fair South Sudan (2012) Agribusiness in South Sudan World Bank (2010) Policy framework for sustainable management of forests African Arguments (2013) article on teak forests in South Sudan United Nations Commodity Trade Statistics Database (2012) - Gum Arabic
Petroleum	Global Witness (2013a) Brief on oil law Global Witness (2012) Blueprint for Prosperity Wall Street Journal (2013) South Sudan Commissions New Oil Fields, Output Up By 26% Nile Petroleum Corporation website The Economist (2013) South Sudan oil: Back in business US Energy Information Administration (EIA) Sudan and South Sudan page Allafrica (2012) South Sudan: Juba Shuts Down Oil Pipeline to North's Export Port Think Africa Press (2013) Oil Politics, Asian Suitors, and Alternative Pipelines in South Sudan African Union (2013) High-level implementation panel report for Sudan and South Sudan African Energy (2012) - Sudan articles PAX report (2014) - Scrutiny of South Sudan's Oil Industry
Institutional structure / main government actors / capacity constraints	Government of South Sudan website - information for investors Revenue Watch website - South Sudan page African Economic Outlook (2013) South Sudan page Allafrica (2013) South Sudan mining laws in the pipeline
Fiscal regime	Republic of South Sudan negotiation team (2013) press release International Monetary Fund (2012) Sudan article IV Consultation Government of South Sudan website- Business environment: Investment Promotion Act
Transparency / accountability	EITI (2011) President of South Sudan commits to global transparency standard Global Witness (2013b) Oil production restarts amid transparency concerns

This profile was drafted with input from officials from the Government of South Sudan, European Union, as well as independent consultants.



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Solomon Islands

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: timber, gold, oil palm, coconut/copra

Main exploration: gold, silver

Extractive industries as share of GDP: unknown

Extractive industries as share of revenue: unknown

Summary

Natural resources play a critical role in the economic and social life of Solomon Islanders, and primary resource exports have been central to the country's development aspirations and its associated challenges. Extraction of resources through mining and logging are critical to the national economy, and subsistence use of forest resources is critical to the livelihoods of communities.

The Solomon Islands' economy grew by 10.7% in 2011 and by 5.4% in 2012 – robust growth that was in part driven by exceptional performance from the forestry sector, supported by the recommencement of commercial mining activity. Opportunities for broadening the range of productive activities is constrained by viability challenges associated in particular with the geographical isolation of the Solomon Islands and the associated cost of reaching international markets.

Overview of key sectors

Resources	Reserves	Status	Key companies
Forests	70-80% of land area under forest cover	Unsustainably high but reducing levels of extraction	MMERE, MFR
Gold	Unknown	Some limited production	St Barbara, Axiom KB, Allied Gold

Source: ADB, company websites, government sources

Forestry in the Solomon Islands has contributed between 30 and 46% of GDP for many years, and offers potential for both further investment and revenue generation. In 2011 the forestry sector attracted a record number of foreign direct investment applications (averaging around 10 applications per quarter). The majority of these foreign investors were able to obtain logging licenses within the same year.

The majority of forested land mass is under customary ownership, and local landowners receive 15% royalties from exported timber. Virtually no value-adding activity takes place within the Solomon Islands. Unprocessed logs accounted for 48% of commodities exported in 2013.

The forestry industry in the Solomon Islands is often described as unsustainable and exploitive, and is

threatened by the unsustainable harvesting of round logs. Recent efforts by government to address these issues have focused on reforestation, the promotion of downstream processing activities and the improvement of monitoring of domestic logging activities and of exported logs.

The significant Gold Ridge mine in the Solomon Islands reopened in 2011. When at full production capacity (95,000 ounces per year; well above the production of 58,690 ounces in 2013), the Gold Ridge mine is predicted to account for one-third of the Solomon Islands' GDP. However, in April 2014 the operating company, St. Barbara Mining, left the mine site, causing significant uncertainty over its future.

Current estimates of mine life for both Gold Ridge and Bugotu, the two most advanced projects in the Solomon Islands, indicate a mining life-span of only 20 years (Gold Ridge 11 years and Bugotu 20 years).

Exploration is underway at other potential mine sites in the Solomon Islands (potential mineral deposit sites have been identified in Guadalcanal, Isabel, Choiseul and Western Province) and to date three companies have been granted mining licenses and a further 16 are prospecting (two offshore and 14 onshore). These companies include Sumitomo Metals Mining, Newmont, Nautilus, and Allied Gold.

Legal, Institutional and Policy Framework

The Ministry of Forestry is responsible for the management of forest resources in the Solomon Islands. The Forest Act 1999 provides the legislative basis for the control of timber harvesting, encouragement of sustainable forestry activities, establishment of plantations and domestic processing of timber. Although this Act was passed in Parliament, however, it was not gazetted and therefore cannot be enforced. Consequently, the Forests Bill 2004 was produced; this is yet to be enacted.

The Ministry of Forestry has been reported grant logging licenses to companies and landowners to carry out logging on customary lands. There are also reports of only minimal compliance to the requirement that logging companies must be members of the Solomon Islands Forest Industry.

The Mines and Minerals Act (2008) regulates the mining sector. A National Minerals Policy was drafted in 2013; this has not yet been adopted.

Transparency and accountability

The Government of the Solomon Islands is committed to the promotion of transparency and accountability in the natural resources sector. A review of the Anti-Corruption Bill is currently underway.

The Solomon Islands has been an EITI candidate country since 2012. The country has not yet produced an EITI report, although there are plans to publish the first report covering fiscal year 2012 by June 2014.

