

CONSTRAINTS TO THE ADOPTION OF LOCAL CONTENT POLICY IN MINING SECTOR IN MADAGASCAR

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ABSTRACT

Supporting local community development has become an imperative for both extractive projects and government over the past two decades. The lack of sufficient incentives, such as local content, for companies supplying needed goods and services to locate within the mining areas, limits the emergence of outreach effects from large-scale mining projects. The objective of this paper is to analyze the constraints to the adoption of a local content policy in the mining sector in Madagascar. For this, the chosen method is based on the inventory of local content in Madagascar following the guide of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF) with two indicators: the legislative framework and the favorable conditions for the implementation of a local content policy. The results showed that political and socio-economic factors still hinder the adoption of a local content policy in Madagascar. The lack of a clear vision of the economic and sectoral policies that explain in the medium- and long-term the desired evolution of the economic, social, and environmental impacts of large-scale mining projects, leads to a lack of ripple effects on the dynamics of business opportunities for both local operators and local populations.

Keyword: Mining Sector, Madagascar, Policy, Local Content, Constraints

1. INTRODUCTION

Exploitation of natural resources (oil, gas and mineral products) by the extractive industry contributes significantly to increase in public revenues of a large number of countries in the world. Mining can also create jobs and develop skills, promote investment in education and building infrastructure, and generate much-needed revenue [7].

Currently, many mining countries are beginning to join the global trend of Local Content Policy in order to create more inclusive development impacts in the mining sector. The importance of local content has thus become increasingly important. Natural resource-rich countries are adopting local content policies, which consist of implementing standards that promote socio-economic investment and social development as well as industrialization through services related to extractive sector activities. Local content policies seem to be the way to benefit from the extractive sector today and avoid the natural resource curse. The adoption of local content policies consists of prioritizing the production of local products and services, local employment and training, improving business environment, promoting local companies, using local infrastructure, and the mobilization of all means that can promote industrialization or the emergence of a local economic dynamic [23].

The two major mining projects in Madagascar, Ambatovy SA and QIT Madagascar Minerals (QMM) SA, in addition to develop the resources of the Malagasy subsoil, are helping to boost the national and local economy [17]. They created 12,000 direct jobs. And this is without counting indirect jobs in the service industries located around the two sites [5]. Especially since the populations impacted by the mining activities expect positive spin-offs, not only in terms of social investments, but also in the area of employment and the use of local and national suppliers of goods and services. Then QMM and Ambatovy developed a range of activities to meet their legal obligations as part of their Corporate Social Responsibility (CSR) programs because Madagascar does not yet have an explicit legal provision on local content [17].

Maximizing these benefits requires a strong legal and policy framework that promotes positive development effects of mining while promoting high environmental and social standards [7]. Local content policies cover a wide range of approaches, from mandatory targets to more flexible requirements, to supportive policies in areas such as education and capacity building [6]. Indeed, the lack of sufficient incentives, such as local content, for companies supplying needed goods and services within mining areas, limits the emergence of outreach effects of large-scale mining projects. Thus, this article aims to define whether the adoption of a local content policy is feasible in the Malagasy mining sector. The hypothesis put forward is: "The adoption of a local content policy for the extractive sector in Madagascar is hampered by its political and socio-economic context".

2. METHODS

In order to analyze the constraints to the adoption of a local content policy in the Malagasy mining sector, the chosen method is based on the inventory of local content in Madagascar following the guide of the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF)¹ [6].

Therefore, two indicators were defined: the legislative framework and the existence of favorable conditions for the implementation of a local content policy.

The analysis of the content of the legislative framework made it possible to collect the regulatory policy texts (the Mining Code and its implementing decree, the Law on Large Scale Mining Investments (LGIM) and its implementing decree, the Decree on the Conformity of Investments with the Environment (MECIE) and the Inter-ministerial Mining-Environment Decree (AIME) that concern the extractive sector. These texts were then categorized according to these four criteria: employment of nationals, training of nationals, use of local suppliers, and Corporate Social Responsibility (CSR).

Then, a literature review was conducted to determine if the criteria for local content implementation were met. The search for this information are focused on the availability of skilled labor, the availability of supply of goods and services, the adequacy of infrastructure, and the attractiveness of investment in Madagascar, again following the IGF guide. The case study of two mining companies, Ambatovy SA and QIT Madagascar Minerals (QMM) SA, was conducted to identify the existing gaps and to determine the solutions undertaken by these companies to fill these gaps.

