QDD.

A Question of development
Synthesis of AFD studies and research
FEBRUARY 2024
N° 69

Is the Environmental and Social Impact Assessment (ESIA) a reliable tool for improving the management of mining projects in West Africa?

"Environmental and Social Impact Assessment (ESIA)" refers to the procedure by which the owner of a mining project is required to assess the environmental and social impact of the project with a view to proposing alternatives or mitigating measures. This study is accompanied by an Environmental and Social Management Plan (ESMP), which includes a mechanism for monitoring and implementing the ESIA.

Mining is responsible for 7 percent of deforestation worldwide, while gold mining is estimated to involve over 15 million people in West Africa. Mining projects have varied and complex impacts on the environment and on human communities. These impacts occur at various stages of projects, from the geological exploration and infrastructure construction phases through to the actual mining operations. The Environmental and Social Impact Assessment (ESIA), an environmental measurement tool used in mining, has come in for sharp criticism, which needs to be addressed with a view to repositioning this tool in its original mission of ensuring better management and preservation of the environment.

Authors
Fabrice COLIN (Université Mohammed V de Rabat, UM5R)
Patrice EBAH (IRD, INP-HB)
Grégory GIRAUD (IRD)
Mory KOUROUMA (ISMGB)
Mahamadou OUSMAN (EMIG)
Alphonse Kouakou YAO (INP-HB)

ÉDITIONS AFD AGENCE FRANÇAISE DE DÉVELOPPEMENT

West Africa's abundance of mineral resources is distributed across multiple nations

Since the boom in mineral prices at the beginning of the twenty-first century,[1] the mining sector in West Africa has undergone an unprecedented level of development. This heterogeneous, fluctuating, and often poorly controlled development raises numerous complex regional economic, human, and environmental issues. West Africa is the continent's leading gold-producing region,[2] with gold present in several of its countries: Côte d'Ivoire, Ghana, Guinea, Liberia, Mali, Niger, Nigeria, Sierra Leone, Burkina Faso, and Senegal. **Artisanal and industrial gold mining is estimated to involve some 15 million people (both workers and dependents) in West Africa.**

Bauxite, an ore used to produce aluminum, ranks second in terms of distribution, and is present in five countries: Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, and Mali. Diamonds and uranium are also widely present. Precious minerals (gold and diamonds) and strategic ones (aluminum and uranium) are among the most widely distributed mineral resources in the Economic Community of West African States (ECOWAS) zone.[3] This abundance of resources is not without consequences for the environments and societies involved in their extraction.

Mining and its impact on the environment and society

Various publications by the scientific community and mining industry trade associations—such as the "Striking a Better Balance" Extractive Industries Review final report—point to the varied and complex impacts of mining projects on the environment and on human communities.[4] These impacts are felt as much in the exploration and construction phases (ports, infrastructure, and so on) as in the mining and extraction stages.[5] Mining projects put multiple pressures on the natural and human environments. In particular, they have an impact on farming and on communities' quality of life by degrading the soil and plant cover, producing excess waste, and endangering flora and fauna species.[6]

- The first level of environmental impact is the **degradation of ecosystems (soil and plant cover) and the loss of biodiversity** due to mining activity, which is mostly open-pit in this region. **Mining is responsible for around 7 percent of deforestation.**[7]

[1] The explosion in prices of mineral raw materials was fueled by China's growing demand to feed its industries. The early years of the first decade of the twenty-first century marked a decisive turning point in this respect.

[2] https://www.sikafinance.com/marches/uemoa-les-exportations-dor-ont-genere-10-4-milliards-d-euros-de-recette-en-2022_43877; see also the report of the second edition of the Economic Community of West African States (ECOWAS) Mining and Petroleum Forum, abbreviated to ECOMOF (Abidjan, December 2018).

[3] Henri-Louis Védie (2020), Forces et faiblesses de la CEDEAO en 2021, Policy Paper 21/06, Policy Center for the New South (PCNS) (https://www.policycenter.ma/sites/default/files/2022-02/PP%20-%2006-21%20%28%20Henri%20louis%20VEDIE%20%29%20%281%29.pdf).