Key issues:

About 87% of land in the Solomon Islands, encompassing more than 90% of export commodities, is customary owned. The land tenure system requires reform in order to enable better utilization of natural resources for the benefit of communities and the nation. This reforms need to clarify ownership and provide secure land for development while also protecting the rights of customary land owners.

The Forestry Act requires amendment to assist land-owning groups to promote the establishment of forest plantations, sustainable harvesting and reforestation. It is also necessary to properly control the activities of the logging industry in order to achieve a better balance in the pecuniary and social benefits received by government and resource owners. This requires the development of further capacity in both government and involved communities.

Annex: sources

Key natural resources / extractive activity	http://www.adb.org/countries/solomon-islands/economy National Development Strategy Medium Term Development Strategy Natural Resources Act ARDS Medium Term Expenditure Framework UN conference on the Least Develop Countries in Istanbul in May 2011
Mining	Central Bank Financial and Economic Reports for 2008/2009/2010/2011 National Development Strategy http://www.ramsi.org/Media/docs/What-should-sustainable-mining-look-like-in-Solomon-Islands-Dr-P-Tagini-474fb62b-4892-46a1-b402-070209af1e77-0.pdf
Forestry	http://www.fao.org/countryprofiles/index/en/?iso3=SLB Central Bank Financial and Economic Reports for 2008/2009/2010/2011 Solomon Islands Forestry Guidelines National Development Strategy 2011 to 2020 Medium Term Development Strategy
Agriculture	Agriculture Rural Development Strategy Agriculture Strategic Plan (2009 to 2014) Food Security Docs of FAO and Ministry of Agriculture and Livestock of Solomon Islands National Development Strategy 2011 to 2020 Medium Term Development Strategy UN conference on the Least Develop Countries in Istanbul in May 2011 UN MDGs
Transparency / account- ability	http://eiti.org/solomon-islands Relevant Bills Ease of Doing Business (Solomon Islands)



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Somalia

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: negligible

Main exploration: oil, gas, gold

Extractive industries as share of GDP: negligible

Extractive industries as share of revenue: negligible

Summary

Extractive industries make very little contribution to Somalia's economy, despite the fact that Somalia has potentially very substantial reserves of oil and gas, as well as large and unexploited reserves of natural resources including uranium, iron ore, tin, gypsum, bauxite, copper and salt. Somalia has a long way to go, however, before it will be in a position to rely on extractive industries for revenue. The mining and oil sectors remain largely undeveloped due to the lack of stability in the country and ambiguity over exploration rights is also causing hesitation among investors. The oil and gas sector is, however, expected to see progress in coming years. A Petroleum Law, a Mining Code, and a Bill on Revenue Sharing from Natural Resources have been drafted and are under consultation with the various Federal Member States (FMS) and stakeholders. In addition, the country intends to join EITI so that Somalia manages its extractive industry in a transparent manner.

However, there is a risk that resources could become a driver of conflict. This risk is exacerbated by a lack of agreement on resource sharing between the states – especially the self-declared independent states of Somaliland and Puntland – and the Federal Government of Somalia. Somalia therefore faces a significant challenge to develop the required governance arrangements to manage its anticipated oil and gas revenue.

Overview of key sectors

Resources	Reserves	Status	Key companies
Oil / gas	<p>Proven reserves of 5.663 billion m³ natural gas (2009)</p> <p>The Somali Indian Ocean is believed to have enormous quantity of oil and gas (USGS report).</p> <p>Onshore prospectivity is high due to eight sedimentary basins with source rocks, reservoir rocks, traps, and seals in addition to existing working petroleum systems in the neighbouring countries of Kenya and Ethiopia.</p>	<p>Seismic exploration is underway in the Indian Ocean, Puntland and Somaliland. Two dry wells were drilled in Puntland.</p> <p>Somalia is in discussion with pre-war contract holders and has asked them to come back to continue exploration work.</p>	<p>Soma Oil & Gas.</p> <p>Multi-client seismic exploration of the Indian Ocean.</p> <p>Prior contract holders: Chevron, ExxonMobil, ConocoPhillips, Shell, BP and Eni are willing to return.</p>

Gold and platinum	The deposit in the area between Arabsiyo and Borame (Somaliland) is made from high-grade metamorphic rocks which enclose at least two greenstone volcanogenic gold-rich base metal deposits and platinum group associated with mafic/ultra-mafic intrusive complexes	Exploration permits in Somaliland. Further evaluation of the deposit is planned.	
Iron-ore	At Bur Galan and Dahimir, a low-grade iron ore deposit was evaluated by UNDP as having a reserve of 394 Mt of 38.7% Fe grade and 30 Mt of higher grade	A survey is planned to assess and evaluate in detail the iron deposit	The government is seeking interested companies
Tin	Tin was mined in Majiyahan and Dalan, west of Bosaso in Puntland in the 1970s and in Elayo	The mines were abandoned after 1977	Technoexport, a Bulgarian company
Sepiolite	This deposit, in Elbur, a town in Central Somalia, is one of the largest in the world	Artisanal Production of this mineral is done in El Bur	Local cooperatives
Uranium	Documented uranium deposits are found in the localities in the Regions of Galgaduud and Mudug (Central Somalia) and in Alio Gelle, in Dooy between Buur Hakaba and Diinsoor. Carnotite deposit between 10-25 Mt at 0.07 - 0.08 % U ₃ O ₈	Further evaluation and exploration is required.	
Phosphate (apatite)	Calc-silicate rocks in the Dooy area of the Bur Basement Complex suggest widespread phosphate (apatite) occurrences	Further evaluation and exploration is required.	