Finally, for each indicator, a diagnostic analysis of the Strengths, Weaknesses, Opportunities and Threats (SWOT) of adopting a local content policy, was conducted to assess the advantages and disadvantages for Madagascar.

3. RESULTS AND DISCUSSION

¹ IGF supports nearly 60 countries that are committed to leveraging mining for sustainable development to ensure that negative impacts are reduced and economic benefits are shared. It is dedicated to optimizing the benefits of mining to achieve poverty reduction, inclusive growth, social development and environmental stewardship. IGF focuses on improving resource management and decision-making by governments working in the sector.

3.1 Overview of the legal framework in relation to local content in the extractive sector in Madagascar

The basis of the general framework of Malagasy mining policies is defined by:

- The Millennium Declaration and the Millennium Development Goals (MDGs) which covered the period from 2000 to 2015. The Sustainable Development Goals (SDGs) represent the comprehensive agenda for social inclusion, environmental sustainability and economic development. Achieving the SDGs by 2030 will require unprecedented cooperation and collaboration among governments, non-governmental organizations, development partners, the private sector and communities for sustainable development.
- Africa's Mining Regime Vision 2050 which is "Equitable and optimal exploitation of mineral resources for broad-based sustainable growth and socio-economic development".
- The Charter of the Environment which constitutes the framework law for environmental protection. It defines the "environment" in its article 2 as "the whole of the natural and artificial environments, including the human environment and the social and cultural factors that are relevant to national development".
- The National Development Plan (2015-2019) and the Madagascar Emergence Plan (2019-2023) based on the 13 commitments of the General State Policy, have integrated the 2030 Agenda for Sustainable Development.
- The General State Policy, which constitutes one of the reference frameworks of the Malagasy mining policy, states among its objectives the industrial and sectoral emergence "Industry, engine of development and with high added value" driven by the dedicated Industrial Activity Zones and the mining sector. In the long term, employment is expected to shift from the primary sector to the secondary sector.

These general policies must necessarily be translated into effective strategies, action plans and implementation at the country level.

The Mining Code constitutes the legal framework governing the mining sector. Through the important advantages that the current regulations grant to mining companies, Madagascar attracts many investors from all over the world. [9].

Despite these policy frameworks that revolve around sustainable development, the notion of local content does not appear as a major theme in current Malagasy texts even though the basis of mining policy revolves around economic, social and environmental aspects and indirectly affects local content (Cf. Table -1).

Table -1: Appearance of information on the four local content criteria in the basic policy and regulatory texts governing the extractive sector in Madagascar

	Local labor	Training of nationals	Local procurement	Corporate Social Responsibility (CSR)
Mining Code 2005	NO	NO	NO	NO
Mining Code Decree	YES	NO	NO	NO
LGIM²	YES	YES	NO	NO
MECIE Decree³	NO	NO	NO	NO
AIME⁴	NO	NO	NO	YES

An analysis of key regulatory texts in the mining sector shows very limited consideration of local content.

Although there is no local content law, there are various elements of local content scattered throughout the texts in different articles. These articles remain too general and limited to make a follow up of local content. There is only mention of a few local content elements such as the hiring of local employees (Decree setting the terms and

² LGIM: Law on Large Scale Mining Investments n°2005-022 of October 17, 2005

³ MECIE: Decree on the Conformity of Investments with the Environment n°2004-167 of February 3, 2004 amending certain provisions of Decree n°99-954 of December 15, 1999

⁴ AIME: Interdepartmental order on the regulation of mining sector with regard to the protection of the environment n°12032/2000 of November 06, 2000

conditions for the application of the Mining Code n°2006-910 of August 19, 2006, Decree setting the conditions for the application of the Large-Scale Mining Investment Act n°2003-784), the training obligation (Large-Scale Mining Investment Act n°020/2001, Decree setting the conditions for the application of the Large-Scale Mining Investment Act No. 2003-784), etc. in some articles. Only, the Mining Code mentions the granting of mining permits reserved for small-scale miners for nationals as well as the constitution of an environmental provision for restoration. The Mines-Environment Inter-Ministerial Order defines measures to improve the well-being of local populations by implementing economic and social development programs and by providing compensation to populations in the event of displacement from their homes, without going into detail (Cf. Table- 2).