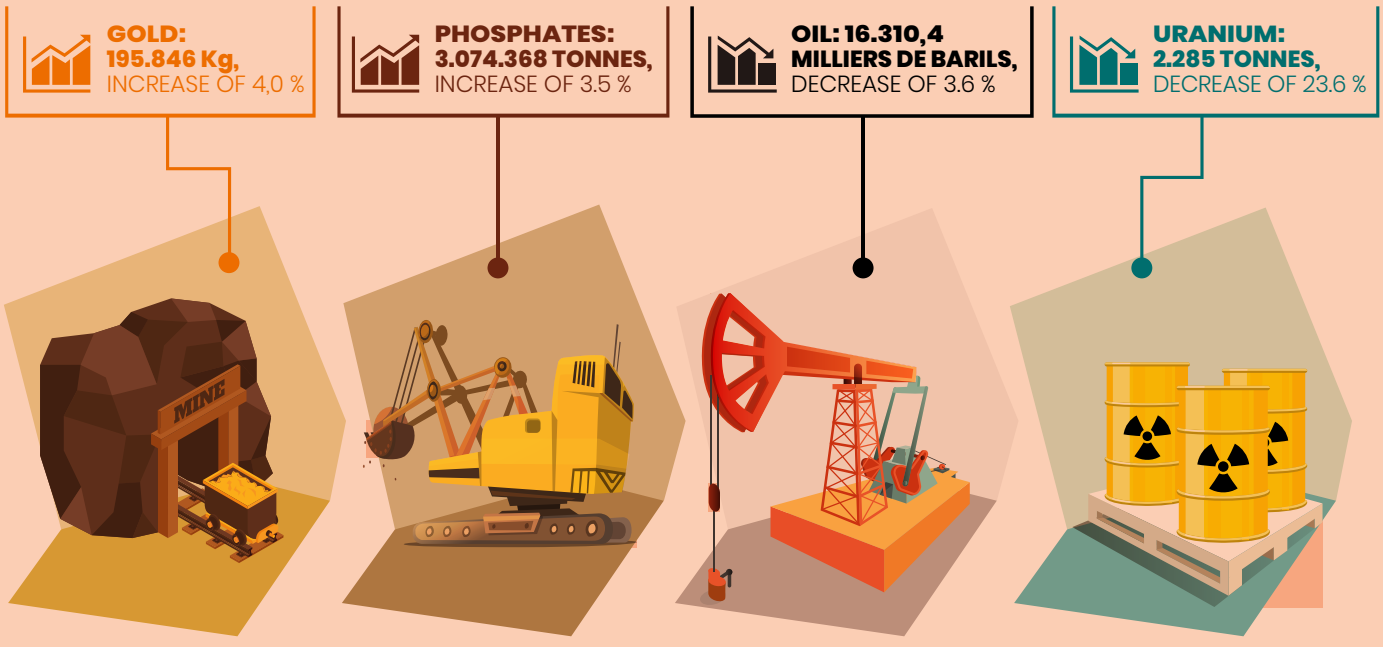
[4] Haïssen Marie Génévième Boka (2021), La violation des droits humains, dans le cadre de l'exploitation du sous-sol minier en Afrique par l'industrie extractive canadienne: Les cas de la Côte d'Ivoire, du Burkina, de Madagascar et du Mali, Masters dissertation in international law, Université du Québec à Montréal (UQAM) (https://archipel.uqam.ca/14838/).

[5] Pacifique Manirakiza (2016), "La protection des droits de l'homme à l'ère de l'industrie extractive en Afrique," Criminologie 49, no. 2, pp. 115–140, Les Presses de l'Université de Montréal (https://doi.org/10.7202/1038419ar).

[6] UNEP - United Nations Environment Programme (2015), Côte d'Ivoire: Post-Conflict Environmental Assessment.

[7] https://all4trees.org/dossiers/deforestation/; see also: https://www.fao.org/3/c0176f/c0176f.pdf [in French].

Illustration 1 - Distribution of mineral resources in West Africa



Source: Central Bank of West African States (BCEAO) 2021 Annual Report.