Source: Government of Somalia, USGS, AFDB

* The Federal Government of Somalia does not recognise agreements concluded by foreign companies solely with regional authorities such as Somaliland and Puntland.

Given the limited data available on natural resources in Somalia, the quantity of the country's natural resources is subject to further analysis. In the 1980s when oil was discovered in Yemen, oil companies quickly rushed to Northern Somalia (with the same tectonic and depositional history), expecting likely rift deposits. However, when the Civil War occurred those companies ended up in "force majeure". Currently, the Indian Ocean is a hotspot for oil and gas exploration and oil companies are again vying for awards in this vast ocean.

Somaliland has signed production-sharing agreements with five companies engaged in oil exploration. In late 2013 one of these (Genel Energy) halted operations in its five exploration blocks following security concerns; the

Somaliland government has since pledged to develop a separate military force specifically to protect the oil industry. Exploration of two onshore oil blocks is also underway in Puntland, and the Federal Government of Somalia recently signed its first oil contract with Soma Oil and Gas Exploration. Soma is expected to soon launch a seismic survey of onshore and offshore locations.

The mineral industry of Somalia produces small quantities of sepiolite, gemstones, quarry products such as dimension stones and aggregates for buildings and road construction.

Legal, Institutional and Policy Framework

The Ministry of Petroleum and Mineral Resources is mandated to run and regulate the oil industry. In order to do that, the Ministry is developing the necessary legislation required in order to accommodate the emerging federal member states. A Natural Resources Revenue Sharing Bill aims to build up the trust between the Federal Member States and the Federal Government. Meanwhile an amended Constitution will attempt to lay the foundations of a Federal System that operates effectively.

The Federal Government asserts its sole authority to enter into agreements with foreign companies, though the relevant Federal Member States are consulted, participate in agreements and put their agenda into the discussions.

However long-running disagreement with Somaliland and Puntland over the legitimacy of granting oil exploration licenses remains unresolved, causing a critical issue for development of the sector. For example, the federal government recently announced that oil exploration licenses granted to Africa Oil Corp by Puntland and Genel Energy by Somaliland were invalid and asked the companies to engage in negotiations with the federal government. Efforts to resolve these issues are at an embryonic stage and are thus subject to the further deliberations by the Somali Parliament.

Somalia also faces the significant challenge of developing a new oil industry while having very limited capacity to effectively regulate it. The Ministry of Petroleum and Mineral Resources is building its capacity with the help of partner countries, and hopes to attract educated diaspora back to the country to work in the industry.

The Petroleum Law was ratified in 2008 by the Baidoa Transitional Parliament. The Law needs to be reviewed in the light of the completion of the federalisation of Somalia and the emergence of the Federal Member States.

Transparency and accountability

According to Transparency International, Somalia is the 175th most corrupt country out of 177 in the world. Somali has not engaged with the Extractive Industries Transparency Initiative (EITI). However Somalia is in

discussions with the Natural Resources Governance Institute to assist the country to join EITI.

Key issues

The UN Monitoring Group on Somalia and Eritrea warned in 2013 that oil exploration could spark renewed conflict in Somalia. Disagreement with Somaliland and Puntland regarding the allocation of exploration licenses "unless resolved, may lead to increased political conflict between federal and regional governments that risk exacerbating clan divisions".

Somalia's governance system is also currently ill-prepared to cope with managing the pressures associated with an influx of revenue from oil.

However, the Federal Government of Somalia is hoping to attain economic growth and development through developing its natural resources. To do this, the Government has pledged to abide by international norms and achieve transparency and accountability.

Annex: sources

Key natural resources / extractive activity	http://www.theguardian.com/global-development/poverty-matters/2012/feb/22/somalia-reborn-progress-prosperity http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/2013-2015%20-%20Somalia%20-%20Country%20Brief.pdf http://www.eisourcebook.org/1520_OilGas.html http://www.upi.com/Business_News/Energy-Resources/2013/09/06/Destabilization-fears-over-Somalias-first-oil-deal/UPI-52501378487185/
Mining	http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-so.pdf http://news.bbc.co.uk/1/hi/business/7935139.stm
Petroleum	http://www.ibtimes.com/somaliland-oil-minister-breakaway-region-basket-case-somalia-says-east-africa-new-middle-east http://www.somalia-oil-gas.com/
Institutional structure / main government actors / capacity constraints / fiscal regime	http://allafrica.com/stories/201310120179.html
Transparency / accountability	http://www.transparency.org/country#SOM



Togo

EXTRACTIVE INDUSTRIES AT A GLANCE

Current production: phosphate, cement, clinker, limestone, iron ore, diamond, gold

Main exploration: marble

Extractive industries as share of GDP: 4.4% in 2012

Extractive industries as share of revenue: 4.8% in 2011

Summary

Mining has played a significant role in Togo's economy for decades. Recent economic growth experienced by Togo is linked to the country's abundance of mineral resources; the Togolese government earned CFA 15.7bn [US\$33m] from the extractive sector in 2011, primarily from phosphates and limestone.

