

**Beyond the Resource Curse: Mineral Resources and Development in Guinea-Conakry**

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## **ABSTRACT**

Natural resource endowments are no guarantee of socioeconomic development. Many developing countries are rich in natural resources (minerals, oil, gas, hydropower), and yet many of their citizens remain in poverty and their economies have failed to grow; the “paradox of plenty”. Despite its natural resources (bauxite, iron ore, diamond, gold and hydropower), Guinea has been unsuccessful in marshaling and leveraging these resources to produce socioeconomic development. The critical challenge for Guinea, just like many resource-rich countries, is governance failures- decades of military rule, corruption and resource mismanagement after centuries of French colonial rule. This thesis uses secondary sources and data to argue that the resource curse as a phenomenon in resource-rich countries has limitations as it does not offer these countries a path for how their resources could be used to propel social and economic development. To overcome the so-called resource curse, this thesis argues that the key to unlocking economic and social development in mineral-rich Guinea, is investing its resource-generated revenue to develop the country’s infrastructure services. Infrastructures such as roads, telecommunications, water, power, education and health facilities are the foundation for socioeconomic development. The new hope for Guinea rests in the fact that after more than fifty two years of military and authoritarian rule, the country transitioned to “democracy” for the first time in 2010. This coupled with the emergence of new global players such as China and other emerging countries, with their quests to secure stable natural resources to fuel their industries, comes a new window of opportunity for resource-rich countries such as Guinea to leverage and link its extractive industries to develop key infrastructure services. Guinea could leverage its bauxite and iron ore industries to transition to onsite transformation of these materials, whose transformation is energy-intensive. Guinea could then leverage the demand for power from the onsite transformation to develop its untapped hydropower generation capacity to supply both mines and the rest of the country. However, this will not happen without governance reforms in Guinea’s extractive industries and mining code.

**Thesis Supervisor:** Balakrishnan Rajagopal, MIT

**Reader:** Calestous Juma, Harvard Kennedy School of Government



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This thesis is inspired by my first sixteen years growing up in Guinea, and I dedicate it to the people and country of Guinea to say that I still have hope that the enormous resources our country possesses will one day translate to inclusive socioeconomic development for all Guineans. To this end, I say, "le combat et la pression doivent continuer."



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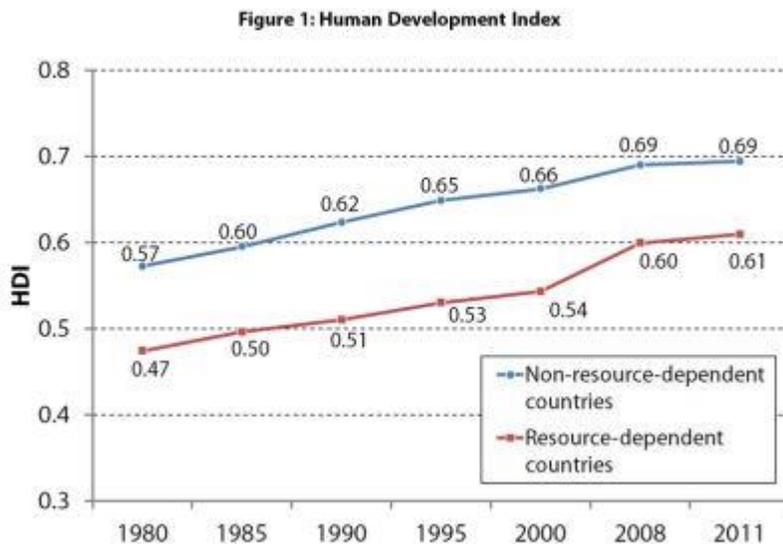
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## I. INTRODUCTION

### RESEARCH CONTEXT

Natural resource endowments are no guarantee of socioeconomic development. Many developing countries are rich in natural resources (minerals, oil, gas, hydropower), and yet many of their citizens remain in poverty and their economies have grown slower compared to many non-resource-rich countries. There are links between natural resource endowments and poor economic and development indicators such as life expectancy, literacy and income. This is known as the “resource curse”, which Richard Auty coined in 1993 to describe the paradox of plenty, essentially, countries rich in natural resources (minerals, oil, and gas) experience slower economic growth and the resource rents from these resources lead to corruption, and overall underinvestment in key socioeconomic development sectors.<sup>1</sup>



Source: UNDP

<sup>1</sup> World Bank, *From Curse to Blessing: Natural Resources and Institutional Quality*, Annual Review, (2006 2005), <http://siteresources.worldbank.org/INTENVMAT/64199955-1162240805462/21125342/9FromCurse.pdf>.

A comparison of the United Nations Human Development Index (HDI) of resource-dependent countries and non-resource dependence countries since the 1980s, shows that resource-rich countries have in general not performed well in key economic and social development areas such as education, health and income compared to non-resource dependent countries. In the African continent, many countries have despite their resource riches failed to capitalize on their resources to grow their economies and improve the socioeconomic wellbeing of their people.

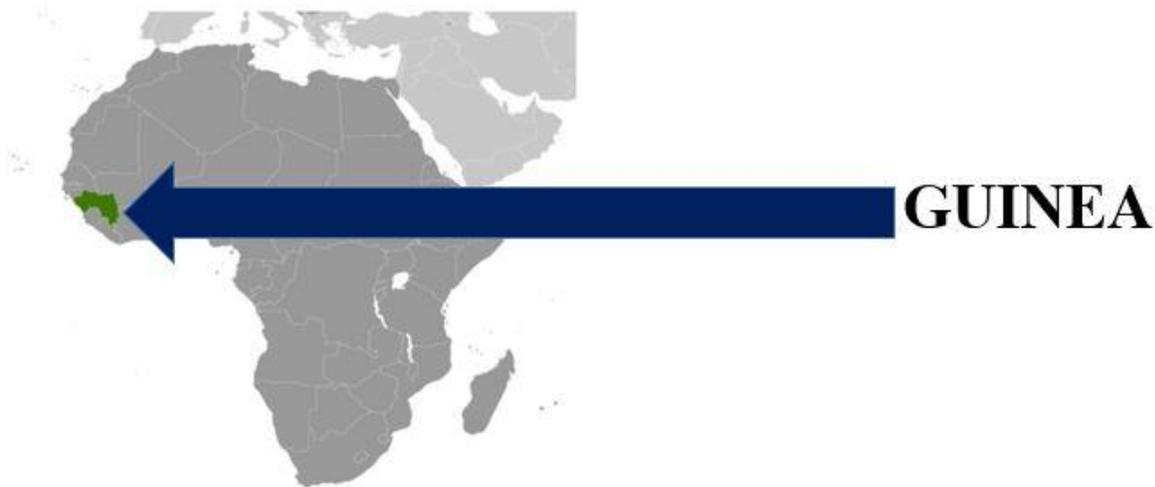
Guinea is one of such resource-rich countries, which despite its one-third of the world's reserves of bauxite, billions of reserves in iron ore and considerable reserves of diamond, gold and huge hydropower generation capacity, has not succeeded in linking its mineral resources to meaningful development. By the late 1980s and early 1990s, there were few resource-rich countries in Africa, which had been able to avoid the so-called resource curse, and as result, it gained traction in international development because at the time it accounted for the problems facing many resource-rich countries. While the resource curse accounts for the major development challenges experiencing resource-rich countries such as Guinea, the resource curse does not offer a path for how countries such as Guinea, which have fallen through development traps, could use and leverage their resources for development.

## **METHODOLOGY AND RESEARCH QUESTION**

This thesis addresses the following question: To what extent do the institutional and governance structures/processes of the extractive sector in Guinea determine investment of resource-generated revenue in infrastructure development? And as a follow up question, how could Guinea's mineral sector be reformed and leveraged for infrastructure development? This thesis aims to understand and reveal how Guinea's mining sector could be leveraged and used to propel

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the country to economic development through the development of the country's infrastructure services. Though, part of the challenge for Guinea and many other countries is overcoming deep-rooted governance failures and establish the reforms necessary to channel the revenue from its mineral exploitation to infrastructure and economic growth. In an attempt to address the above question, this thesis research will use Guinea's bauxite sector and its untapped iron reserves to argue that with smart governance mechanisms, and mining policies, Guinea's mineral sector could serve as path to improve the country's infrastructure capabilities as a foundation for economic development. Infrastructure services—roads, rail, ports, air transport and information and telecommunication technologies connect a people in a country and integrate all parts of the country, which facilitates commerce, improves business and industry competitiveness. Due to the Ebola outbreak in Guinea, which began in December 2013, travel and interviews as planned in the thesis research proposal could not be carried out in the summer of 2014. Instead, this thesis research employs desk-based research and the use of secondary sources to address the above thesis question.



Map Source: CIA World Factbook



## II. GUINEA: DEVELOPMENT CHALLENGES

### LITERATURE REVIEW

#### Resource Rents

Beginning in the late 1980s, a large number of resource-rich countries had failed to grow economically and in many of these countries, extreme poverty had increased. Around this time, development and political economy research studies began to link the presence of natural resources with slow economic growth and poor performance in key sectors such as education, health, and income.<sup>2</sup> The paradox of plenty or experiencing economic stagnation and poor development outcomes despite possession of natural resources is known as the “resource curse”. The resource curse manifests itself in resource-rich countries in multiple ways. One of which is such that natural resources create excess resource rents, which if unguarded, allows for excessive government spending on inefficient and less productive projects.<sup>3</sup> Excessive government spending on “white elephant” or politically motivated projects has become a critical challenge in resource-rich, as revenue from minerals are spent on personal gains and regular government budget line items rather than on long-term development projects. Furthermore, in many resource-rich countries, with a few exceptions, the conditions that drive economic development erode over time as revenue from resources provides “easy money”, which lead to factional political states, where politicians survive by capturing the rents rather than making hard choices about reform.<sup>4</sup> As the resource booms create more revenue, in places such as Guinea, the revenue from natural

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<sup>2</sup> Andrew Rosser, *The Political Economy of the Resource Curse: A Literature Survey*, Working Paper, (2006), <https://www.ids.ac.uk/files/WP268.pdf>.

<sup>3</sup> Ibid.

<sup>4</sup> Indra de Soysa, *Dead Ends of Transition : Rentier Economies and Protectorates*, ed. Michael Dauderstädt and Arne Schildberg. (Frankfurt ; New York : Campus Verlag, c2006., 2006).

resources has been captured by political elites. Historically, payments were made to military officers for power solidification and political support; military spending still constitutes a large portion of the government's budget in Guinea. The military and authoritarian governments, which ruled Guinea for fifty two years, were characterized by the use of resource revenue to pursue various politically-driven economic policies. This included providing economic benefits to particular groups and creating rent-seeking opportunities in order to secure private sector cooperation, gaining control over resource rent allocation, and eroding accountability and checks and balances.<sup>5</sup>

### **Resource Dependence and commodity prices**

A major feature of the resource curse is the fluctuation and instability of resource commodity prices in the international market, which many times lead to reduction in government revenue in resource-rich countries. This in turn affects the reliability and stability of government revenue and foreign exchange earnings; dramatically exposing governments to budget deficits. Governments, which do not exercise caution and spending restraints during the boom years, experience economic downturns during “rainy” days; the economic instability increases risks for private investment and business costs.<sup>6</sup> Price volatility has been a challenge in especially, in oil-rich countries, due to the constantly changing international oil prices. However, in Guinea, in particular, the challenge has not been price volatility per-se because the price of the country's mineral exports such as raw bauxite, Guinea's main export, is not linked to the internationally-determined price of bauxite's end-product, aluminum. Thus, while Guinea is heavily dependent on natural resource export earnings, the price volatility has not been a major issue as much as has

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<sup>5</sup> Rosser, *The Political Economy of the Resource Curse: A Literature Survey*.