- **Atmospheric pollution and degradation of water resources** rank second in terms of impact. The water-intensive nature of mining inevitably puts pressure on surface and groundwater, and can thus lead to conflict over water use. Environmental contamination by heavy metals from gold ore (arsenic and lead), cyanide discharges, and releases of mercury into the natural environment as a result of artisanal mining far exceed the alert thresholds set by the World Health Organization (WHO) and affect the quality of drinking water. A 2008 Ghanaian environmental impact study of sixty-one major mines and a number of smaller ones showed that mining areas have higher concentrations of arsenic, particularly in the vicinity of large old mines such as Obuasi, Bibiani, and Prestea. In the area of influence of the Obuasi mine, the average arsenic content of the water over one sampling year was 25 µg/L (micrograms per liter), more than fifty times the WHO drinking water limit (European Union, 2008).

- A third level of impact relates to the **deterioration in the quality of life of populations** who lose their homes, see their food resources degraded and their health impacted, which often leads to higher levels of poverty and an increase in inequalities.

All these negative externalities can lead to conflict in areas where mining activity is taking place. In this context, ESIAs must assess the environmental and social consequences of mining projects before they are implemented, in order to identify and reduce these impacts and maximize the benefits for local communities if they give their assent to a mining project. The complexity of these impacts raises questions about the relevance of ESIAs.

The Environmental and Social Impact Assessment (ESIA): an essential but questionable tool

Imposing obligations to carry out an ESIA for each mining project to address environmental and social concerns is a significant development that has become well established among national governments. These obligations are particularly incumbent on mining companies. Increased vigilance on the part of non-governmental organizations (NGOs) and actors from the academic and scientific world is making it possible to monitor the benefits and challenges of ESIAs. ESIAs enable the competent authorities to take the appropriate decisions to ensure responsible mining. They also identify the mitigating measures needed to minimize negative impacts, as well as compensation measures for acceptable residual adverse impacts.

Today, all mining codes in West African countries are aligned with this obligation, which has become a cardinal and non-derogable principle since the Rio Conference in 1992.[8] It is one of the conditions for obtaining any mining rights.

However, failing to observe the rules of rigor and ethics can give the impression that the impact study is just an administrative formality and, over time, can have a lasting effect on the credibility of the process.[9] For example, it is rare for the local communities most affected by projects to participate in the studies on the basis of free, prior, and informed consent. The disparity between the reality of mining areas and impact study documents thus raises many questions around the issue of integrity.

Another major bias lies in the fact that political decisions to grant environmental authorization are not clearly separated from technical decisions to approve the scientific content of impact studies. This undermines the credibility of the assessment and decision-making process, especially as the procedure and its progress are rarely transparent.

As far as monitoring is concerned, impact studies also suffer from bureaucratic red tape on the part of the competent authorities, a lack of staff to monitor the implementation of Environmental and Social Management Plans (ESMPs), and a lack of technical resources for the structures (to the point where the costs of certain monitoring missions are sometimes borne by the structure being monitored). The reality is that semi-industrial mines and quarries are rarely subject to ESMP monitoring because of a lack of mining and environmental administration staff. Moreover, the rehabilitation of mined sites—an important component of ESMPs—suffers from the absence of an appropriate blueprint or legal framework for drawing up rehabilitation plans. This illustrates the lack of follow-up to impact studies.

Finally, the picture at regional level is mixed. The ECOWAS Model Mining and Minerals Development Act (EMMMDA) lays down this requirement at the regional level but does not provide a framework for rehabilitation plans. This is a real challenge that needs to be met at national and regional levels. Fortunately, the new West African Economic and Monetary Union (WAEMU) community text on mining[10] has made more progress in this area. This reform gives more details on the elements that must be included in rehabilitation and closure plans. It provides significant clarification on the specific nature of the rehabilitation plan according to the type of mining operation.

Notwithstanding this important reform of June 2023, it is highly desirable that ECOWAS and WAEMU work together to put in place a specific regulatory framework for the rehabilitation and closure of mining sites, which would serve as a set of guidelines in this area.

[8] United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit or Rio Conference (Rio de Janeiro, Brazil, June 3–14, 1992).

[9] Évolution des systèmes d'étude d'impact sur l'environnement en Afrique centrale: Rôle des associations nationales de professionnels (2013), p.118 (http://www.mediaterre.org/docactu,SUVQRi9kb2NzL291dnJhZ2Vjb2xsZWN0aWZzZWVhYw==,6.pdf).

[10] Regulation No. 02/2023/CM/UEMOA on the Community Mining Code.