Table -2: Texts reflecting a trend towards local content in the mining sector in Madagascar

Laws, Decrees, Orders	Local content
<p>Mining Code N°2005-021 of October 17, 2005.</p>	<ul style="list-style-type: none"> Article 11, paragraph 2, which states that only people with Malagasy nationality, and legally constituted groups of people with Malagasy nationality, using artisanal techniques, may acquire and hold mining permits reserved for small-scale miners. The same provision for gold panning permits, which can only be granted individually to people with Malagasy nationality or to legally constituted local groups of national gold panners; Article 102 also stipulates that: “Every holder of a mining permit shall provide for the constitution of an environmental provision intended for the rehabilitation and protection of the environment.” Any holder of a gold panning permit pays an environmental contribution to the issuing Commune, which is included in the granting fee, and undertakes to carry out prevention and environmental rehabilitation work on the gold panning sites in accordance with the programs established by the Commune.
<p>Decree setting the terms and conditions for the application of the Mining Code N°2006-910 of August 19, 2006</p>	<ul style="list-style-type: none"> Emphasizes the objective of environmental protection and integrates the related measures adopted by the departments specialized in this field. With regard to the employment of expatriate personnel, in addition to the obligations provided by common law in this regard, with similar capacity and qualifications, the mining permit holder undertakes to employ, as a priority, workers with Malagasy nationality.
<p>Law on major mining investments (LGIM) N°2005-022 of October 17, 2005</p>	<ul style="list-style-type: none"> Give priority to workers with Malagasy nationality with similar skills and qualifications in accordance with Article 103. Obligation for the processing company to set up a theoretical and practical training program for Malagasy nationals, as well as to promote the access of workers with Malagasy nationality to all jobs of the project, regardless of their level and in relation to their individual capacities, (Article 104).
<p>Decree establishing the conditions for the application of the Act on major mining investments N°2003-784 of July 8, 2003</p>	<ul style="list-style-type: none"> Obligation of a training and professional promotion program for Malagasy employees. With respect to workers and employment, the annual report must specify the number and quality of workers trained and hired during the year under review, as compared to the previous year. It must describe the ongoing recruitment and vocational training programs and their results.
<p>Decree on the accounting of investments with the environment (MECIE) N°2004-167 of February 3, 2004 amending certain provisions of Decree n°99-954 of December 15, 1999</p>	<ul style="list-style-type: none"> Obligation for mining investment projects to undergo an environmental impact study. Requirement to hold a public consultation during the environmental assessment process (involvement of local communities). Establishing rules of conduct and penalties for violators.
<p>Interdepartmental order on the regulation of mining sector with regard to the protection of environment (AIME)</p>	<ul style="list-style-type: none"> Obligation for the mining permit holder to conduct an Environmental Impact Assessment (EIA) before the start and before the end of the project. Definition of economic mitigation and rehabilitation measures aimed at, among other things: improving the well-being of local populations by implementing economic and social development programs, and providing compensation to

Laws, Decrees, Orders	Local content
N°12032/2000 of November 06, 2000	<p>populations in the event of displacement from their homes.</p> <ul style="list-style-type: none"> • Consultation with local authorities and communities before starting any work.

Given the mineral potential that has not yet been fully exploited and the major leverage role that the mining sector can play in the country's growth, the Malagasy government has made it a priority to create a legal framework that is attractive to investors (reform of the mining code and promulgation of the law on major mining investments) [19]. The mining regime does not impose any obligation for local employment or quotas on foreign employment in mining projects. The only provisions in place, contained in the Decree implementing the Mining Code (N°2006-910 of 2006, Article 7) and reproduced in the LGIM (Article 103), concern the employment, as a priority, of workers with Malagasy nationality "with similar capacity and qualifications". However, there is no mechanism in place to verify the application of these provisions. The Decree and the LGIM also contain an obligation for mining investors to design and implement a theoretical and practical training program for Malagasy workers [4]. However, these obligations remain vague and the application texts necessary for implementation and monitoring has not been adopted (Cf. Table- 3).

Table -3: Strengths, weaknesses, opportunities and threats of Malagasy mining legislation in terms of local content

Strengths	Weaknesses
<ul style="list-style-type: none"> • The identification and management of socio-economic impacts are part of the EIA and the Project Environmental Management Plan (PEMP) • The requirement for annual reporting with the implementation of PEMP • The obligation to employ in priority workers with Malagasy nationality • National laws and international treaties to which Madagascar is a party protect workers' rights • Large mines invest in socio-economic infrastructure as part of CSR • Ongoing consultation with affected populations in large mines 	<ul style="list-style-type: none"> • The absence of an integrated national policy framework for the optimization of the socio-economic benefits of mining • Lack of obligations or incentives for the creation of economic linkages between upstream and downstream of mining activities • Lack of policies and mechanisms to maximize local employment, despite the general requirement that local employment is a priority • Systematic violation of workers' rights in small formal and informal mines • The lack of texts for implementation and monitoring
Opportunities	Threats
<ul style="list-style-type: none"> • The draft law on the overhaul of the mining code has been adopted by the Assembly and Parliament and is awaiting promulgation 	<ul style="list-style-type: none"> • The absence of an integrated national policy framework for the optimization of the socio-economic benefits of mining • Political will not firm in the implementation of the texts • The lack of texts for implementation and monitoring

There are any provisions in the mining code and its application texts that encourage companies, through various mechanisms, to give preference to local and national suppliers of goods and services, while helping to build their capacity to meet the needs of mining activities [7].