Overview of key sectors

Resources	Reserves	Status	Key companies
Mobile Phosphate	70 million tonnes at 36% of P2 O5	1.1 million tonnes produced at 2012	Societe Nouvelle des Phosphates du Togo (SNPT)
Carbonated Phosphate	2,100 million tonnes at 15% if P2 O5		Nubian Gold Corp.
Metaphosphar-enite	300 million tonnes at 20-30 % of P2 O5		
Limestone	200 million tonnes	1.9 million tonnes limestone in 2011	West African Cement (WACEM)
Cement		1.8 million tonnes cement in 2011	WACEM and CIMTOGO
Iron ore	Unknown	Production of 82,196 tonnes in 2012	MM Mining Company
Marble	800 million tonnes		POMAR
Gold*	Unknown	18,551 KG exported in 2012	
Diamond^	Unknown	455.94 carats produced in 2012	
Manganese	Reserves amount to about 13 million tonnes at 10-35% of Manganese Ore~		

Oil Exploration of oil at sea, led by the company ENI has not resulted in the discovery of traces of petroleum but allowed for the collection of important data on the seabed that could be useful for further research.

Source: USGS, Togo Ministry of Mines

- * Quantity shipped which includes mainly gold coming from neighbouring countries, which is being checked before being shipped and a small amount of gold which is being exploited in a non-industrial way by individuals in Togo.
- ^ Gold and diamonds are only exploited in a small scale non industrial way and their reserves are unknown.
- ~ The Société Générale de Mines (General Mining Company) is in charge of the exploration of Manganese.

In 2010 Togo was ranked 14th among the world's top producers of phosphate. Reforms associated with the creation of the Société Nouvelle des Phosphates du Togo (SNPT), the state-run phosphate company created in 2009, have begun to pay off: production expanded by 28.4% in 2012 and, largely driven by the phosphate sector, further growth in extractive industries is forecast (18.4% in 2014).

The government has granted seven licenses to companies exploring for gold, diamonds, manganese, nickel, zinc, bauxite and platinum.

Togo has forest resources covering 368,000 hectares (41,000 hectares natural production forest, 313,000 hectares protected and 14,000 hectares plantations). The deforestation rate is estimated at 15,000 hectares per year.

Oil discoveries in neighbouring Ghana have raised interest in the exploratory potential of Togo's offshore acreage, and initial geological studies have been carried out in Blocks 1 and 2 by the operator ENI. ENI has indicated that at the end of the exploration stage traces of petroleum were discovered.

Legal, Institutional and Policy Framework

Togo established a Ministry of Environment in 1987 and passed a law establishing the Environmental Code in 1988. In 2009 a National Environment Policy was adopted.

The government has also taken a number of steps to improve the management of the country's natural resources and to actively promote the mining sector, in

particular by leveraging increased private capital and by undertaking comprehensive institutional and structural reforms in the extractive industries. The state-owned mining company Société Nouvelle des Phosphates du Togo (SNPT) was established in 2009, and the Togolese authorities are working on a new draft mining code with the aim of increasing transparency in licensing, better taking into account the environment and reviewing mining taxation. The government also intends to introduce new fiscal rules for the mining sector in a further attempt to attract major investment.

Togo's mineral sector is governed by law No. 96-004 1996 (amended by Act No. 2003-012). All mineral resource operators are required by law to contribute to local development, and all mining operations must be systematically preceded by an environmental and social impact assessment.

Transparency and accountability

Togo has been compliant with the Extractive Industries Transparency Initiative (EITI) since 2013. Despite this progress, however, some foreign investors remain hesitant due to a perceived continuing lack of clarity in the mining sector's legislation and operations.

Key issues

Togo's transparency will be tested by the pending award of a major contract to develop the country's phosphate reserves which could attract significant investment in mining as well as downstream processing industries.

Annex: sources

Key natural resources / extractive activity	http://www.africaneconomicoutlook.org/en/countries/west-africa/togo/
Mining	http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-ct-to.pdf http://www.azomining.com/Article.aspx?ArticleID=128
Forestry	http://www.itto.int/sfm_detail/id=12360000
Petroleum	http://mergersandacquisitionreviewcom.blogspot.co.uk/2011/06/mauritania-benin-and-togo-overview-of.html
Transparency / accountability	http://eiti.org/togo http://itietogo.org/index/ http://country.eiu.com/article.aspx?articleid=1630557147&Country=Togo&topic=Economy&subtopic=Forecast&subsubtopic=Economic+growth&u=1&pid=71692191&oid=71692191&uid=1



Timor-Leste

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EXTRACTIVE INDUSTRIES AT A GLANCE

Current production and main exploration:	Oil & Gas
Oil & condensate reserves:	851.8 million barrels
Gas reserves:	11.7 Trillion Cubic Feet
Extractive industries as share of GDP:	75% ¹
Extractive industries as share of revenue:	90% ²
GDP:	1,29 billions USD in 2012 ⁴
GDP Growth:	8.5 % in 2012 ⁴
Inflation:	11.8% 2012 ⁴
Sovereign wealth fund:	Petroleum Fund (Balance 13 billion USD in 2012) ⁷
Transparency & anti corruption measures:	EITI, Government Portal, CAC, Free Media, and Active Civil Society
Country development guide:	TL 2011-2030 Strategic Development Plan ⁸

Summary

Timor-Leste is an 11 year old country with a population of 1.2 million people. It is a small island economy blessed with natural resource endowments and natural beauty located in a growing and highly competitive region. The country has petroleum reserves of 553.8 million barrels¹, in addition to 298 million barrels of condensate from the Greater Sunrise field³ and gas reserves of 11,7 trillion cubic feet.^{5,6}