<sup>6</sup> Ibid.

been the failure to invest in industries and infrastructure to diversify its economic base.<sup>7</sup> To this end, the country continues to remain dependent on resource-generated revenue, and long-term, this continued dependence will likely become more problematic than the dangers of price volatility from unprocessed raw materials.<sup>8</sup> A more applicable resource curse challenge for Guinea is that government revenue is heavily derived from resource-revenue, rather than from a direct system of taxation.<sup>9</sup> It is argued that if government spending is not dependent on revenue from the populace, politicians utilize resource rents recklessly because less pressure may come from citizens in the delivery of efficient and adequate public services, as opposed to if more government tax revenue was derived from taxpayers.<sup>10</sup> The argument is that if public expenditures are derived from direct taxes from citizens, it would be much more difficult to mismanage tax-derived revenue from the public than from revenue from extractive industries. This is largely due to the idea that people tend to scrutinize, and exert more pressure when it is their tax dollars being used to fund public services and expenditures than if these services were financed from resource rents.<sup>11</sup>

### **The Dutch disease**

Another feature of resource-rich countries is a mechanism in which the presence of natural resources produces more export earnings, which lead a country's currency to become more expensive; making the country's other exports uncompetitive internationally. Furthermore,

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<sup>7</sup> Paul Collier, *The Bottom Billion : Why the Poorest Countries Are Failing and What Can Be Done about It* (Oxford ; New York : Oxford University Press, 2007., 2007).

<sup>8</sup> Michael Renner, *The Anatomy of Resource Wars*, Worldwatch Paper: 162 ([Washington, D.C.] : Worldwatch Institute, c2002., 2002).

<sup>9</sup> Paul Collier, et al. *Natural Resources and Violent Conflict* (The World Bank, 2003), <http://elibrary.worldbank.org/doi/book/10.1596/0-8213-5503-1>.

<sup>10</sup> Renner, *The Anatomy of Resource Wars*.

<sup>11</sup> Xavier Sala-i-Martin and Arvind Subramanian, *Addressing the Natural Resource Curse: An Illustration from Nigeria*, Working Paper (National Bureau of Economic Research, June 2003), <http://www.nber.org/papers/w9804>.

as less resources are devoted to sectors such as manufacturing, which could otherwise provide comparative advantage than reliance on resource extraction, this contributes to further decline of that country's non-mineral economic production.<sup>12</sup> While the "Dutch disease" was more problematic in the 1970s and 1980s in countries such as Nigeria, it has historically not been Guinea's main challenge. The challenge for Guinea has largely been a lack of economic diversification and investment in key infrastructure development to promote overall economic development.<sup>13</sup> Furthermore, the "Dutch disease" has been less applicable to Guinea due to the nonexistence of the country's other sectors such as manufacturing and finance, to begin with.

### **Governance**

Governance is defined as the quality of public and private institutions, which govern how decisions get made and in whose interest. In Guinea, for example, there is a failure of public institutions to manage the mineral resources and the revenue, hence the continued high levels of poverty and low income per capita.<sup>14</sup> One of the troubling governance challenges facing resource-rich countries such as Guinea, is corruption, which have been a scourge on the country. Corruption as a governance challenge gets to the heart of the relationship between the governed and the government. Corruption is an erosion of the rule of law, which is the foundation for business and investment creation. In many of these countries, the business and political cultures, coupled with low salaries have created and encourage a culture of corruption, which is rampant. As a result, there is a tendency for resource management institutions to deviate from good governance standards such as checks and balances and accountability of public officials. For

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<sup>12</sup> Jeffrey D. Sachs and Andrew M. Warner, *Natural Resource Abundance and Economic Growth*, Working Paper (National Bureau of Economic Research, December 1995), <http://www.nber.org/papers/w5398>.

<sup>13</sup> Sala-i-Martin and Subramanian, *Addressing the Natural Resource Curse*.

<sup>14</sup> Louis A. Picard and Ezzeddine Moudoud, "The 2008 Guinea Conakry Coup: Neither Inevitable nor Inexorable," *Journal of Contemporary African Studies* 28, no. 1 (January 2010): 51–69, doi:10.1080/02589000903542590.

example, in Guinea, it is not uncommon for government officials to demand money or other services for duties and services they render.<sup>15</sup> The low investment in meaningful infrastructure development in these countries have led to poor development and economic outcomes.<sup>16</sup> Resource-rich countries face other institutional and governance challenges such as the inability of the government to manage the country's resources, formulate and put into effect policies for socioeconomic development of its people.<sup>17</sup> Throughout Guinea's history, favoritism and rewarding loyalist supporters with gifts and services are rampant, as such, the priorities of the country (raising education, health, income and life expectancy standards) and investment in the country's dilapidating infrastructure services were ignored and unaddressed.<sup>18</sup>

Much of the discourse on governance focuses on preventative measures against corruption and mismanagement, while these have been critical issues in many resource-dependent countries, there must also be a recognition that a number of these countries, including Guinea have experienced decades of low growth, political instability and sometimes civil unrests. Thus, it is as much a struggle to prevent mismanagement and corruption as it is about building up the human resources and institutional capabilities necessary to improve delivery of public services and the economic environment.<sup>19</sup> In the Guinean context, even with the renewed hope the return to "democracy" in 2010 brought, the current government has struggled to deliver on key areas such as infrastructure and economic development, due to some extent, lack of

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<sup>15</sup> Economist Intelligence Unit, *Country Report: Guinea*, Quarterly, (2014), [http://www.eiu.com/index.asp?layout=displayIssue&publication\\_id=780000878](http://www.eiu.com/index.asp?layout=displayIssue&publication_id=780000878).

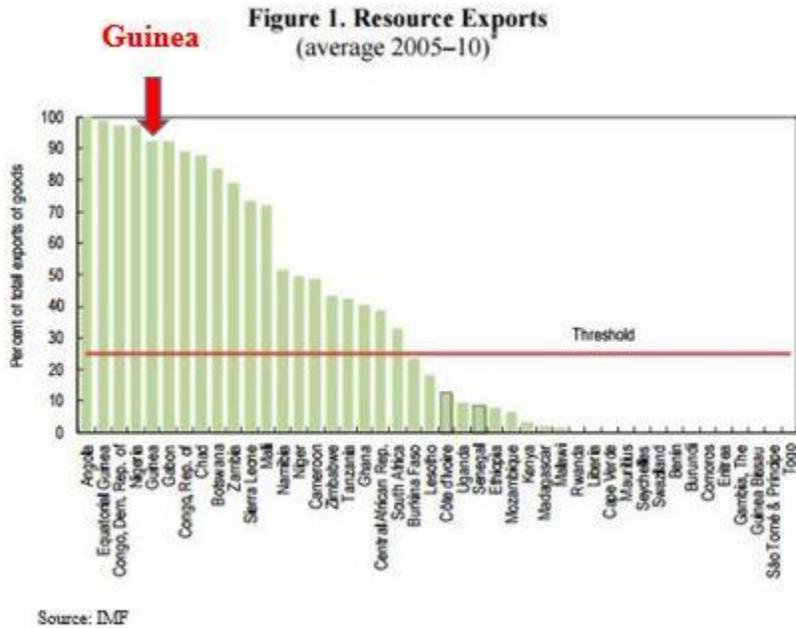
<sup>16</sup> Joseph E. Stiglitz, *Making Globalization Work* (New York : W.W. Norton & Co., c2006., 2006).

<sup>17</sup> Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobaton, "Governance Matters from Measurement to Action," *Finance and Development* 37, no. 2 (June 2000): 10–13, doi:<http://www.imf.org/external/pubs/ft/fandd/2001/03/index.htm>.

<sup>18</sup> "Guinea: Country Report," *Political Risk Yearbook: Guinea Country Report*, January 2011, 2–12.

<sup>19</sup> Mo Ibrahim, "Toward a Well-Governed Africa | McKinsey & Company," 2010, [http://www.mckinsey.com/insights/public\\_sector/toward\\_a\\_well-governed\\_africa](http://www.mckinsey.com/insights/public_sector/toward_a_well-governed_africa).

effective policies and human resource capabilities to delivery government priorities and public services.



Despite heavy exports of minerals, many resource-dependent countries in Sub-Saharan Africa, rank poorly in the Human Development Index (HDI) measure. In Guinea, where more than 90% of total export earnings come from its extractive industries, it ranks 179th out of 186 countries in the latest HDI measures. Many resource-dependent countries have fallen through resource traps, and have failed to successfully embark on a pathway to socioeconomic development using the opportunities from their extractive industries. At a 2015 UN/Africa Post-2015 Development Agenda on Africa's extractive industries, Paul Collier, Professor of Economics and Public Policy at the University of Oxford, argues that:

"Natural resources are first and foremost about money...they're money coming out of the ground. When it is iron ore coming out of the ground, the major characteristic is not that you can turn it into iron, it's that you can turn it into money; and that money you can then turn into

development. But, in order for that to happen...you need really very good stewardship because natural resources revenues are the ultimate unsustainable revenues stream."<sup>20</sup>

Historically, Guinea's extractive sector has been plagued with mismanagement, corruption and lack of sound mineral policies to leverage the country's untapped resources for economic growth.<sup>21</sup>

### **Transparency and accountability in resource-rich countries**

An important feature and challenge for resource-based economies is the lack of accountability and transparency of resource rents. Within the last decade, there have emerged new international transparency frameworks, such as the Publish What You Pay (PWYP) campaign, Promoting Revenue Transparency Project (PRTTP), and Extractive Industries Transparency Initiative (EITI). All of these frameworks aim to hold governments in resource-rich countries accountable for the management of revenue from extractive industries. An important goal of many of these international efforts is to strengthen resource governance by improving transparency in the reporting of royalty and tax revenue payments from mining and oil companies. Under these initiatives, payments in the form of taxes and royalties are reported by companies and government, and mining contracts are published, making discrepancies transparent.<sup>22</sup> These international movements are direct responses from the lack of transparency and accountability in many resource-rich countries in order to promote sound management of

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<sup>20</sup> "UN / AFRICA POST-2015 DEVELOPMENT AGENDA | UNifeed," February 24, 2015, <http://www.unmultimedia.org/tv/unifeed/2015/02/un-africa-post-2015-development-agenda/>.

<sup>21</sup> *Resource Governance Index: Guinea, 2013*, [http://www.resourcegovernance.org/sites/default/files/country\\_pdfs/guineaRGI2013.pdf](http://www.resourcegovernance.org/sites/default/files/country_pdfs/guineaRGI2013.pdf).

<sup>22</sup> Hazel M. McFerson, "Extractive Industries and African Democracy: Can the 'Resource Curse' Be Exorcised? Extractive Industries and African Democracy," *International Studies Perspectives* 11, no. 4 (November 2010): 335–53, doi:10.1111/j.1528-3585.2010.00410.x.

resource-revenue so that the resources will be better utilized to provide economic and social development.<sup>23</sup> However, the challenge for countries such as Guinea is much more than just about investing resource revenue, it is also about committing the resources properly in order to yield outcomes, which are beneficial to the country and people. Thus, the challenge is not only to get more public investment in resource-rich countries such as Guinea; the spending must be targeted on poverty reduction and investment to build up the domestic sectors such as health, education and other key infrastructures.

Experiences in many resource-dependent countries show a history of “white elephant” projects, which over-spend and are not directed toward solving the issues facing the country.<sup>24</sup> Therefore, transparency in revenue payment alone is not enough because even when governments and mining companies disclose information on revenue and concession contracts, the question and challenge still remains: how to get the revenue to be channeled to strategic sectors, which will propel socioeconomic development?<sup>25</sup> In addition, citizens in these countries may also lack the organizational power and influence to effectively hold governments and elites accountable. The lack of domestic civil society organizations is a hindrance to the effectiveness of revenue transparency and to the translation of revenue into long-term development.<sup>26</sup> International mechanisms and standards have made progress in highlighting issues of transparency and accountability in the extractive industries in many resource-rich countries. For example, Guinea has recently become an “Extractive Industries Transparency Initiative (EITI)-

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<sup>23</sup> Collier, *The Bottom Billion*.

<sup>24</sup> Paul Collier et al., “Managing Resource Revenues in Developing Economies,” *IMF Staff Papers* 57, no. 1 (April 2010): 84–118, doi:10.1057/imfsp.2009.16.

<sup>25</sup> Jeffrey A. Frankel, *The Natural Resource Curse: A Survey*, Working Paper (National Bureau of Economic Research, March 2010), <http://www.nber.org/papers/w15836>.