In addition, the government has recently adopted the draft law on the overhaul of the mining code. The promotion of local content, the consideration of socio-economic and environmental issues, with the introduction of provisions on Corporate Social Responsibility (CSR) and local content, the protection of human rights and the creation of a social and community investment mining fund are, among others, the new provisions contained in this new law.

3.2 The socio-economic conditions for the adoption of local content

Countries undertaking their first local content policy efforts should focus first on measures to stimulate direct employment in the mining sector. If local industrial capacity is strong enough, they should also focus on local sourcing, and if capacity and markets exist, they may want to explore downstream value addition. Horizontal

linkages through skills and capabilities will generally be pursued. Horizontal linkages through shared infrastructure do not depend as much on skills and capabilities but can be pursued at any time [6].

- **Availability of supply of goods and services**

The current mining legislation does not establish a national strategy to encourage the creation of companies in industry or services for the local, regional and national supply of goods and services to the mine and the community. Thus, unlike local employment, there are no provisions in the mining code and its application texts that encourage companies, through various mechanisms, to give preference to local and national suppliers of goods and services, while helping to build their capacity to meet the needs of the mine [7]. Nevertheless, local procurement can contribute to a significant increase in the mining sector's share of GDP. It can also contribute to the strengthening of infrastructure, governance institutions and skills in the development of the extractive industry value chain. Indirectly, local procurement can contribute to the diversification of the national economy independently of the mining sector [6]. The supply of local goods and services to mining companies represents a set of opportunities for the local or regional economy that the government and decentralized authorities should not miss [21].

- **Availability of skilled labor**

Human capital in Madagascar is in decline. Although labor force participation rates are high, widespread informality and underemployment mean that people are employed in low quality, low productivity jobs with some of the lowest wage rates in the world [3]. The direct employment offered in the mines generally requires skill levels that are not available to local populations. Local job creation and training programs can help, but mining operations cannot generally employ everyone, and access to high wages is limited [12].

When the local labor force is better trained in the mine, but also in the subcontractors and suppliers of products and services, more local jobs can be created. This can apply to the labor force employed directly by the mines, indirectly through subcontractors (maintenance, surveillance/security, housekeeping) but also through public procurement for the supply of goods and services [16]. Knowledge transfer is one of the key dimensions of value added in the mining sector [21].

- **Availability of Infrastructure**

The lack of infrastructure remains a major problem for the Malagasy economy and is increasingly felt. The road network is still poorly developed. As a comparison: road network in 1960 = 60'000 km; in 2022 = 11'000 km. Moreover, this greatly reduced transport system is at the same time very poorly maintained. Thus, the insufficiency of the communication routes has hindered the development of the Big Island. Indeed, it covers only a part of the territory and is no longer sufficient for the transport of products, nor for the road service of landlocked regions [1]. However, the state of the country's infrastructure network is essential for the development of mining projects [6].

In addition, the attraction of investors in the extractive industries, especially large-scale mining, depends on the existence of infrastructure including physical infrastructure such as roads, ports, airports, telecommunications; industrial infrastructure such as subcontracting, services, industries [15].

It is common to observe a positive and significant correlation between GDP growth and the level of infrastructure [20]. One of the objectives of the 1998 mining policy is to promote the development of regional infrastructure to facilitate as much as possible access to mining areas and the movement of products. It is important to have regional and national infrastructure development with the participation of mining projects in the framework of public-private partnership: roads, ports, railroads, schools, health centers, energy, housing, and militaries advanced posts. The infrastructure plan for these mining projects should be established on the basis of the regional development plans (Regional Development Plan and Communal Development Plan), in order to optimize investments.

Inadequate supply of goods and services, unavailability of skilled labor, and lack of infrastructure are among Madagascar's main handicaps to adopting a local content policy, according to the incentive factors of investments in Madagascar (Cf. Table- 4).