Prospects and proposals

An analysis of mining legislation in West African countries reveals efforts to take environmental and social concerns into account when implementing mining projects. However, reforms are still needed to improve the responsible management of mining activity through better incorporation of and adaptation to environmental and social realities.

- **Rethinking the articulation of environmental law (particularly ESIAs) with mining law**
  Reconciling mining codes and ESIAs is key to improving the articulation of these two areas of legislation. Strict monitoring of ESIAs and the instruments derived from them must be reinforced. Given that the majority of environmental codes are more than twenty-five years old and do not sufficiently reflect the current environmental realities of the mining sector, changes need to be made to the administrative practices of national governments and the distribution of competences between national governments and local authorities in order to improve the articulation between environmental law and mining law.

- **Strengthening the framework for rehabilitating mining sites**
  Establishing a specific legal framework for the redevelopment and rehabilitation of mining sites would make it possible to meet the requirements of ESMPs. This framework should be limited to exploration work that is subject to rehabilitation obligations and to defining mining activities that are subject to rehabilitation obligations. In addition, the introduction of regional- and national-level guidelines on compensation and resettlement for affected communities is critical to ensuring that ESIAs are monitored and ESMPs are implemented.

- **Operationalizing the Free, Prior and Informed Consent (FPIC) and Complaint Management (CM) mechanisms**
  Official confirmation of the operationalization of environmental principles at all stages of mining projects to implement the principles of participation, information, legal non-regression, and access to justice through FPIC and CM mechanisms would be a decisive factor.

- **Incorporating the fight against hunger into ESIAs**
  Taking food security into account in ESIAs by highlighting arable land in impact studies (defining the amount of arable land available for agricultural crops to meet food requirements) is a key goal.

- **Putting an end to opaque decision-making and instituting a system of reinforced responsibility for mining and environmental actors in ESIAs,** by setting up a specific system of responsibilities for mining and environmental officials with regard to monitoring the implementation of ESMPs (including equipment and training), but also by strengthening collaboration between the various departments of the ministries in charge of mining, agriculture, and the environment to ensure better coordination of studies and to dissociate political decisions to grant environmental passports to operate from technical decisions.

- **Including academic and scientific institutions in ESIAs**
  Support for open and participatory scientific research, in particular pan-African research networks of excellence on mining activities, such as the ACE Partner program's Responsible Mining and Sustainable Development (RAMR2D) network, is essential to ensure that ESIAs are better articulated for all mining projects throughout their life cycles. Public-private research partnerships that build trust among all the actors involved and produce shared knowledge will help to create a virtuous spiral.

Reference list

AFRODAD – African Forum and Network on Debt and Development (2020), Assessment of Guinea's Domestication of The African Mining Vision (AMV).

Chuhan-Pole P., A.L. Dabalen & B.C. Land (2020), Mining in Africa: Are local communities better off? collection *L'Afrique en développement*, 225 p., co-édition AFD/Banque mondiale.

Boka H.M.G. (2021), La violation des droits humains, dans le cadre de l'exploitation du sous-sol minier en Afrique par l'industrie extractive canadienne : les cas de la Côte d'Ivoire, du Burkina Faso, de Madagascar et du Mali, mémoire de Maîtrise en droit international, [Masters dissertation in international law], Université du Québec à Montréal (UQÀM) (http://archipel.uqam.ca/id/eprint/14838).

UNEP – United Nations Environment Programme (2015), Côte d'Ivoire Post-Conflict Environmental Assessment

Règlement n° 02/2023/CM/UEMOA portant Code minier communautaire.

Agence française de développement (AFD)
5, rue Roland Barthes | 75012 Paris | France
Publication Director Rémy Rioux
Editor-in-chief Thomas Mélonio
Graphic design MeMo, Juliegilles, D. Cazeils
Design and production eDeo-design.com
Translation Cadenza Academic Translations

Legal deposit 1st quarter 2024 | **ISSN** 2428-8926
Credits and authorizations
Licence Creative Commons CC-BY-NC-ND
https://creativecommons.org/licenses/by-nc-nd/4.0/
Printed by the AFD Reprographics Department.

Browse other QDD collection publications: *https://www.afd.fr/collection/question-de-developpement*