<sup>26</sup> Virginia Haufler, “Disclosure as Governance: The Extractive Industries Transparency Initiative and Resource Management in the Developing World,” *Global Environmental Politics* 10, no. 3 (August 2010): 53–73, doi:<http://www.mitpressjournals.org/loi/glep>.

compliant” country, which has forced the government to publish mining contracts and annual resource-revenue payments received. These are monumental gains in countries such as Guinea, where access to information and checks and balances are historic deficiencies. As the previous analysis and literature review demonstrates, the resource curse as an analytical framework for resource-rich countries measures well in accounting for the structural and development challenges confronting many of these countries. However, as analytical framework in resource-based economies, it has limitations as to how these same countries could use their resource-revenue to move beyond the resource curse and provide economic growth. For example, in recent years, fiscal policies in some resource-dependent African countries have allowed more fiscal and revenue stability, which historically has been a challenge in resource-based economies. With strategic investment in infrastructure and reforms of regulatory institutions, resource-rich countries such as Guinea could break from the so-called “resource curse”.<sup>27</sup>

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<sup>27</sup> “The Twilight of the Resource Curse?,” *The Economist*, January 10, 2015, <http://www.economist.com/news/middle-east-and-africa/21638141-africas-growth-being-powered-things-other-commodities-twilight>.



### III. SOCIOECONOMIC DEVELOPMENT OF GUINEA

#### GEOGRAPHY



Guinea is a country in West Africa, and it currently has a population of 11,474,383 people. It borders Guinea-Bissau to the northwest, Senegal and Mali to the north and northeast, Ivory Coast to the east and Sierra Leone and Liberia to south and southeast. Guinea’s official language is French, but it is home to several ethnic groups, including the Peuhl, Malinke, Soussou, and smaller ethnic groups, which make up the remaining of the population. Guinea is a majority-Muslim country, where 85% are Muslims, 8% are Christians and 7% follow indigenous beliefs.<sup>28</sup> Guinea has a mostly flat coastal plain and hilly to mountainous interior. Major environmental issues, include deforestation, inadequate potable water,

<sup>28</sup> “The WORLD FACTBOOK,” 2015, <https://www.cia.gov/library/publications/the-world-factbook/geos/gv.html>.

desertification, soil contamination, overfishing, and poor mining practices, which have all led to environmental damages.

## **HISTORY AND POLITICS**

Guinea or the Republic of Guinea as it is formally known, has a republican form of government. There are three branches of government: the executive, legislative and judiciary branches. In the executive branch, the president is the head of state and the prime minister is the head of government. Guinea has a unicameral legislature known as the People's National Assembly (Assemblée Nationale Populaire). The unicameral legislature consists of 114 seats, and members are elected by a mixed system of direct popular vote and proportional party system.<sup>29</sup> In December of 2008, the legislature was dissolved by junta leader Moussa Dadis Camara and in February 2010, the Transition Government appointed a 155 member National Transition Council (CNT) that acted as the legislature until parliamentary elections were held in September of 2013. Per Guinea's constitution, the National Assembly can be dissolved one time by the President, but elections must be held within ninety days of such action. Guinea's judiciary system is organized into Constitutional, Civil, Penal, Commercial, Administrative Chambers, and Chamber of Accounts. The judiciary branch is made of the Supreme Court (la Cour Supreme), which is headed by a president and chamber presidents. In Guinea, the President of the Supreme Court is appointed by the president, and others members of the court are appointed directly by presidential decree. In the last parliamentary elections held in September 2013, the ruling party, Rally of the Guinean People (RPG) won 53 seats, while the main opposition party,

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<sup>29</sup> Ibid.

Union of Democratic Forces of Guinea (UFDG) won 37 seats, Union of Republican Forces (UFR) won 10 seats, and all other parties won a combined of 14 seats.<sup>30</sup>

From its independence from France in 1958 until 2010, Guinea was ruled by authoritarian and military regimes. Sekou Toure, the country's first president, ruled the country from 1958 until his death in 1984 with an iron-fist. The military, led by General Lansana Conte seized power after Toure's death. The death of General Lansana Conte in 2008, led to another military junta to take over the country in a coup. However, the military's unwillingness to transition power to a civilian government led to heightened tensions in September 2009, in which the army opened fire on an opposition rally against the military's inclination to run its own candidate in the then proposed presidential elections, more than 150 were killed. Mass protests, increased international pressure, and a failed assassination attempt on the military junta's leader, Dadis Camara, in 2009, left Mr. Camara severely injured, and he was forced to leave the country to seek medical treatment in Morocco; this paved the way for a transition to democracy. In 2010, Guinea held its first "democratic" presidential elections since its independence. Despite the international recognition of the presidential elections in 2010 as "free and fair", the country has since experienced increased ethnic tensions and ethnic violence due to allegations of vote rigging and fraud in both the presidential and the 2013 parliamentary elections, this marked an end to more than half-a-century of military dictatorships.<sup>31</sup>

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<sup>30</sup> Ibid.

<sup>31</sup> Economist Intelligence Unit, *Country Report: Guinea*.

## GUINEA'S ECONOMIC AND SOCIAL DEVELOPMENT

Guinea's economy is dominated by minerals-bauxite, gold, and diamonds.<sup>32</sup> The mining sector is 30% of Gross Domestic Product, and bauxite mining alone provides 80% of foreign exchange revenue for Guinea. By far, Compagnie Bauxite de Guinee (CBG) is Guinea's largest provider of revenue to the government. In 2013, Guinea's GDP was estimated to be \$ 5.6 billion. Its GDP grew by 2.6% in 2013, and 4.6% in 2014. Future growth will largely be driven by an estimated \$24 billion in mining investment agreements signed by the government in the last few years.<sup>33</sup> One of the biggest challenges facing the government is high inflation, which threatens economic growth and stability. Economic conditions in Guinea have deteriorated since the early 2000s due largely to social unrests, economic uncertainty, and fiscal mismanagement, which have discouraged foreign investment.

More than half of the population in Guinea live below the poverty line. In 2012, Guinea spent only 2.5% of its GDP in education, and in comparison to the rest of the world, it ranks 156th. Its literacy rate is 41% of the total population, among the lowest in the world.<sup>34</sup> Life expectancy in Guinea is 59 years old, and the maternal mortality rate is 610 per 100,000 live births. Women perishing while giving birth is all too common in the country, due to lack of access to maternal care during pregnancy. Health facilities are not available in many parts of the country, where available, they are too remote to be accessible by road transport. Guinea also has one of the highest infant mortality rate in the world, with 56 deaths per 1000 live births.<sup>35</sup>

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<sup>32</sup> "The WORLD FACTBOOK."

<sup>33</sup> "A Propos de La Guinée," *Le PNUD En Guinée*, accessed May 20, 2015, <http://www.gn.undp.org/content/guinea/fr/home/countryinfo.html>.

<sup>34</sup> Ibid.

<sup>35</sup> Olivier Manlan, *Guinea*, 2014, [http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2014/PDF/CN\\_Long\\_EN/Guinee\\_EN.pdf](http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2014/PDF/CN_Long_EN/Guinee_EN.pdf).

## **CURRENT POLITICAL AND ECONOMIC CONDITIONS**

Due to political negotiations between the government and the opposition over the timeline of parliamentary elections in 2013, this resulted in frequent violent unrests. This coupled with the outbreak of Ebola in the same year, has slowed economic growth in 2013 to 2% from 3.9% in the previous year.<sup>36</sup> After parliamentary elections in September of 2013, the National Assembly was seated in early 2014. The Ebola outbreak has added more stress on the already struggling Guinean economy, and from the World Health Organization's (WHO) latest report, the number of new cases overall has gone down.<sup>37</sup> Though, even when the Ebola crisis comes under control, the economic and social impact of the deadly disease will continue to impact Guinea for years to come. The political environment was already toxic since the 2010 presidential elections and after the 2013 parliamentary elections. Frequent opposition street protests are likely to heighten tensions ahead of the 2015 presidential elections.

Failure to address these divisions connects with the second major challenge, the relationship between the military and the civilian government. Military reform continues, and many officers have been removed from the cabinet and the army is being restructured. But, the army continues to receive around 10% of total government spending. Due to Guinea's history of military coups, increased political instability could be used by the army as the reason to intervene.<sup>38</sup>

Agricultural outputs and artisanal gold production have been impacted in the areas most affected by the Ebola epidemic, and the closure of borders due to Ebola has disrupted exports from the country. However, the mining sector has not been impacted, this is because Guinea's

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<sup>36</sup> Ibid.

<sup>37</sup> "WHO | Guinea," WHO, accessed May 20, 2015, <http://www.who.int/countries/gin/en/>.

<sup>38</sup> Economist Intelligence Unit, *Country Report: Guinea*.

mainly export unprocessed raw materials. Projected weak gold prices in 2015 and 2016 is likely to reduce development of the gold industry, but the prospects for the bauxite/alumina sector are strong. For example, global aluminum prices are forecasted to increase by 20% over the next two years. Price inflation pressure is likely to come mainly from disruptions to economic activities by frequent political unrests. As the Ebola outbreak comes under control, the economy is projected to grow at 4.7% in the 2015-2016 cycle.<sup>39</sup> Though, the current Ebola crisis still ravaging Guinea is due largely to the country's poor and inexistent infrastructures—roads, power supply, water, sanitation facilities, and telecommunications.

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<sup>39</sup> Manlan, *Guinea*.



#### **IV. CASE OF GUINEA: INFRASTRUCTURE CHALLENGES**

Despite its natural resources-bauxite, iron ore, diamond, gold and hydropower, Guinea has struggled to translate and channel the revenue from these sectors into meaningful economic and infrastructure development for its people.<sup>40</sup> Guinea routinely gives low priority to investment in infrastructure and social services.<sup>41</sup> Areas such as power generation, water, sanitation and transport remain daunting challenges for the country's economic development.<sup>42</sup> Furthermore, Guinea's development is constrained by infrastructure gaps in key sectors-energy, transport, water, health and information and technologies sectors.<sup>43</sup>

#### **ROAD NETWORK**

In 2010, Guinea had the lowest road density rate and the lowest percentage of paved roads, of total road network in the West Africa region, with only 2.8 km per 100 km<sup>2</sup>. In 2003, Guinea had a total of 44,348 km of road network, of which 4,342 km is paved and 40,006 km is unpaved. The national road network is poor and unexpansive.<sup>44</sup> In addition, of the roads that are paved, 16% are in "good" conditions, 31% are in average conditions and 50% are in "bad" conditions, and of the unpaved roads, 6% are considered in good conditions, 51% are average and 43% are in bad conditions. The cost of rehabilitating all of the national roads-paved and

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<sup>40</sup> "Guinea: 2014 Country Review," *Guinea Country Review*, July 2014, 1–265.

<sup>41</sup> "Guinea Mining Guide | KPMG | GLOBAL," July 9, 2014, <http://www.kpmg.com/global/en/issuesandinsights/articlespublications/mining-country-guides/pages/guinea.aspx>.

<sup>42</sup> Jim Yong Kim et al., *The Africa Competitiveness Report 2013* (The World Bank, January 1, 2013), <http://documents.worldbank.org/curated/en/2013/01/17688638/africa-competitiveness-report-2013>.

<sup>43</sup> *REPUBLIC OF GUINEA COUNTRY STRATEGY PAPER* (African Development Bank, 2011), <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Guinea%20-%20CSP%202012-16.pdf>.

<sup>44</sup> *Guinea: Country Report* (PRS Group, 2014), <http://www.prsgroup.com/about-us/our-two-methodologies/prs>.

unpaved, is estimated to be around \$1.5 billion.<sup>45</sup> In addition to the deterioration of the road network in most of the country, the northern and eastern parts of the country remain the most remote and the most inaccessible. Guinea's trade with its neighboring countries in the sub-region is very important to its economy, and road transportation is vital because the country's agriculture exports such as cotton, coffee and palm oil rely heavily on road transport to move goods to these countries. Due to the country's lack of efficient road transport system, a portion of the country's agricultural zones remains isolated, and this prevents agricultural producers and businesses from accessing markets, and when there is access, transport costs are very high and make business development uncompetitive.<sup>46</sup> This deficit reduces the country's agricultural productivity and increases transport costs.



Source: [travelmag.co.uk](http://travelmag.co.uk), a road in the interior of Guinea

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<sup>45</sup> *Doing Business in Guinea* (CIDB Malaysia, 2014), [https://www.cidb.gov.my/cidbv4/images/pdf/announcement/antarabangsa/doing\\_business\\_in\\_guinea\\_-\\_a\\_construction\\_perspective\\_ebook\\_template%20amend.pdf](https://www.cidb.gov.my/cidbv4/images/pdf/announcement/antarabangsa/doing_business_in_guinea_-_a_construction_perspective_ebook_template%20amend.pdf).