With the aim of managing its oil revenues and avoiding the resource curse, Timor-Leste established a Sovereign Wealth Fund (Petroleum Fund), which has a current balance of over 14 billion USD, and is invested in US treasury bonds and equities⁴. This petroleum wealth equals approximately US \$36,920 per citizen (based on proven reserves and an assumed oil price of \$80/barrel).⁵ It offers protection from uncertain petroleum revenue flows, thereby allowing for better management of fiscal policy.⁹

Currently, Timor-Leste is one of world's most natural resource-dependent countries. More than 90% of government finances in 2011 were made up of petroleum revenues², and accounted for approximately 75% of GDP¹. However, the government is planning to utilize the natural resources to diversify its economy over the next 20 years by investing in the country infrastructure, health, education, agriculture and tourism through its 'Front Loading Policy' outlined in the Timor-Leste Strategic Development Plan (SDP) 2011-2030⁸. The SDP envisions Timor-Leste becoming an upper middle income country in 2030 by eradicating extreme poverty by building a secure, well educated and healthy population.⁸

Exploration of significant further offshore reserves of both oil and gas continues, although production at the Greater Sunrise field has been delayed as a result of disputes over maritime boundaries and the validity of the CMATS treaty³. Timor-Leste has also been blessed with significant mineral deposits, although these remain large unexploited. They include gold, copper, silver, manganese, marble and chromites. To better manage its extractive industries, Timor-Leste has increased efforts to control corruption and enhance transparency, good governance, stability and security.

Overview of key sectors

Resources	Reserves	Development	Companies involved
Oil	553.8 million barrels (Revenue Watch)	Extraction – 70,000 barrels per day)	Conoco-Phillips, Santos, ENI, Santos, INPEX, Oilex, Tokyo Electric and Gas Company, Inpet Sahul, Woodside, Shell, Osaka Gas
	298 million barrels of condensate from Greater Sunrise ^{3,6}	Not Yet	Woodside
Natural gas	4 trillion cubic feet ³ (Revenue Watch)	Extraction 1bcf/day (ANP, 2013)	Woodside
	7.7 Trillion Cubic Feet ³ (Greater Sunrise field only) ^{3,6}	Not Yet	Woodside
Mining	Ongoing Surveying	Not Yet	None
Forestry	742,000 hectares	N/A	N/A

Petroleum

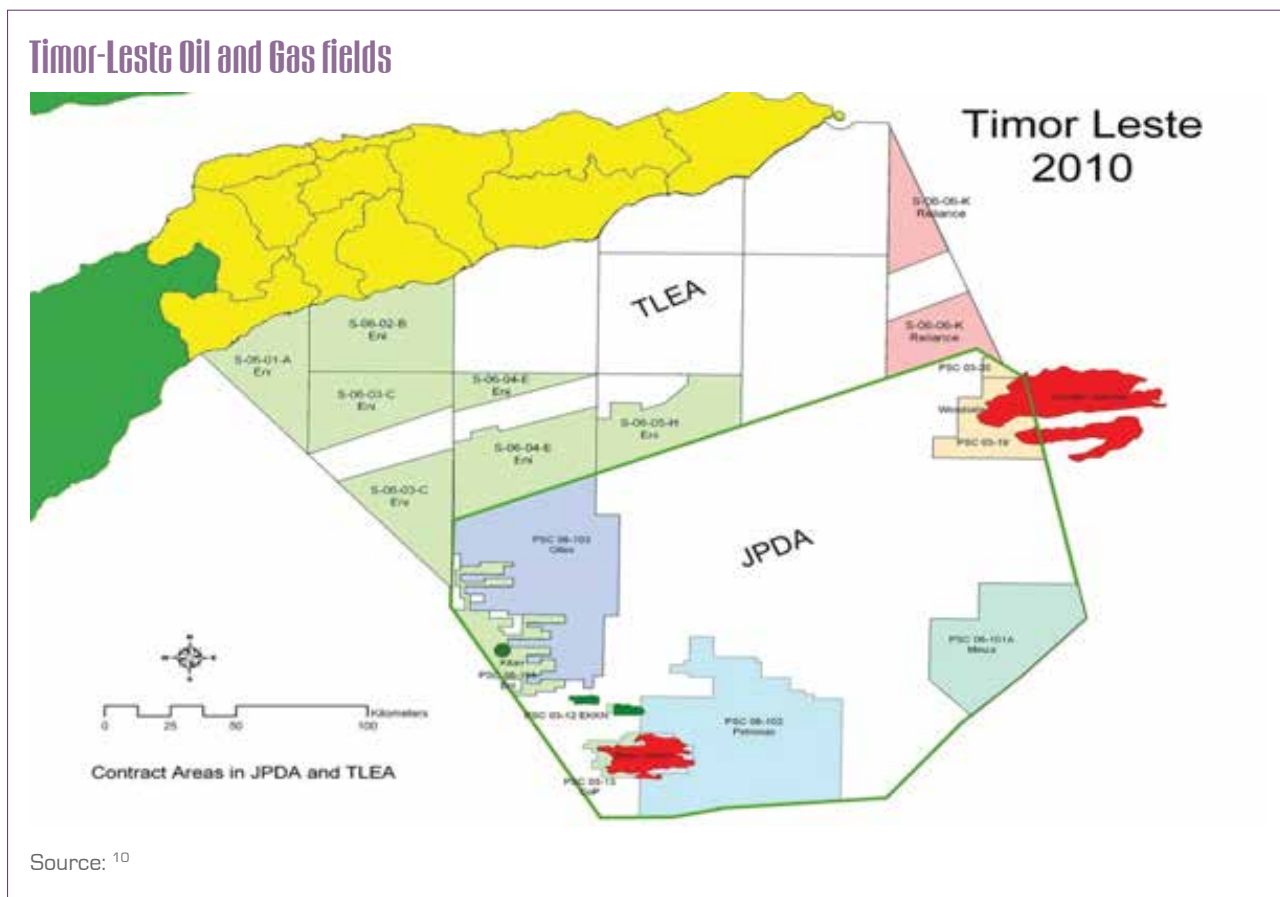
In 2012, proven oil reserves amounted to 553.8 million barrels, and oil production is currently 70 barrels per day^{3,6}. Companies involved in extraction include Conoco-Phillips, Santos, ENI, INPEX, Oilex, Tokyo Electric and Gas Company, Inpet Sahul, Woodside, Shell, and Osaka Gas.