Table -4: SWOT analysis of socio-economic conditions in Madagascar

Strengths	Weaknesses
<ul style="list-style-type: none"> Abundant natural resources (precious stones, industrial and decorative stones, oil, and rare metals for mining activities; a vast and fertile land with a favorable climate) Low cost of production factors and local labor costs Large mines invest in socio-economic infrastructure as part of CSR 	<ul style="list-style-type: none"> Political instability Dependence on agricultural and mining products Unavailability of skilled labor Insufficient infrastructure (roads, water and electricity networks) Limited access to electricity The weakness of the financial system Limited access to education for the Malagasy population
Opportunities	Threats
<ul style="list-style-type: none"> Increased need for raw materials at the international level The existence of major mining projects such as QIT Madagascar Minerals SA and Ambatovy Minerals SA The draft law revising the mining code has been adopted by the Assembly and Parliament and is awaiting promulgation 	<ul style="list-style-type: none"> Political instability Insufficient infrastructure (roads, water and electricity networks) Limited access to electricity The weakness of the financial system Limited access to education for the Malagasy population

Although the three socio-economic criteria for implementing local content (availability of supply of goods and services, availability of skilled labor, and availability of infrastructure) are not met, the proposed overhaul of the mining code and the increased demand for raw materials are a good opportunity for Madagascar. Indeed, in the new mining code (pending promulgation), it is mentioned that local content includes, among other things: prioritization of local suppliers and local supply chain development; local skills development and capacity building programs; prioritization of local recruitment for equal skills; and development of income generating activities. However, political instability, the inadequacy and poor quality of existing infrastructure, and the low level of education of the population hinder the success of a local content policy.

3.3 The case of QIT Madagascar Minerals SA and Ambatovy Minerals SA

Madagascar does not yet have local content legislation. Also, large mining projects such as QMM and Ambatovy both have their own policies to strengthen their commercial links with the local economy. These policies include: a focus on local purchasing and procurement; training for small local suppliers to strengthen their administrative and management capacity; and specialized payment mechanisms for small local suppliers [11]. In this way, they adopt a local content approach and engage in Corporate Social Responsibility (CSR) to participate in the development of their area of implementation.

The objectives of QMM's Local Content Policy are to enable local and national suppliers to develop economically and work sustainably according to customer requirements and legislation; and to enable the creation of a parallel economy to the mine, independent of the mine but which will last beyond the life of the mine [18].

Ambatovy's commitments and contributions in the priority areas of the Malagasy State are: promoting Human Rights and contributing to the security of the populations; improving the quality of life of the host communities; zero tolerance towards corruption; investing in education in a sustainable way; enabling equitable and quality access to healthcare for all; investing in the development of its employees' skills as a priority; promoting an inclusive and sustainable industrialization while fostering innovation; preserving and valuing the environment; constructing sustainable and resilient buildings, accessible to the largest number of people [2].

The total number of jobs created is 11,700 for Ambatovy and 2,500 for QMM, with more than 80% of these jobs being filled by nationals and more than 65% of jobs being created through the existence of QMM and Ambatovy. In general, the budget allocated to local procurement for both companies has consistently increased year by year, ranging from \$238 million to \$252 million from 2015 to 2019 for Ambatovy, and about from \$3 million to \$6 million for QMM for the same period. Ambatovy has invested USD 250 million in roads, port, railroads, etc. and USD 8 million in community infrastructure construction and rehabilitation under the Social Investment Fund.

QMM, for its part, has contributed to the construction of common infrastructure, including the port of Ehoala, roads, potable water and electricity, through public-private partnerships with a budget of US\$ 400 million [17].

4. CONCLUSIONS

According to the IGF Guide, for effective local content policies, government must consider such elements as: institutional and regulatory capacity, supply capacity of goods and services, human resource capacity, and infrastructure availability.

For Madagascar, the hypothesis is true. Political and socio-economic factors still hinder the adoption of a local content policy in the mining sector. Madagascar often lacks institutional arrangements and does not currently have a true local content policy based on the redistribution of the benefits of exploitation obtained from the extractive industries, and the continued strengthening of the human and environmental conditions necessary for sustainable local development. The favorable socio-economic conditions for the implementation of a local content policy are not yet in place. The supply of goods and services is not satisfactory, the quality of the workforce is limited, and the infrastructure is poor. Also, the lack of a clear vision of economic and sectoral policies explaining the desired medium- and long-term evolution of the economic, social and environmental impacts of large mining projects leads to a lack of ripple effects on the dynamics of business opportunities for both local operators and local populations.

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