<sup>46</sup> *Guinea : Poverty Reduction Strategy Paper* (International Monetary Fund (IMF), 2013), <https://www.imf.org/external/pubs/ft/scr/2013/cr13191.pdf>.

## **RAIL TRANSPORT**

Rail transport remains underdeveloped in Guinea, and currently, the country has four rail lines, totaling 1,047 km. Three of these lines were originally built by mining companies and transferred to the government at the end of the concession agreements. Guinea's rail lines, include the 662 km Conakry-Kankan line, which was built before World War I, but has not been operational since the early 1990s due to maintenance and dilapidation. The Conakry-Fria line, which is about 144 km long is managed and maintained by the FRIGUIA mining company, and it connects the alumina plant in Fria to Conakry's port. The Kamsar-Sangarédi line is 136 km long, and is run by Guinea Bauxite Company (CBG), which connects bauxite mines in the town of Sangarédi to the port city of Kamsar. Finally, the Conakry-Kindia line, about 105 km long, is managed by the Société des Bauxites de Kindia (SBK), and it links the Kindia bauxite mines to the port of Conakry.<sup>47</sup> Mining companies have pre-emption rights while their mining operations are active, but some pay annual fees to use the rails. Though, all of Guinea's rail lines are considered outdated-not very developed to begin with, and exclusively used for mineral exports. The country currently does not have a passenger rail service anywhere in the country. Rail transport development could improve the mobility of people and goods.<sup>48</sup> In addition to the lack of passenger rail transport, the country's only commercial port in Conakry has limited capacity, and is burdened with increasing commercial demand and heavy mineral export uses.

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<sup>47</sup> Ibid, 83.

<sup>48</sup> *Doing Business in Guinea*. p. 35



Source: Wikipedia, rail lines in Guinea

## AIR TRANSPORT

Guinea currently has sixteen airports, of which, four have paved runways and twelve airports have unpaved runways. The main airport is Conakry-Gbessia International Airport. There are three regional airports, and seven secondary airports. In addition, the country has a total of five private aerodromes, which are used primarily by mining companies. Conakry airport is currently served by fourteen different airlines, and has experienced a more than 20% increase in air traffic and more than 16% increase in passenger traffic between 2011 and 2012. Despite these improvements, the airport is running at 50% capacity and remains one of the most uncompetitive in the sub-region in terms of number of passengers and airline traffic.<sup>49</sup> As such, Conakry-Gbessia International Airport is not yet a reliable and competitive airport, which can sustain heavy international air connections. Airports in the interior do not have navigational aid equipment, and have high maintenance challenges to operate effectively and efficiently.<sup>50</sup>

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<sup>49</sup> *Guinea : Poverty Reduction Strategy Paper*. p. 84

<sup>50</sup> *Doing Business in Guinea*. p. 37

## **INFORMATION/TELECOMMUNICATION TECHNOLOGIES**

Guinea's telecommunication sector has five telecom operators, with about 4 million subscribers. Sotelgui, which is a state-owned company, has 16% market share, and the rest of the market is provided by private operators: Areeba 45%, Intercel 6%, Orange Guinee 22% and Cellcom 18%. There are about 200,000 internet users out of 12 million people, with an internet penetration rate of 1.7%, and telephone service penetration rate of 40%, which is low in the West Africa sub-region. Though, recently, the country has gotten connected to the ACE submarine cable, whose distribution around the country was started in 2014, and is contracted out to China's telecom giant, Huawei.<sup>51</sup> Connectivity is limited to certain urban areas, this is seriously constrained by the irregular power supply, even in big cities such as Conakry. Though, within the last decade, the number of mobile phone users increased by 35%, and most Guinean cities have also seen telephone coverage.<sup>52</sup>

## **ENERGY SECTOR**

Guinea is often referred to as the "water-tower of West Africa" because it is the source of major rivers in the West Africa region, such as the Niger River, the Gambia River and the Senegal River. As the source of major rivers in West Africa, Guinea currently has an estimated economic hydropower potential of around 6,000 MW.<sup>53</sup> If the country's hydropower reserves were to be tapped into, Guinea would generate enough electricity to power the whole country and be an energy exporter to its neighbors.

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<sup>51</sup> Ibid.

<sup>52</sup> Osei Agyeman Tutu, *Survey of ICT and Education in Africa : Guinea Country Report* (The World Bank, June 1, 2007), <http://documents.worldbank.org/curated/en/2007/06/10014613/survey-ict-education-africa-guinea-country-report>.

<sup>53</sup> "SUB-SAHARAN AFRICA: Guinea," *Electrical Utilities of the World*, January 2002, 409–10.



Major rivers in Guinea, source: google.com

Despite its hydropower potential, Guinea's electrification rate is estimated at only about 17%, 14% of which is located in urban areas while rural areas have a 3% electrification rate. Guinea's electricity generation and distribution is managed by Electricité de Guinée (EDG). EDG, which is state-owned. The majority of this generation capacity is generated and distributed via three interconnected grid-systems in Samou, Garafiri and Kinkon. Guinea currently has a total installed capacity of 221.99 MW, of this, 127.62 MW comes from hydropower sources and 94.37 MW is thermally fired. However, currently, only 141.2 MW is operational. The remaining is lost due to lack of maintenance, investment and upgrading issues. In the capital, Conakry, only about 10 per cent of the population have access to electricity.<sup>54</sup> Out of the country's total electricity generation, 90% is consumed by 25 per cent of the country's population living in

<sup>54</sup> Ibid.

Conakry.<sup>55</sup> In Conakry, where 90% of the installed capacity is consumed, the electricity service is irregular and only operating three to four hours per day in limited areas, if at all. Given the current installed hydropower, Guinea is only using 0.2% of its 6,000 MW of hydropower production capacity.<sup>56</sup> Insufficient supply has been a major drag on the country's economy, and improving generation capacity has the potential to boost economic growth, business opportunities and improve living conditions. This is especially important because power shortages have led to frequent and violent street unrests. With the new presidency of Alpha Conde in 2010, there are plans to build a number of power projects, of which is the hydropower project of 240 MW in Kaleta on the Konkoure River. Kaleta is a Chinese-financed dam, and if this projects operates as planned, the country's generation capacity will increase significantly; hopefully bridging the energy deficit in Conakry and a number of other cities in the interior.<sup>57</sup> Though, even with a project such as Kaleta in the pipeline, the country's current grid is incapable of absorbing the new supply, unless investment is targeted toward improving transmission and distribution networks".<sup>58</sup>

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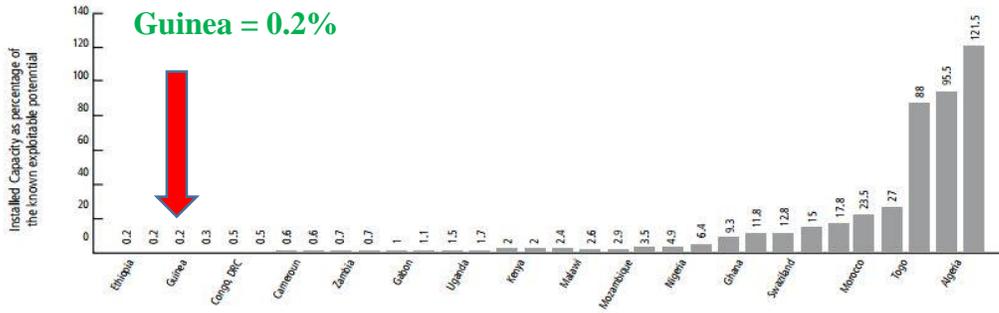
<sup>55</sup> H Liu, D Masera, and L Esser, *World Small Hydropower Development Report 2013: Guinea* (United Nations Industrial Development Organization (UNIDO) and International Center on Small Hydro Power (ICSHP), 2013), [http://www.smallhydroworld.org/fileadmin/user\\_upload/pdf/Africa\\_Western/WSHPDR\\_2013\\_Guinea.pdf](http://www.smallhydroworld.org/fileadmin/user_upload/pdf/Africa_Western/WSHPDR_2013_Guinea.pdf).

<sup>56</sup> *Infrastructure for Economic Development and Poverty Reduction in Africa*, Global Urban Economic Dialogue (UN Habitat, 2011), <http://www.uncsd2012.org/content/documents/UN-HabitatReport.pdf>.

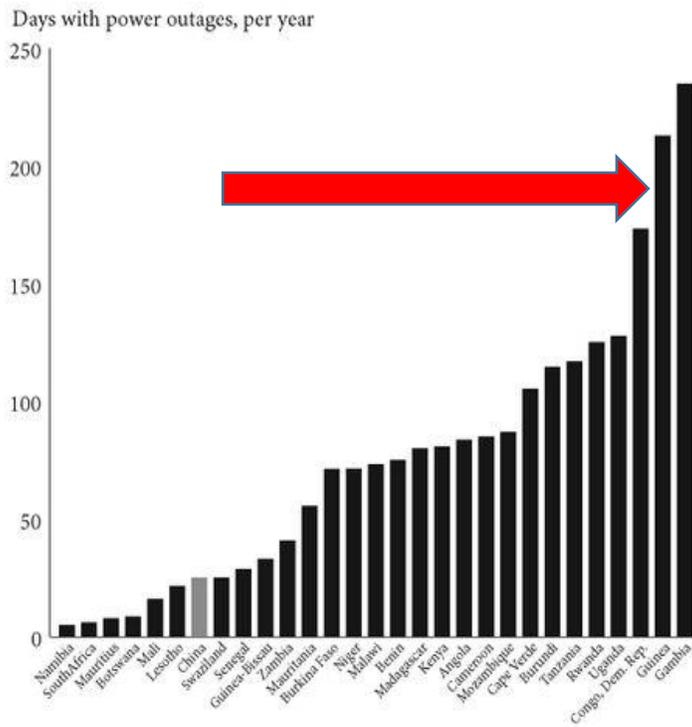
<sup>57</sup> "Chiffres Clés et Données de l'Electricite de Guinee" (Electricite de Guinee (EDG)), accessed May 20, 2015, <http://www.edgguinee.com/chiffres-cles-et-donnees-edg/capacite-de-production.php>.

<sup>58</sup> *Country Report: Guinea*, Quarterly (Economist Intelligence Unit, 2015), [http://country.eiu.com/FileHandler.ashx?issue\\_id=1592989743&mode=pdf](http://country.eiu.com/FileHandler.ashx?issue_id=1592989743&mode=pdf).

FIGURE 3: **Installed Hydropower Capacity as Percentage of Known Exploitable Potential**



Source: African Development Bank (2008).



Source: Author's calculations based on data from the World Bank Enterprise Surveys database.

Power outages are rampant in Guinea and its capital, Conakry.<sup>59</sup>

<sup>59</sup> Nancy Birdsall, *The White House and the World: A Global Development Agenda for the Next U.S. President* (CGD Books, 2008).

### **Management of the energy sector**

From independence, the country's energy sector saw little investment, and by 1994, the energy sector was plagued with various challenges, including the inability of then, power operator, l'Entreprise Nationale d'Electricité de Guinée (ENELGUI) to operate and expand the energy network and remain financially solvent. Early in the 1990s, demand for electricity had levelled off at 70 MW, though, ENELGUI could only assure 44 MW. As a result of the gap between demand and supply, the country and the capital in particular, experienced major power cuts. Grid losses and power thefts increased dramatically. The network was experiencing major power shortages exceeding 30%. In the early 1990s, revenue for ENELGUI fell as the collection rate was around 33%. Thus, ENELGUI went bankrupt, and in light of these challenges, a project financed by multilaterals (World Bank, AfDB, USAID and the EU) was launched. Its aim was to help rebuild Guinea's electricity sector through major reforms, which included reorganization of the executing agency, involvement of a private operator and tariff adjustments.