The Timor-Leste petroleum sector consists of two different jurisdictional areas: the Joint Petroleum Development Area (JPDA), which is jointly managed by Australia (10%) and Timor-Leste (90%), and the Timor-Leste Exclusive Area and onshore areas. Key fields include Elang, Kakatua and Kakatua North, which began production in 1998 and ceased production in July 2007. Bayu-Undan, which currently provides the majority of revenues and the Kitan field, is a relatively small oil field and commenced production in October 2011^{3,6} new fields have also been discovered that are subject to further exploration. They include the Chuditch gas field, Jahal and Kuda Taci Oil fields, the kelp deep

gas field, and the Greater Sunrise gas fields. Production at the Bayu-Undan field peaked in 2011 and is expected to dry up around 2025. Its total estimated reserves are 400 million barrels of liquids and 4 trillion cubic feet of gas^{3,6}.

There is also an estimated twenty years of reserves in the Greater Sunrise field. It is one of the largest Timorese petroleum fields identified to date, with estimated reserves totaling 7.67 trillion cubic feet of gas and 298 million barrels of condensate.^{3,6} Production at Greater Sunrise has been delayed as a result of disputes with Australia, which include arbitration against the validity of the CMATS treaty, as well as disputes between the Timor-Leste Government and the Woodside-led Sunrise joint venture – the project operator – over the location of a processing plant.^{3,6}

Exploration activities to locate more oil and gas fields in both the JPDA and the Timor-Leste Exclusive Offshore



areas have been resumed since the latest international exploration bidding in 2006. Another international bidding round is currently being planned for 2014, although there have been no new discoveries since the KITAN field was discovered in early 2008. Nevertheless, overall exploration ratios are well above the world average, and interest in future off-shore and onshore explorations remains high.^{3,6}

Currently, Timor-Leste does not have any refinery capacity. However, the Strategic Development Plan's vision for development in 2030 includes the establishment of a south coast petroleum industry corridor, which will include a petrochemicals refinery and liquid natural gas processing plant.

Mining

Timor-Leste has also been blessed with significant mineral potential, although mines have yet to be exploited or generate any revenue. Mineral deposits include gold, copper, silver, manganese, marble and chromite. They are still being surveyed and are expected to be as least as promising as those of the island's western (Indonesian) half, where there has been a significant manganese boom. Gold mineralization in the form of quartz, quartz-

calcite and calcite veins has been observed in Hilimanu area, Manatuto district. Chromite deposits with good quality grade 36 percent and 51 percent cr_2o_3 have been reported from Baucau, Hilimanu and Manufahi districts.^{11,12}

The manganese deposits are mainly composed of pyrolusite minerals with a grade range between 84–94.5 percent MnO_2 . These have been found in Vemassee, Talamata, Venilale (Baucau district), Uato-Carbau (Viqueque district). Phosphate deposits with grades ranging from 9.97 percent to 21.55 percent P_2O_5 have been discovered in Abo (Quelicae-Baucau district), and Laleia (Manatuto district). There are also Bentonnesite-clay deposits, Gypsum deposit and Marble Deposit found in various mountains formation in various part of the country¹⁰⁻¹²

River valleys throughout the country contain a wide range of sand and gravel deposits some of which have already been used for the building and construction industries. There is also a wide variety of building stones such as granite, andesitic, basalt and gabbroic that could provide valuable sources of rock fill, aggregate and road materials. Andesitic are especially suitable for



use in breakwaters for harbour protection, stabilizing seabed pipelines and for railway ballast, road metal and high strength concrete.

Logging

Timor-Leste has forest area of 742,000 hectares,¹³ the current state of which is unknown due to the lack of any recent national forest resource inventory. There is no established logging industry, and the removal of wood for industrial purposes is banned, while the cutting of big diameter trees is permitted only for domestic use. Some cutting of sandalwood trees for industrial purposes occurs illegally.