Therefore, in 1994, ENELGUI signed a 10-year concession contract with a newly created private company, Société Guinéenne d'Electricité (SOGEL), headed by a consortium led by a Canadian company, HydroQuebec. Five years after the concession contract went into effect, technical capacity of Guinea's electricity power sector had improved, with increase in the supply of electricity. However, the objectives of the 1994 concession reforms were not achieved, due largely to difficulties experienced in the implementation of the subcontracting agreement between ENELGUI and SOGEL.<sup>60</sup> First, the Guinean government lacked the determination and political will to carry through needed reforms within the energy sector. Furthermore, the

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<sup>60</sup> *Guinea: Sector Programme; Power Supply in Conakry*, 23040: Electricity Transmission/distribution, 2005, [https://www.kfw-entwicklungsbank.de/migration/Entwicklungsbank-Startseite/Development-Finance/Evaluation/Results-and-Publications/PDF-Dokumente-E-K/Guinea\\_Conakry\\_2005.pdf](https://www.kfw-entwicklungsbank.de/migration/Entwicklungsbank-Startseite/Development-Finance/Evaluation/Results-and-Publications/PDF-Dokumente-E-K/Guinea_Conakry_2005.pdf).

government was reluctant to commit to tariff adjustments, which was politically infeasible. In addition to failures from the government, the private operator, SOGEL also did not have much freedom to make decisions such as tariff adjustments, cost controls, establishment of customer relations, which were critical to the company's financial solvency. Furthermore, even SOGEL's own management did not have the necessary motivation to lead the required reforms, and both SOGEL and ANELGUI blamed each other for the sector's failures.<sup>61</sup>

### **Post-concession**

Given the obstacles and financial difficulties from SOGEL, in 2001, HydroQuebec, which led the private consortium, suddenly terminated the concession contract because at this point it had become obvious that SOGEL could not operate the facilities as successfully as established in the concession agreement. The consortium's stake in SOGEL was sold to the Guinean government, a new state power utility, Société Electricité de Guinée (EDG), was established in 2001.<sup>62</sup> The Guinean government decided during this time to transition from the current arrangement to a longer term agreement, which stipulated clearly the roles and obligations of the government and the private concessionaire through established minimum investment requirements to expand the power network and meet increasing demand. In addition, the plan also included plans to refocus on cities in the interior of the country, which historically have been left behind due to focus on the capital, Conakry.<sup>63</sup>

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<sup>61</sup> Ibid. p.4

<sup>62</sup> Ibid. p.7

<sup>63</sup> "Guinea—Enhanced Structural Adjustment Facility Economic and Financial Policy Framework Paper, 1998–2000," *International Monetary Fund (IMF)*, 1998, <https://www.imf.org/external/np/pfp/guinea/guinea01.htm>.

## Beyond the Resource Curse: Mineral Resources and Development in Guinea-Conakry

Given the lack of investment in power generation in the country and to close the supply and demand gap, in 1999, a new hydroelectric power dam in Garafiri came into completion. However, despite the promises and the high hopes that reliable and adequate power supply would become a reality for the country, this dam never worked at full capacity, and has underperformed ever since. Thus, daily power cuts continue to be a major challenge for the country.<sup>64</sup> An African Development Bank project, approved in 2013, will aim to reduce the rate of loss to 15% from a current level of 49% in the Conakry area, and could increase the access rate to 20% by 2017.<sup>65</sup>



Source: google.com, students studying in Conakry's airport during final exams because there is no electricity at home

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<sup>64</sup> *Country Report: Guinea*. P. 22

<sup>65</sup> *CONAKRY ELECTRICITY NETWORK REHABILITATION AND EXTENSION PROJECT 2*, Appraisal Report (African Development Bank, 2013), [http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Guinea\\_-\\_Conakry\\_Electricity\\_Network\\_Rehabilitation\\_and\\_Extension\\_Project\\_2\\_-\\_Appraisal\\_Report.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Guinea_-_Conakry_Electricity_Network_Rehabilitation_and_Extension_Project_2_-_Appraisal_Report.pdf).

## **WATER**

The water sector in Guinea had experienced underinvestment since independence, and by the mid-1980s, the sector had become critical. The public agency then, which was in charge of service, *Enterprise Nationale de Distribution de l'Eau Guinéenne* (DEG) was inefficient, overstuffed and had many financial solvency challenges. At this time, less than half of Conakry's residents had access to piped water, and service was erratic even for those who had service. Before the 1989 reforms, DEG was responsible for operations, maintenance and investment. On paper, the agency was autonomous within the Ministry of Natural Resources and Environment (MNRE). In practice, however, DEG was not autonomous and experienced corruption and financial mismanagement. In principle, water distribution was metered and consumers were charged according to consumption. But, in reality, metering was very rare. In fact, only 5% of connections had a working meter. In 1989, almost one quarter of water connections were illegal and even fewer were actually billed. Due to low private billing and collection rates, DEG became heavily dependent on infrequent and unreliable subsidies from the Government. In addition, tariffs were set below marginal cost to deliver water service. DEG experienced financial problems to maintain service and expand to meet growing demand.<sup>66</sup>

To improve this situation, the government entered into a lease arrangement for private sector operation of water services in the capital city in 1989, and sixteen other cities and towns. Under the lease agreement, a state-owned national water authority, *Société Nationale des Eaux de Guinée* (SONEG), owned the water supply facilities in the cities and towns covered by the lease. It was responsible for sector planning, new investments and servicing the debt, which had

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<sup>66</sup> Claude Menard and George Clarke, *A Transitory Regime Water Supply in Conakry, Guinea*, Policy Research Working Papers (The World Bank, 1999), <http://elibrary.worldbank.org/doi/book/10.1596/1813-9450-2362>.

been accumulating under DEG. SONEG was also responsible for setting tariffs. A newly created water management company, Société d'Exploitation des Eaux de Guinée (SEEG), which was jointly owned by the state (49 percent) and a foreign private consortium (51 percent), was responsible for operation and maintenance of urban water supply facilities, billing customers, and collecting charges.<sup>67</sup>

In the five years after the lease contract, consumers benefited when a bulk water pipeline and a water treatment plant, both financed by the World Bank, were completed in 1994; resulting in improved service quality. Though, at the same time that service quality had improved, water tariffs quadrupled. While this eased pressure on the government budget, the tariff increase was a burden on the minority of Guineans who were connected to the water supply system. Most of the poor in Guinea were not affected by water privatization, since they did not have access. In 2000, towards the end of the lease contract, major problems persisted. The water supply system, especially in Conakry, had not improved because demand outgrew supply. Furthermore, unaccounted water remains high, at about 47 percent.<sup>68</sup> After the private sector contract expired in 2000, the sector returned to public management as before the 1989 lease contract. By 2003, water service and quality in Conakry and other cities had deteriorated, and the situation became similar to the low and poor service quality before privatization. Currently, the water situation in Conakry remains mired with poor service and low quality as water is often delivered through poorly maintained lead pipes. As a result, consumers often have to run the water several minutes before it was “clear” enough to appear drinkable.

The current situation in Conakry is similar to the situation before the 1989 lease. The

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<sup>67</sup> Penelope Cowen, *Private Sector: Lessons from the Guinea Water Lease*, 1999, <http://castalia-advisors.com/files/1851.pdf>.

<sup>68</sup> *Poverty and Urban Mobility in Conakry* (World Bank, 2004), [http://www.gtkp.com/assets/uploads/20091127-171237-6675-Conakry\\_en.pdf](http://www.gtkp.com/assets/uploads/20091127-171237-6675-Conakry_en.pdf).

system currently experiences large number of illegal connections, which also results in high levels of unaccounted water. In addition, most current private connections in Conakry are a single tap inside a lot or compound because only a small wealthy minority residents can afford to pay the fees required to install the pipes, which run empty most of the year, anyway.<sup>69</sup> A single tap inside a lot or compound usually serves many households. Despite the sector's problems, scarcity has never been a major problem in Guinea, due to its abundant rainfall, which has earned the country the nickname of being the "water tower of West Africa". Given the problems of affordability, low access, poor service quality and low coverage, many households in Conakry rely on neighbors' connections or water from wells for drinking and their daily use. Many households also use rainwater for uses other than drinking (washing dishes and bathing), especially during the rainy season. Hence, Guinea experiences high cases of water-borne diseases such as cholera and diarrhea.<sup>70</sup>



Source: google pictures, this is how most households in Conakry meet their water daily needs

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<sup>69</sup> Menard and Clarke, *A Transitory Regime Water Supply in Conakry, Guinea*.

<sup>70</sup> *Poverty and Urban Mobility in Conakry*.

**Guinea's infrastructure challenges: connection with poor governance of the mineral sector**

During Guinea's 52 years of authoritarian and military rule, the country's mining revenue was mostly diverted to ruling party loyalists and the military to maintain power. Resource-revenue was also spent on regular government budgets, without much targeted investment in infrastructure and key industries. This led to mismanagement of resource-generated revenue and corruption at the national level. During these five decades period, numerous mining contracts were signed, which did not have the long-term interest of the country.<sup>71</sup> For example, Guinea signed a 75-year contract with the country's largest producer of bauxite (aluminum) in 1964, and this contract is due to end in 2039. Unwise mining contracts such as this one, coupled with historic political and economic challenges have hindered the country's ability to steward its natural resources for socioeconomic development.

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<sup>71</sup> "Guinea: Country Conditions," *Political Risk Yearbook: Guinea Country Report*, 2011, 1–12.



## V. GUINEA'S MINERAL INDUSTRY

### Profile of Guinea's mineral sector

Guinea is one of the world's largest bauxite producers, holding an estimated two-thirds of the world's reserves. Compagnie Bauxite de Guinee (CBG) is Guinea's largest bauxite producer, it produces about 80% of the country's annual bauxite exports.<sup>72</sup> Most of the bauxite mined in Guinea is exported out of the country to be refined and smelted into aluminum. In addition, Guinea has an estimated 3 billion tons of known iron ore reserves. The iron ore is largely not exploited due to lack of investment, but the recent Simandou project, an agreement between the government and Riot Tinto, will make Guinea a major iron ore producer. Other major minerals include diamond and gold.<sup>73</sup> Artisanal mining, until recently, remained the primary method for extracting gold and diamond in Guinea. Between 200,000 and 300,000 people are involved in artisanal mining of gold and diamond in the country, predominantly, women.<sup>74</sup> Many of the artisanal miners farm during the agriculture season, and conduct artisanal mining activities during the off-season. Artisanal miners lack the financial resources and technical skills required for effective and efficient mining of the gold and diamond. In recent years, more industrial gold and diamond mining companies have begun extracting gold and diamond.<sup>75</sup>

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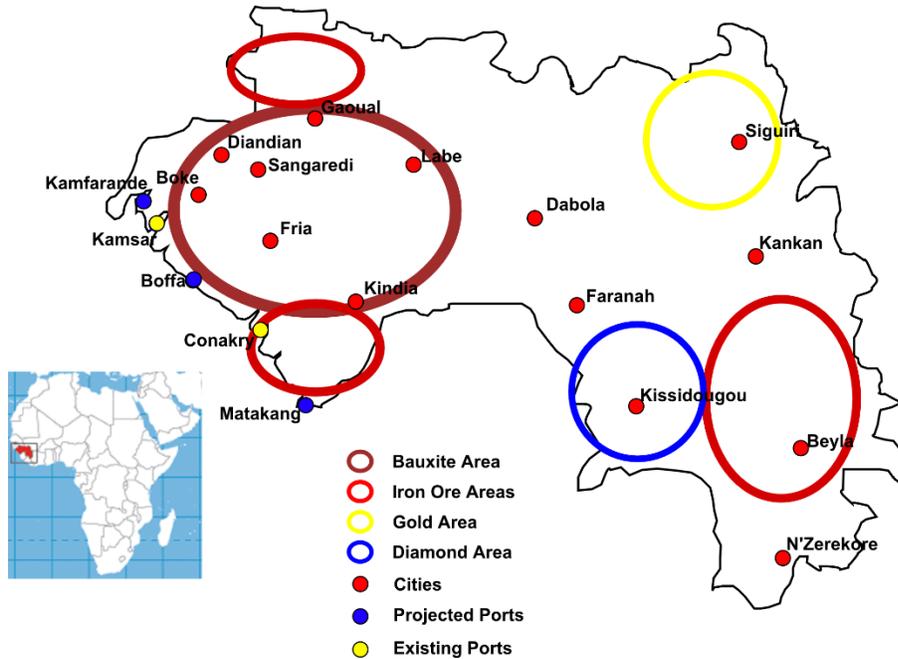
<sup>72</sup> "Presentation de La Republique de Guinee," *Extractive Industries Transparency Initiative (EITI)*, accessed May 20, 2015, <http://itie-guinee.org/index.php?rubrique=guinee#ressources>.

<sup>73</sup> Omayra Bermúdez-Lugo, *2011 Minerals Yearbook: Guinea*, Yearly (U.S Department of the Interior: U.S. Geological Survey, 2011), <http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-gv.pdf>.

<sup>74</sup> "Guinea: Fact Sheet," *AngloGold Ashanti*, 2011, <http://www.aga-reports.com/11/pdf/guinea.pdf>.

<sup>75</sup> "Presentation de La Republique de Guinee."

### Map of Guinea's mineral deposits



Source: [www.giolimited.com](http://www.giolimited.com)

### Mineral royalties and taxes

The mining sector accounts for 25% to 30% of Gross Domestic Product, and more than 80% of foreign exchange revenue for Guinea. The mining sector also provides 17% to 20% of government revenue.<sup>76</sup> In 2005, in an effort to allow Guinea to benefit more from its vast mineral resources, the government attempted to renegotiate mining contracts, this was met with limited success. The 1995 mining code desperately needed reforms. As such, in September 2011, the National Transition Council, acting as the National Assembly, enacted a new mining code, which overturned many of the mining contracts awarded during the brief military rule of Capt. Dadis Camara in 2008-2010, and formulated a new vision for future mining contracts.<sup>77</sup> The new

<sup>76</sup> Ibid.

<sup>77</sup> *Rapport de Conciliation des Flux de Paiement et des Recettes du Secteur Extractif au Titre de L'annee 2012, 2012*, <https://eiti.org/files/Guinea-2012-EITI-Report-FR.pdf>.

mining code requires mining companies to invest a minimum of \$1 billion for bauxite mining, and \$500 million for other minerals, which was not a requirement under the old 1995 mining code. In the new mining code, the government receives a free 15% share with the option of a further 20% purchase. The code raised the custom duties from 5.6% to 8%. Though, due to pressure from mining companies, the 2013 amendment was passed, which fixed taxes for bauxite at 0.075%, 3% for base metals, a range of 3.5%-5% for diamonds, and 1.5%-5% for precious stones and gemstones. The Mineral Substance Export Tax is as follows, 0.075% for bauxite, 2% for iron ore, base metals and radioactive substances. In addition to the above taxes, there is a 1.5% tax on precious stones and other gems other than diamonds. Finally, there is a 5% export tax on any stone with a unit value equal to or greater than \$500,000.<sup>78</sup>

### **Governance of the mining sector**

Under Guinea's constitution, the National Assembly passes the laws and regulations governing the country's extractive industries. In addition, it has the responsibility of ratifying mining contracts. In Guinea, the Ministry of Mines and Geology conducts all mining contract negotiations, issues permits, enforces regulations, and sets policy for the extractive sector. Before the 2011 new mining code, mining taxes and royalties were collected and deposited into different government accounts, which increased the risk of corruption and mismanagement of revenue funds. With the 2011 mining code, mining taxes and royalties are collected by the Ministry of Finance into a single account in the National Treasury. In February 2014, a report by Extractive Industries Transparency Initiative (EITI), from its Multi-Stakeholder Group (MSG) in Guinea, pointed to low capacity within the Ministry of Mines and Geology to trace mining extraction,

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<sup>78</sup> "Amendments to the Guinean Mining Code," accessed May 20, 2015, <http://www.nortonrosefulbright.com/knowledge/publications/99188/amendments-to-the-guinean-mining-code>.

monitor the presence of mining companies and payments from these companies. According to EITI, very few of these mechanisms in the Ministry of Mines/Geology and the National Treasury are computerized. These deficiencies are inefficient, and reduce the transparency needed in contract awarding, permit issuing, and revenue payments.

In Guinea, all requests for mining titles are submitted to the Center for Promotion and Development of Mining (CPDM), within the Ministry of Mines and Geology. In order to reduce corrupt practices within the mining sector, the new mining code created the National Commission of Mines, which examines mining decisions made by CPDM. This commission is made of a Strategic Committee and a Steering Committee. The Strategic Committee is composed of government Ministries, and it focuses on the political and strategic aspects of revision of mining conventions and agreements. The Technical Committee is an eighteen-member committee from key ministries and representatives from worker unions and Publish What You Pay (PWYP). The Technical Committee reviews mining contracts and conventions for legal and conformity to the country's mining code. Its recommendations are submitted to the Strategic Committee, which can implement or reject the recommendations.<sup>79</sup> In 2011, Guinea created a state-owned minerals management entity, Société Guinéenne de Patrimoine Minier (SOGUIPAMI), which manages the government's shares in mining companies and contracts.

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<sup>79</sup> "Mission Du Comite Technique de Revue Des Titres et Conventions Miniers," accessed May 20, 2015, <http://www.contratsminiersguinee.org/about/mission-ctrtc.html>.

## Revenue collection and allocation

Intergovernmental transfer is the method through which resource-revenue is transferred back to local governments in Guinea from the national government. Mining policy, agenda setting, and revenue collection are done by the central government. From the 2011 mining code, mining revenue payments collected by the government in Conakry will be deposited into the central government's account as follows: 80% into the National Budget, 15% into the budget of all local governments, and 5% into the Mining Investment Fund, which is supposed to promote investment and development of the mining sector.<sup>80</sup> An examination of Guinea's governance of its mineral sector shows that payments are been made to the government, but there is a lack of targeting to translate resource-revenue to long-term economic and social development. Therefore, the major challenge for Guinea is not merely transparency in resource-revenue payments; it's a governance failure to channel and target mineral revenue funds to invest in key infrastructure and economic development. Hence, the infrastructure challenges in health, education, transport, power supply, water and sanitation sectors facing Guinea. The absence of these key services lead to lower economic and social mobility, which create marginalized and stratified communities, such places can harbor inclination for political and social unrests.<sup>81</sup> Thus, the lack of investment in infrastructure services cannot just be in terms of GDP growth, their lack thereof create low literacy, low life expectancy and low economic opportunities, which increases tendencies for violence and potential for armed conflicts.<sup>82</sup>

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<sup>80</sup> *CODE MINIER 2011 AMENDÉ: AMENDEE 2011 MINING CODE*, 2011, <http://www.eisourcebook.org/cms/June%202013/Guinea%20Mining%20Code%20%28in%20French%20&%20Engli sh%29%20as%20amended%202011.pdf>.

<sup>81</sup> *Can Africa Claim the 21st Century* (World Bank, 2000), <http://www.worldbank.org/html/extdr/canafricaclaim.pdf>.

<sup>82</sup> World Bank (2014), "The Economic Impact of the 2014 Ebola Epidemic: Short and Medium Term Estimates for West Africa", <http://www->

### **The Ebola outbreak in Guinea: infrastructure vulnerability**

The Ebola outbreak in Guinea, which started in December 2013 and still ongoing in 2015, has demonstrated how incapable and vulnerable Guinea is to health crises. As the epidemic began in late 2013, it killed hundreds and was undetected for months in southeastern Guinea, the government in Conakry was forced to respond to the mysterious deaths in remote villages. However, the first Ebola blood sample had to be flown out of the country to Lyon (France) to be tested because Guinea did not have the hospitals and laboratories to test for Ebola. Before the Ebola outbreak, hospitals and the health care sector already could not cope with common diseases such as malaria, cholera and diarrhea. The pace and rate of Ebola infections quickly overwhelmed Guinea's poor health infrastructure. But, the failure of the health sector is only part of the story. Due to Guinea's poor transportation system, some Ebola impacted areas could not be accessed on time through roads, this complicated the transfer of patients to treatment facilities, which were entirely built with and by international assistance. The lack of electricity has meant that hospitals have to run on generators to store medications.<sup>83</sup> The Ebola outbreak has challenged the mainstream thinking, which separates investments in health infrastructure (health facilities, human resources) and investments in long term economic development.<sup>84</sup> As the Ebola outbreak has shown, Guinea has not been as successful in developing its economy and infrastructure capabilities, despite the wealth from its mineral sector. A robust infrastructure

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[wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/07/000456286\\_20141007140300/Rendered/PDF/912190WP0see0a00070385314B00PUBLIC0.pdf](http://wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/07/000456286_20141007140300/Rendered/PDF/912190WP0see0a00070385314B00PUBLIC0.pdf)

<sup>83</sup> *The Economic Impact of the 2014 Ebola Epidemic: Short and Medium Term Estimates for West Africa* (The World Bank Group, 2014), [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/07/000456286\\_20141007140300/Rendered/PDF/912190WP0see0a00070385314B00PUBLIC0.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/10/07/000456286_20141007140300/Rendered/PDF/912190WP0see0a00070385314B00PUBLIC0.pdf).

<sup>84</sup> Calestous Juma, "Africa Ebola Outbreak: How Do We Prevent It?: The Ebola Outbreak Has Exposed Africa's Poor Infrastructure, Limited Health Research and Inadequate," 2014, <http://www.aljazeera.com/indepth/opinion/2014/08/africa-ebola-outbreak-how-do-pre-20148138355590807.html>.

system could have prevented or limited the enormous economic and human toll of the outbreak.<sup>85</sup> Fortunately, with the transition to democracy in 2010, after 52 years of authoritarian and military rule as well as the emergence of new international players such as China and non-traditional financing sources, there is a small window for Guinea to “reset”. Though, this cannot happen without good governance and management mechanisms to steward the revenue from its natural resources to move beyond the so-called resource curse.

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<sup>85</sup> “A Long Way to Go: The Ebola Response in West Africa at the Sixty Day Mark | Oxfam GB,” *Policy & Practice*, accessed May 20, 2015, <http://policy-practice.oxfam.org.uk/publications/a-long-way-to-go-the-ebola-response-in-west-africa-at-the-sixty-day-mark-336919>.



## **VI. RESOURCE-BASED ECONOMIC DEVELOPMENT: beyond the resource curse**

### **Leveraging Guinea's mineral sector: the role of new players-China**

Within the last decade, the African continent has witnessed increased relations with emerging countries such as China, India and Brazil. These new emergent countries are in search of raw materials to power their growing industries, and resource-rich countries such as Guinea have an opportunity to link resource exploitation with the development of infrastructure services, which for countries such as Guinea, might had been impossible decades earlier. The advent of these players and new financing sources give Guinea new options and opportunities to “reset”. Guinea is already a beneficiary of such a Chinese-backed investment: the Simandou iron ore project, located in Guinea's forest region. The project consists of the construction of a 650 km long railway (a multi-use, multi-user railway line for both the transport of iron ore from Simandou and a passenger rail service) and a deep-water seaport, southeast of the capital, Conakry.<sup>86</sup> For example, as negotiations got underway between Guinea and Rio Tinto about developing Mt. Simandou's iron ore, Rio Tinto was reluctant to shoulder the expenses of the whole railway project, and the Guinean government could not afford to build the railway alone, either. Chinalco, a Chinese aluminum company, entered the negotiation process and provided funding for the rail and sea-port projects, estimated at around \$10 billion.<sup>87</sup> The Simandou project is an attempt to link mineral extraction, infrastructure development (rail and port) with economic development, through the use of “development corridor” to catalyze positive

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<sup>86</sup> “About Simandou - Rio Tinto,” July 11, 2014, <http://www.riotinto.com/guinea/about-simandou-10974.aspx>.

<sup>87</sup> “West Africa Mining Report,” *West Africa Mining Report*, no. 4 (Quarter 2014): 1–101.

spillovers.<sup>88</sup> The Southern Growth Corridor in Guinea also creates feeder roads to the rail line and build social facilities in conjunction with transport infrastructure along the corridor.<sup>89</sup>



Overview of the Project's investment and infrastructure footprint

Source: Rio Tinto

In last few years, Guinea has signed numerous mining agreements with various investors from China, Brazil and the United Arabs Emirates. A number of aluminum refineries are being built. One such project is a 650 sq km alumina refinery in the Boke region by Guinea Alumina (GAC), which is a joint venture between Global Alumina, BHP Billiton, Dubai Aluminum, and Abu Dhabi's Mubadala Development. In 2008, the company started the early work phase of the project, which includes the connected refinery and transportation infrastructures.<sup>90</sup> Full transformation of bauxite into aluminum is energy-intensive, and will require power to supply

<sup>88</sup> "AU Conference of Ministers Responsible for Mineral Resources Development," *United Nations Economic Commission for Africa*, 2011,

<http://www.au.int/en/sites/default/files/Overview%20of%20the%20ISG%20Report.pdf>.