Legal, Institutional and Policy Framework

Petroleum

The oil sector is governed by a comprehensive legal framework and independent licensing process. National law limits the discretion of the licensing authority and ensures that the licensing process is competitive and fair. Parliament has no legal mandate to review contracts but takes an oversight role. The Ministry of Petroleum and Mining has administrative oversight while the National Petroleum Authority (ANP), established by decree, awards production-sharing contracts to companies through competitive public bidding rounds and regulates the sector.¹⁴

Timor-Gap Empresa Publico, an entirely state-owned national oil company, holds the government's equity stake in the country's oil industry. The Petroleum Fund Law, established in 2005 and amended in 2011, determines petroleum revenue management under the Petroleum Fund for both current spending and saving for future generations. A number of reporting requirements outlined in the Petroleum Fund Law ensure parliamentary oversight.¹⁵

Mining

Mining officially falls under the remit of the Ministry of Petroleum and Mineral Resources, although in practice it faces a virtually non-existent regulatory regime. There is a new Environmental Act but it has limited reach into the mining industry, and a draft mining code is currently being circulated among national stakeholders for consultations.^{10,16}

Logging

Timor-Leste's forest resources are managed by the Ministry of Agriculture and Fisheries. The industry is subject to the Forest Policy 2007 and the Decree Law on Forest Management 2000. Within the Ministry of Agriculture and Fisheries, the Agriculture and Land-use Geographic Information System Unit and the National Directorate of Forestry collect forest data. The preparation of a national inventory of forest resources has become a major priority under the National Directorate of Forestry Sector Investment Program.

Fiscal framework

Total net petroleum revenue in 2012 amounted to \$3.6 billion,¹⁷ and Petroleum Fund capital is currently \$14 billion.⁷ About 90% of the 2012 State Budget was supported by petroleum revenues.¹⁷ Since 2009, withdrawals from the Fund have exceeded the Estimated Sustainable Income (ESI) or recommended maximum transfer, in order to finance the government's Strategic Development Plan. In 2012 these transfers totaled \$1495 million, which is significantly greater than the ESI of \$665.3 million.¹⁸ Without adjusting for inflation, government spending jumped 587% between 2007 and 2012. Some projections indicate that if this trend continues, and the Greater Sunrise project remains stalled, the Petroleum Fund could be empty by 2020.

However, the government argues that these excess withdrawals, called 'Frontloading', are intended to be transient, and will bring a return to the ESI in later years. The objective of 'Frontloading' is to diversify the economy and reduce its dependence on petroleum resources, as outlined in the Timor-Leste 20 year Strategic Development Plan (2011-2030).^{8,9} And between June 2005 and 2013, Timor-Leste received more than \$16 billion in petroleum revenues in addition to \$1.5 billion in investment returns, and only spent around \$4.6 billion. The government argues that for a new country like Timor-Leste, having a framework that can save 50-70% of its revenues is a remarkable achievement, while satisfying spending demands to improve infrastructure, health, education, water and sanitation.⁹

The National Directorate for Petroleum Revenue in the Ministry of Finance administers petroleum taxes; income tax from oil companies, additional profit tax, value-added tax (VAT), wages tax and withholding tax. The National Petroleum Authority is the regulatory body for petroleum activities and it administers the collection of royalties and profit sharing agreements with the oil companies.

Sovereign Wealth Fund

The Petroleum Fund, the Sovereign Wealth Fund of Timor-Leste, was established under the Petroleum Fund Law, which was passed in 2005 and amended in 2011. It is designed to contribute to a wise management of Timor-Leste's petroleum resources for the benefit of both current and future generations. The Petroleum Fund is a tool that contributes to sound fiscal policy,

where appropriate consideration and weight is given to the long-term interest of Timor-Leste's citizens.⁹

Withdrawals from the fund are only allowed to be made to a single state budget account, and require approval by Parliament through the state budget process. The withdrawal amount is guided by the Estimated Sustainable Income (ESI) framework, which is calculated every year in conjunction with the state budget process. The estimated annual withdrawal from the Fund is aimed to be sustainable over the long term without depleting the nation's petroleum wealth. The ESI is calculated by the Ministry of Finance with assistance from the IMF, and is audited by an external auditor. Until a series of concessional loans were agreed in 2012, Timor-Leste had zero external debt.⁹

The Fund is actually an account held by the Ministry of Finance in the Central Bank of Timor-Leste, whose returns are determined by the returns on a portfolio of financial assets. The Fund is not a separate legal entity or institution, but can be seen as a fiscal management tool integrated with the central government budget and the budget process to facilitate informed decision making. In more simple terms, it can be seen as the government's long-term saving account. Guidelines regarding the management of the fund and the eligibility of its investments are set by the Petroleum Fund Law of 2005.⁹

With a sound and robust legal basis, the governance structure of the fund complies with international standards. The structure is defined by the separation of duties between the Operational Manager and the Ministry of Finance as well as stringent reporting requirements based on the principle of transparency. The Ministry of Finance is responsible for the overall management of the Fund and is accountable to Parliament, while the Central Bank is responsible for the operational management of the Fund. These features safeguard the investment objective of the Fund; to pursue finance returns while having due regard for the risks.⁹

Transparency and accountability

Transparency and accountability are increasingly important features of Timor-Leste's natural resource governance. It achieved compliance with the Extractive Industries Transparency Initiative in 2010 and subscribes to the Santiago Principles for transparent and accountable management of sovereign wealth

funds. Timor-Leste's Petroleum Fund scores well on international benchmarks of sovereign wealth fund governance.

Ministry of Finance budget reports include data on production volumes, prices, export values and disaggregated resource revenue streams and the National Petroleum Authority publishes information on reserves, production volumes and investment. Reports on the Petroleum Fund's receipts, balance, investments and withdrawals are available through the Central Bank and the Petroleum Fund is also subject to external auditing; audits are reported to parliament albeit with some delay.

The Petroleum Act requires disclosure on licensing rounds but the National Petroleum Authority has yet to release this information. Many, but not all, petroleum contracts are publicly available, while technical data and 'trade secrets' remain confidential. Anti-Corruption Commission, Office of Inspectorate General, Independent External Government Audit, Free media and Active Civil Society has been established and promote in the country with aims to prevent corruption and promote good governance.