<sup>89</sup> Gadzeni Mulenga, *Developing Economic Corridors In Africa: Rationale for the Participation of the African Development Bank*, Regional Integration Brief (African Development Bank, 2013),

[http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Regional\\_Integration\\_Brief\\_-\\_Developing\\_Economic\\_Corridors\\_in\\_Africa\\_-\\_Rationale\\_for\\_the\\_Participation\\_of\\_the\\_AfDB.pdf](http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Regional_Integration_Brief_-_Developing_Economic_Corridors_in_Africa_-_Rationale_for_the_Participation_of_the_AfDB.pdf).

<sup>90</sup> Bureau of Public Affairs Department of State. The Office of Website Management, *2012 Investment Climate Statement - Guinea*, Report (Department Of State. The Office of Website Management, Bureau of Public Affairs., June 8, 2012), <http://www.state.gov/e/eb/rls/othr/ics/2012/191159.htm>.

these refineries. Guinea’s national grid is not expansive and functions poorly, and the country faces energy shortages. As such, there is a great potential for the country to leverage the power demand needed for the proposed and future aluminum refineries to take advantage of its more than 6,000 megawatts of hydropower untapped resources to generate power not only for the refineries, but also for non-mineral sector. The onsite transformation creates an opportunity for investment in hydropower to supply the electricity needed for mineral transformation and the rest of the country, already facing power shortages.<sup>91</sup> Transitioning from the current exporting of raw bauxite to onsite aluminum transformation will allow Guinea to generate more revenue with the added value chain, and it create more jobs in addition to the added benefits of power generation.



Given the high-energy uses required in bauxite transformation, hydropower could provide more cost effective power to mining companies as opposed to their current self-supply, which runs on diesel. The cost of providing electricity through a shared plant to meet mining and local demand is much lower. Leveraging demand for power from mining operations, could attract investment

<sup>91</sup> Sudeshna Banerjee et al., “The Power of the Mine: A Transformative Opportunity for Sub-Saharan Africa,” *ScribbleLive Embed*, 2015, [http://www.scribblelive.com/Event/The\\_Power\\_of\\_the\\_Mine\\_A\\_Transformative\\_Opportunity\\_for\\_Sub-Saharan\\_Africa](http://www.scribblelive.com/Event/The_Power_of_the_Mine_A_Transformative_Opportunity_for_Sub-Saharan_Africa).

in hydropower, given that the demand for power is guaranteed from the mines and the country's non-mining economy.<sup>92</sup> In addition to the construction of multiple energy-intensive aluminum refineries, in 2011, the government started negotiations with China International Water and Electric Corporation on the construction of a 240 megawatt hydroelectric dam at Kaleta, 150 km from the capital, Conakry. The project is estimated to cost around \$526 million. Construction on the dam began in December 2011, and is expected to be completed in May 2015. This mega project is financed by China, and is just an example of the new opportunities, which Guinea has now that it did not decades earlier.<sup>93</sup> Though, to fully to take advantage of this window of opportunity, it all starts with leadership, vision, good management and governance of the country's resource-revenue, and channeling of the revenue to focus on strategic areas of the economy and infrastructure development. This is exactly what Botswana- another resource-rich country did since its independence.

### **The Case of Botswana: lessons for Guinea**

Botswana is a landlocked and parliamentary democracy in southern Africa with a population of 2,155,784 people. The country gained independence from Britain in 1966. At independence, beef, the country's main export and largest sector at the time, contributed 39 percent to GDP. From independence until the 1970s, international aid was dominant in the government budget, and was an important revenue source. Soon after, Botswana's extraordinary growth was fueled by minerals, particularly diamonds. More than four decades of uninterrupted civilian leadership, progressive social policies, and significant capital investment have created one of the most stable economies in

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<sup>92</sup> Ibid.

<sup>93</sup> Department of State. The Office of Website Management, *2012 Investment Climate Statement - Guinea*.

Africa. Mineral extraction, principally diamond mining, dominates economic activity. Botswana is the largest diamond producer in the world by volume. Like Guinea, Botswana is also heavily dependent on mineral exports, and the mining sector contributed 79 percent to total exports in 2011. Other mineral resources include copper, nickel, gold, and coal. But, in recent years tourism has become a growing sector due to the country's conservation and natural preservation programs.<sup>94</sup>

### **How Botswana did it**

Botswana has avoided the resource curse, which countries such as Guinea could not. One of the key to Botswana's success were fiscal and management policies, which limited the erosion of domestic productivity due to appreciation of the real exchange rate from mineral extraction and exports; a characteristic of many mineral rich countries. First, the government promoted high fiscal savings, which limited consumption and stabilized inflation, a danger during resource booms. Government savings and the accumulation of reserves protected the country against resource-revenue volatility. Resource-generated revenue was deposited to the country's established Public Service Debt Management Fund and the Revenue Stabilization Fund. These funds have been critical mechanisms in promoting government savings. Public sector saving was positive every year from 1975 until 1996, fluctuating between 10 and 40 percent of the country's Gross Domestic Product. The crucial step in the fiscal management policies for Botswana was to channel the resource-generated savings to domestic assets, including building up the country's competitiveness with investment in public goods such as infrastructure, health, and education. These investments contributed to growth without hindering private investment. Furthermore,

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<sup>94</sup> "Botswana," *Natural Resource Governance Institute: Resource Governance Index, 2014*, <http://www.resourcegovernance.org/countries/africa/botswana/overview>.

public sector investment averaged about 10% of GDP. But, if expenditure on health and human capital are counted as investment, public sector investment rises to about 20% of GDP.

Furthermore, 30% of the capital budget focused on basic infrastructure, with about 30% devoted to water, electricity, roads, communication, and transportation and another 20% was invested to education.<sup>95</sup>

Botswana also avoided another characteristic of resource-rich countries, “white elephant projects”, which over-spend on projects that do not produce much benefits to the country and people. Botswana’s investment and focus on infrastructure such as health, and education have improved the country’s economy and living conditions for its people. For example, the number of paved roads increased from around 20 kilometers to 2,300 km between 1970 and 1990. The country’s road sector remains strong, due to many years of planning and investment. Botswana has 971km of rail lines and 18,482 km of roads. The country has a relatively well-developed land transport infrastructure (road and railways). In addition, it has a thriving mobile telecommunications industry, with one of the highest penetration levels in Africa. In the water sector, 90% of its population has gained access to safe water as opposed to 29% in 1970. Moreover, the country leads African countries in education achievement and literacy rate, which for adults stands around 80% compared to 50% in Sub-Saharan Africa.<sup>96</sup> Due to sound fiscal policies, Botswana has witnessed economic stability and avoided the booms and busts, common in mineral rich countries.

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<sup>95</sup> Michael Lewin, *Botswana’s Success: Good Governance, Good Policies, and Good Luck | Information Centre for the Extractives Sector*, 2011, <http://ices.or.ke/botswanas-success-good-governance-good-policies-and-good-luck/>.

<sup>96</sup> *Botswana: Country Mining Guide* (KPMG Global Mining Institute, April 8, 2014), <http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/botswana-mining-guide.pdf>.

### **The role of leadership**

Some of Botswana's success may be credited to its relatively homogeneous population, compared to other mineral rich countries such as Guinea. Due to its homogeneity, Botswana has avoided the political polarization and ethnic divisions present in mineral rich countries such as Guinea. However, a homogenous population alone does not guarantee economic development and it still does not guarantee that resource-generated revenue will necessarily be invested in "hard" and "soft" infrastructure development. Therefore, the country's success is also owed to the leadership provided by its first president after independence. President Seretse Khama was critical in creating the institutions and enabling conditions for good governance to take hold and mature, which translated the revenue from diamond to developing the country and building up the country's infrastructure capabilities, which serve as the foundation for economic and social development. In fact, the first government after independence established respect for property rights and the rule of law. This was enhanced by the Tswana tribal tradition of consultation and harmony. These consultative institutions planted the seeds for trust and sense that the government's role was to serve the people and the public good, not serve their own individual interests.<sup>97</sup> The fact that many of the Tswana tribal leaders who helped build the country's modern government were also large cattle owners, may have reinforced the respect for the rule of law and property rights, which has served the country well in attracting private and foreign investment. Therefore, for Botswana, leadership, particularly that of its first president, Seretse Khama, was crucial, given the country endowments in minerals. The discovery of minerals could have led to war and instability, instead, after independence, the government reached agreement on ownership of mineral resources with the tribal authorities, which reduced the likelihood of

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<sup>97</sup> Lewin, *Botswana's Success*. p. 86

mineral-fueled conflict.<sup>98</sup>

Through fiscal discipline and investment of its diamond revenue in infrastructure and human development, Botswana went from being one of the poorest countries in the world, with a per capita income of just \$70 per year after independence to a middle-upper income status with a GDP per capita of \$16,600 in 2014. The country was agrarian-based society after independence (cattle farming for beef production), which accounted for 40% of gross domestic product (GDP). For example, after independence, life expectancy was 37 years old, by the year 1990, it had climbed to 60 years old, this is a decade longer than the average life expectancy in the Sub-Saharan Africa region. The child mortality rate decreased to 45 deaths per 1,000 live births by the year 1990, compared to 180 deaths per 1,000 live births for the rest of African countries. This performance is impressive compared to African standards, especially for a country, which gained independence eight years after Guinea, whose development and economic indicators could not have been different from Botswana's.<sup>99</sup>

### **Botswana: not all positive**

Even though Botswana remained the fastest growing economy from independence in 1966 until 1999, its economy did not grow in 2009 due the global financial crisis, which reduced the world's demand for the country's main export (diamond). Even though the economy recovered between the years 2010 and 2012, growth slowed between 2012 and 2014. In addition, despite its impressive economic success, the country has not been as successful in economic diversification, and still, three-fourths of its export earnings come from diamond. This is the

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<sup>98</sup> Ibid. p. 85

<sup>99</sup> Ibid. p. 81

main reason for the sharp decline of its economy in 2009. Though, to mitigate its resource-dependence, the country is looking to sectors such as tourism, financial services, and farming as potential opportunities. Furthermore, despite its impressive economic growth, this growth has not been equally shared within the country; the unemployment rate stood at about 17.8% in 2009, unofficial estimates are even higher. Despite its impressive economic progress and heavy investment in the health sector, Botswana has the second highest HIV/AIDS prevalence rate.<sup>100</sup> This has the potential to derail decades-long economic and social progress made. Though, unlike other countries in the region, it has adopted a robust and comprehensive approach to confronting the deadly disease. With resource-revenue expected to dwindle in the next decade and half, this casts some uncertainty in the country's economic prospects in maintaining the high growth from previous decades. As such, the government is taking policy steps to transition away from resource-reliance to a more service and financial-based economy to prepare for what is coming.

### **Lessons: what Botswana's case means for Guinea?**

Of course, what happened in and to Botswana is unique given its context. Guinea and Botswana are different countries with different political, cultural, and economic traditions, which shaped and are shaping the trajectories of development. First, Guinea's population is almost six times that of Botswana's. Second, Botswana is very homogeneous, with one dominant ethnic group, compared to Guinea, where it is much more ethnically diverse and divided. This is particularly important given that polarization and ethnic-based politics can be problematic, especially with the presence of mineral resources. However, despite these differences, both countries are endowed with natural resources-bauxite, iron ore, diamond, gold for Guinea, and diamond and other minerals for Botswana. Both countries emerged out of centuries of colonial

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<sup>100</sup> "The WORLD FACTBOOK."

rule, and started out as new independent countries with very similar per capital income and development levels. How did an agrarian, landlocked, arid and a newly independent nation with the presence of minerals (few years after independence) managed to avoid the “resource curse”? How did this country go from being one the poorest country in the world, with GDP per capita of \$70 per year to a middle-upper income country, with a per capita income of \$16,000 per year in 2014? What are the lessons from Botswana (resource-dependent) that Guinea (also resource-dependent), could learn from?

First, the Botswana case demonstrates that governance (institutions and leadership) are critical, especially for countries with natural resources. It was leadership from the country’s first president who worked with tribal leaders to create institutions that respect the rule of law. This planted the seeds for trust in the government, and has cultivated a culture, which sees the role of government as to serve the country and its people, not to use the resources of the country for their own individual self-interests. In Botswana, it took leadership and visionary policies, which established the national consultation processes, and the government used these platforms to convince its people on its policies-focus on strategic areas of economic development and infrastructure—health, power, water, education, transportation and telecommunication. All of which produced a more inclusive economy, business opportunities and improved living conditions. The integrated focus on infrastructure and economic development sectors allowed the government in Botswana to appeal to a larger constituency and win their support through consultations. For Guinea, with the end of 52 years of military and authoritarian rule and the transition to democracy in 2010, Guineans yearn for a Botswana-type leadership, governance and selfless visionary economic policies. In addition, policies that connect the opportunities in its

mineral sector and channel the resource-generated revenue to develop the country's economy, whose competitiveness depends on robust infrastructure development. In the case of Botswana, communication was also an important tool used by the government to manage expectations and play down overconfidence, which could be a challenge, especially when new minerals are discovered. For Guinea, this is where political leadership from the government could play an important role in managing expectations and overconfidence in light of mega projects such as the \$20 billion iron ore investment in Mt. Simandou so that it is communicated to the population that it will take time before the country could experience full benefits from such mining operations. In the long run, this could help rebuild trust and provide policymakers with the time and space to make sound and less politically-motivated policies, instead to focus on long-term policies for the benefit of the country.

Second, Botswana's case illustrates that prudent fiscal policies are prerequisite for long-term economic growth, especially for resource-rich countries to avoid the resource curse and volatility associated with resource-based economies. With disciplined government spending, Botswana has reduced wasteful "white elephant" projects, which are common in resource-rich countries such as Guinea. The fiscal discipline promoted savings during boom years, which helped avoid revenue volatility during bust years. One of the most critical factor in Botswana's success story is sound fiscal management, which encouraged savings, limited wasteful consumption and spending of the country's diamond revenue. Specifically, the channeling of the resource-revenue to specific infrastructure funds, has helped the country target and manage its revenue. This is something that Guinea could learn from, given that most of its resource-generated revenue is deposited to government general budget treasury accounts, without much

savings, targeting and channeling of the funds to key strategic areas and investment.

Third, Botswana's story also demonstrates that investment of resource-generated revenue and savings in infrastructure, if well guided and targeted, yields better and more inclusive economic growth and improved living conditions for people. In the case of Botswana, the focus on infrastructure development produced higher literacy rate, life expectancy, better access to transport systems, higher access to safe drinking water, and better access to reliable energy supply for people and businesses. For example, the focus on education-both infrastructure and training, helped Botswana rebuild its human resource capacities with not only higher literacy rate, but more importantly, it allowed the country to create a more capable civil service, administration and institutions, which further help govern and manage the country's resources. Overall, this increased the country's economic competitiveness and human resource capabilities with more opportunities for people.



## VII. CONCLUSION

First and foremost, Botswana's path and success is a testament to what can be possible in Guinea, despite the differences, but given the similar economic base. The fact that Botswana, which like most in the continent, including Guinea, emerged out of colonial rule, makes for a stronger case that if this country did it then, other resource dependent countries such as Guinea could do it by addressing the socioeconomic, political roadblocks and governance challenges holding them back. For resource-rich African countries, including Guinea Botswana demonstrates that, despite the already established link between resource riches and the so-called resource curse, actually, extractive industries could serve as the vehicle and path to economic and social development, given sound governance, fiscal and management of the mineral industries and the revenue from such industries.

This begins with a political leadership with a vision, and a political culture that puts forward and foremost the interests of the country and the welfare of its people ahead of individuals' self-interests. The cultivation of a culture that sees power as serving the people and the country, not one that views power as a path to self-enrichment. The in-depth analysis of Guinea's mineral sector calls for the establishment of a robust mining code and mineral policies, coupled with strong governance mechanisms, institutions and a regulatory environment, which not only regulate the mining sector effectively and efficiently, but also promote public savings of the resource-generated revenue. More importantly, for resource-revenue to be channeled and targeted in key industries and infrastructure-power, health, education, water, transportation, agriculture and sanitation.

But, the focus must also be on building and developing the capabilities of government

agencies to effectively and efficiently deliver public services to their citizens. Much of good governance literature is fixated on preventing bad actions, while this is important, the focus must at the same time be on promoting good actions and equipping well-intended policymakers, agencies and officials with the capacity (financial and human) to target and channel the resource-revenue to invest in “hard” infrastructure development such as energy and water facilities and in “soft” infrastructure such as health and education. In the case of Guinea, the “hard” infrastructure investment will help build up competitiveness and improve economic development opportunities while investment in “soft” infrastructure such as education and health will develop and improve human resource capabilities and improved living conditions for its population. Put together, targeted and smart infrastructure development is likely to produce a more inclusive economy and social development because both businesses and people will benefit from the availability of critical public goods, which economic and social development depend upon. More importantly, had Guinea been investing, especially in its health care system, the current Ebola outbreak would probably not have led to such a high human death toll and negative economic impact, which will be felt for years to come.

Infrastructure projects such as hydropower stations, water plants, health and education facilities are expensive to be financed exclusively from resource revenue. Therefore, it is important that Guinea and other countries reform their mining codes to transition from extraction and export of raw materials to onsite transformation and to link mining operations’ infrastructure needs to the needs of the non-mining economy. The use of “development corridor” or “growth corridor” provides an opportunity for mineral rich countries such Guinea, with a little bit of extra cost, to share the infrastructure, already demanded and needed for mining-related activities. This

allows the government not to shoulder the bulk of the cost of providing such infrastructures solely from its budget.

In Guinea, mineral exploitation has been happening since independence, more than five decades. Some are benefiting from the exploitation of these minerals. Though, Guineans have not been those who have benefited from the country's mineral endowments. What is also clearly known is that in Guinea and in many other countries, mineral exploitation has for the most part not improved the socioeconomic wellbeing of their people. We may disagree with the proper investment channels for resource-revenue, but what is the point of a country having mineral resources if the revenue from these extractions will not be invested in the people and in the country to generate opportunities for all?—infrastructure development is one critical channel for resource-revenue to be invested in because it involves building infrastructure capabilities, which no one individual or corporation can or is willing to do on their own.



## VIII. APPENDIX

**Table 1:** Legal and Regulatory Environment of Guinea’s Extractive Industry

	<b>Minerals</b>
<b>Governing Legislature</b>	Mining code of 2011, Law No. L/2011/006/CNT 2011 Mining Code-Amended
<b>Regulatory bodies</b>	Centre de Promotion et de Developpement Minier (CPDM) National Directorate of Mines National Directorate of Geology National Bureau of Expertise of diamond, gold and other precious materials (BNE) Bureau of Study and Strategy (BES) Guinean Mining Heritage Company (SOGUIPAMI) Brigade of Anti-Fraud of Precious Materials
<b>National Companies/State Participation</b>	Compagnie de Bauxite de Guinee (CBG): the government owns a 49% share of the company . The new mining code grants a 15% free share to the government in every mining contract, and an optional 20% purchase.
<b>Contract Types</b>	Exploration permit, Operating permit, Mining Concession, Reconnaissance authorization, artisanal exploration permits, Staking permits, quarry operation permits,
<b>Signature Bonuses and Upfront Payments</b>	License fees and surface royalties
<b>Royalties, Taxes, and Bonuses</b>	Royalty: Iron ore: 3%; Bauxite: 0.075%; copper, Tim, Nickel, and Zinc: 3%; gemstones (industrial and semi-industrial, and diamond): 3.5-5%; precious stones: 1.5%-5%; industrial and semi-industrial production of metals: 5%; corporate, industrial and commercial tax: 35%; capital gain Tax: 10%
<b>Local Content</b>	Employment quotas and procurement given to Guinean nationals and local community
<b>Social and Development Contributions</b>	Mining title holder is required to sign a Local Community Agreement (LCA) to establish Local Economic Development Funds, which is set at 0.5% of the mining company’s turnover for category 1 mines and 1% for other mining substances. These funds provide local employment training, social projects, environmental and health measures and strengthen local capacities. This agreement is signed with the Ministries of Mines and Decentralization with some consultation with the local community.
<b>Environmental Requirements</b>	Title holders are required to conduct an Environmental Impact Assessment, and to notify concerned administrators and local community of plans to close mining operations with plans to ensure livability and minimizing health and environmental risks.

**Table 2: Overview of Guinea’s mining industries**

<b>Industry at a Glance:</b>
<ul style="list-style-type: none"> <li>• Guinea is the world’s largest bauxite producer holding an estimated 29 billion tons of bauxite reserves. Compagnie Bauxite de Guinee (CBG), one of the world’s and Guinea’s largest bauxite producer, exports about 80% of the 17.6 million tons of bauxite exported annually from Guinea. The vast majority of the bauxite mined in Guinea is exported abroad to be refined and smelted into aluminum.</li> <li>• In addition to bauxite, Guinea is rich in gold, diamond and iron ore holding 1000 tons, 25 million carats and 12 billion tons of estimated reserves, respectively. In 2011, Guinea produced 20 tons of gold and 304,000 carats of diamonds. Currently, Guinea’s iron ore reserves remain largely untapped, including one of the world’s largest untapped iron ore resource in the country’s Simandou region. Other important mineral deposits in Guinea include nickel, titanium, chrome, copper, uranium and graphite.</li> <li>• Export of mineral resources accounts for \$550 million a year (80% of the total volume).</li> <li>• According to EITI-Guinea, the mining sector represents about 17%-20% of GDP, more than 80% of total export earnings and 25% to 30% of government revenue. In 2012, bauxite accounted for 46.5% of extractive sector revenue, which in 2012 provided about 46.5% of government revenue from the extractive industry.</li> <li>• In 2011, Guinea adopted a new mining code designed to reform the 1995 mining code with stronger transparency and accountability mechanisms such as publication of all mining contracts, the creation of a National Commission of Mines to review mining contracts. The new mining code requires minimum investments in USD 1 billion for bauxite licenses and USD 500,000 for diamonds, gold and iron ore there are currently a total of six agreements to build alumina refineries with a total investment of about USD26.72 billion. The investments include the construction of new ports, rail lines and roads which are expected to help create employment for Guineans, and infrastructure services such as electricity plants and roads.</li> <li>• In 2014, Rio Tinto signed a USD 20 billion deal with the Government of Guinea to develop the Simandou iron ore deposit.</li> <li>• The Simandou iron ore project is a combined USD 20 billion investment in iron ore extraction, a rail service and a new port. It is estimated that it will bring USD 1.2 billion annually, representing 30% of current GDP, in tax revenue when the mine is in full production If the Simandou iron ore project succeeds, Guinea’s mining sector’s share of GDP is projected to reach 40%.</li> <li>• Hydrocarbon exploration activities are currently taking place in Guinea’s offshores, but, no commercial oil discovery has been made thus far.</li> <li>• In 2008, Guinea became an EITI-candidate country. After a year of suspension, in 2014, Guinea became EITI compliant.</li> </ul>

<b>State of Artisanal and Small Scale Mining</b>
<ul style="list-style-type: none"> <li>• Between 200,000 and 300,000 people are involved in artisanal mining of gold and diamond in Guinea of which, between 50% -70% are women and 10% to 20% are children between the ages of 10 to 14</li> <li>• In 2012, artisanal gold production represented 23% of gold exports, up from 12% in 2011. Artisanal gold miners produce about 6 tons of gold per year. In 2012, artisanal gold production represented 23% of gold exports, up from 12% in 2011. However, artisanal gold production is highly inefficient with a mere 5% to 10% recovery rate. Furthermore, artisanal mining were responsible for over 95% of the country’s diamond production. Although Guinea’s new 2011 mining code grants permits and recognizes artisanal mining, it focuses heavily on industrial mining.</li> <li>• While Guinea’s Central Bank controls all gold export out of Guinea, it is estimated that about 2.3 tons are smuggled into neighboring countries every year resulting in loss of revenue for the state.</li> <li>• Most of the gold produced by artisanal miners is sold to local middlemen. About 20%-25% of the sale profit is lost to the middlemen. Miners lack the organization and technical capacities to leverage their production to gain better deals in the market.</li> </ul>

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