Demonstrating its commitment to transparency, the government introduced the Timor-Leste Transparency Model on the occasion of the 2011 EITI Asia-Pacific Conference in Dili, Timor-Leste, with theme Beyond EITI: Timor-Leste Transparency Model. The model is an unparalleled approach to good governance, utilizing a combination of independent and interdependent institutional tools and mechanisms, which can be adapted to in-country systems within EITI countries. It identified the five following pillars:⁹

Pillar 1: Global Standards (EITI – Publish What You Pay, Disclose What You Received)

The first pillar concerns adherence to EITI principles. Launched in 2002, EITI sets the global standard for promoting transparency and accountability in countries rich in oil, gas or mineral resources. Timor-Leste was one of the first countries to commit to the principles and criteria of the EITI at the first international conference on EITI in London in June 2003, and became EITI Compliant in 2010. Please visit EITI website for further information: www.eiti.org

Pillar 2: Best Practice in Sovereign Wealth Management – how are revenues best managed?

The second pillar is reflected in the Timor-Leste Petroleum Fund, established in 2005 to assist Timor-Leste in sustainably managing its petroleum revenues, and in doing so attempting to avoid the resource curse. The Petroleum Fund Law was amended in August 2011 and is based on two principles: good governance and diversification. Also based on the Santiago Principles³⁴, the Petroleum Fund governance model emphasizes a high degree of transparency and disclosure of information. Please visit www.mof.gov.tl and www.bancocentral.tl for further information on the Petroleum Fund.

Pillar 3: Educate and Information – How are revenues used?

Timor-Leste has taken measures to ensure that the State Budget, 90 per cent of which funded by resource revenue from the Petroleum Fund, is open, widely accessible and understood. Each year, the Minister of Finance presents a budget to National Parliament, with each Minister proposing and defending departmental budget discussed in Parliamentary Committees.

Pillar 4: Accountability and Accessibility – How are revenues spent and where?

In March 2011, the Government of Timor-Leste launched the Transparency Portal as a landmark initiative. The Portal is intended to cover four fields: Budget, Procurement, Results and Aid Transparency. The Portal attempts to promote fiscal transparency by providing citizens, civil society and development partners with tools to account for and monitor public resources. Please visit the following link to learn more: <http://www.transparency.gov.tl/english.html>

Pillar 5: Communication and Good Governance – What decisions are made and why?

The Council of Ministers is the highest decision making body in Timor-Leste, comprised of the Prime Minister, Vice-Prime Minister and Ministers with Portfolio, as well as Secretary of State. Across the world, such forums are often closed-door sessions, with little known about agendas, debates or decisions. As part of its Timor-Leste Transparency Model, Timor-Leste publishes the decisions of the Council of Ministers within two days of the weekly meetings. The decisions are published and

³⁴ These make up a framework of generally accepted principles and practices for appropriate governance and accountability arrangements. They also reflect prudent and sound investment practices for Sovereign Wealth Funds.

archived on the official Government website and through press releases in English, Portuguese and Tetum. They are also distributed through local and international media, civil society, institutional and diplomatic channels. The information on decisions made by the Government can be found at <http://timor-leste.gov.tl/?lang=en>

Key issues

- Notwithstanding **Timor-Leste's recent and successful efforts to harness petroleum revenues**, the country lacks much-needed infrastructure, human resources and supporting industries. To develop the sector, Timor-Leste's Strategic Development Plan for 2011- 2030 notes the establishment of a National Petroleum Company, developing a key petroleum project on the South Coast (in Tasi Mane), improving human resources and deepening revenue transparency.
- **Legal and fiscal regimes in Timor-Leste have improved in recent years**, alongside improvements in transparency and government accountability. This owes much to progressive initiatives such as the Timor-Leste Transparency Portal. But in spite of these efforts to increase openness, information is still not readily accessible to the majority of the country's impoverished citizens and local communities. The government also lacks sufficient capacity to ensure that companies in the petroleum sector operate in full compliance with the law.
- **Timor-Leste's Petroleum Fund is a good example of a sovereign wealth fund** to manage petroleum resources and offers important lessons that can be learned for the benefit of other g7+ countries. The Timorese model is highly transparent about transfers to and from the Fund, which are subject to democratic checks and balances.
- **Political economy challenges in Timor-Leste include managing the level of transfers made from the Petroleum Fund** to the government. Since 2009 it has significantly exceeded Timor Leste's stated Estimated Sustainable Income. Without adjusting for inflation, government spending jumped 587% between 2007 and 2012. If this trend continues, the Petroleum Fund could be empty by 2020. Spending is, however, necessary as there is an urgent need for quick results in the infrastructure, agriculture, education and health sectors to reduce poverty and malnutrition, improve food stocks and the quality of education. Meeting these goals, outlined in the Strategic Development Plan for 2011-2030, will be a challenge for the government. It will require sustaining economic growth, job creation for youth and rural populations, controlling inflation and avoiding Dutch disease in the long term.

Key resources

[Ministry of Finance Petroleum Fund portal](#): Offers an overview of the Fund's investments and structures

[Timor-Leste National Petroleum Authority](#): Website of the Timorese regulatory body for petroleum

[Extractive Industries Transparency Initiative in Timor-Leste](#): The national EITI chapter's website

[Timor-Leste Strategic Development Plan](#): Outlining national development priorities for 2011- 2030

[Timor-Leste Transparency Portal](#): Published information on aid, results, procurement & national budget

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