CASE STUDY

Coordinated and collaborative application of the mitigation hierarchy in complex multi-use landscapes in Africa: Guinea

Challenges and opportunities for collaboration to address the cumulative effects of mining: a multi-stakeholder perspective from Guinea

arcus FOUNDATION

FAUNA & FLORA INTERNATIONAL

Prepared for Fauna & Flora International by Mamadou Samba Barry, Dr Penda Diallo, Aissatou Bobo Diallo, Johny Rabenantoandro & Nicky Jenner

Fauna & Flora International (FFI) protects threatened species and ecosystems worldwide, choosing solutions that are sustainable, based on sound science and take account of human needs. Founded in 1903, FFI is the world's longest established international conservation body and a registered charity. For more information see: www.fauna-flora.org

Cover photograph: Moussa Thiam

Cover design: Dan Barrett, Brandman

Lead authors: Mamadou Samba Barry[1], Penda Diallo[2], Aissatou Bobo Diallo[3], Johny Rabenantoandro[3] & Nicky Jenner[4]

1. Unité de Coopération pour l'Offset Moyen-Bafing, Guineé Alumina Corporation, 2. Camborne School of Mines, University of Exeter, 3. Compagnie des Bauxites de Guinée, 4. FFI.

Citation: Barry, M.S., Diallo, P., Diallo, A.B., Rabenantoandro, J. & Jenner, N. 2021. *Coordinated and collaborative application of the mitigation hierarchy in complex multi-use landscapes in Africa. Challenges and opportunities for collaboration to address the cumulative effects of mining: a multi-stakeholder perspective from Guinea.* Fauna & Flora International (FFI): Cambridge U.K. Available from: www.fauna-flora.org

Acknowledgements
Thanks are extended to the Arcus Foundation for their support and funding that has enabled the development of this case study. Special thanks to Dr Penda Diallo for enabling and supporting this collaboration and to Mr Mamadou Samba Barry and all contributing members of the Réseau Environment Bauxite for sharing their experience and learning.

arcus FOUNDATION

FAUNA & FLORA INTERNATIONAL

SYNOPSIS

The Boké region in north-west Guinea contains some of the world's largest reserves of high-grade bauxite. This mosaic landscape also hosts important natural habitat that supports threatened, rare and restricted range species, maintains essential ecosystem functions and services, and holds important cultural value. Over the past decade, there has been rapid growth of bauxite mining: today the region is host to at least 14 companies at different stages of mining activities. The accelerated increase in bauxite production is having wide-ranging impacts on forests, biodiversity and people.

In this increasingly crowded landscape, addressing the indirect and cumulative impacts of mining is a major challenge and the actions of one operator can quickly undermine mitigation efforts of neighbouring operators. Yet there is also opportunity and an urgent need for operators to work together to reinforce and improve mitigation outcomes.

The focus of this case study is the recently established sectoral network, the Réseau Environment Bauxite, which formed in response to growing concerns by some opertors of the cumulative impacts of bauxite mining and recognition that these issues could not be addressed by any single operator alone.

Reconciling mining companies with very divergent interests and obligations towards a common vision and agenda and securing the voluntary commitment of operators to implement shared objectives and activities has proved challenging. Yet despite being in its infancy, the platform has already helped to break down barriers between operators: building trust, facilitating a more open dialogue, improving understanding of common interests and issues and enabling the sharing of biodiversity data and action plans.

This case study brings together experience and learning from the creation and operation of the Réseau Environment Bauxite and emphasises the value of industry-led development of a multi-operator platform to respond to recognised challenges that cannot be addressed by any individual operator alone. Learning from Boké can help to inspire and inform the development of sectoral and cross-sectoral platforms or networks elsewhere in the region.

CONTENTS

CONTEXT

Landscapes function as complex **socioecological systems** in which humans are an integral part of the ecosystem - as individuals, communities, societies and economies we depend on, interact with, shape and are shaped by ecosystems over time. The relationships between local people and ecosystems (land, nature and the services they provide) are constantly evolving and adapting, and are influenced by societal and environmental changes beyond the landscape itself: environmental changes (e.g. climate change), laws and policies, changes in governance and management regimes, and so on. Commercial industries, including large-scale mining and associated infrastructure projects, are playing an increasingly important role in shaping socioecological systems, particularly where these landscapes contain large reserves of minerals and metals.

The Boké prefecture in northwestern Guinea (Figure 1) contains some of the world's largest reserves of high-grade bauxite and has a long history of mining, with the first mine established in 1963. In this landscape, mining and shifting agriculture are the main land uses in a matrix of woodland, wooded grasslands (also called savannahs), gallery forests (located along rivers and streams), grasslands and “bowal” habitats. However, grasslands, wooded grasslands and forests are under increasing pressure from mining and agriculture; gallery forests are becoming scarce, fragmented and degraded. This mosaic landscape includes valuable natural habitat that supports large populations of threatened, rare and restricted range species (e.g. western chimpanzee, West African red colobus, African white-backed vulture, Kunda's half-fingered gecko), maintain essential ecosystem functions and services (e.g. gallery forest habitat protects headwaters and water resources, and forest ecosystems are a source of natural resources for communities), and have important cultural value (e.g. sacred forests, genie houses associated with trees, forest, rocks, streams).

From 1973 to 2010, the Compagnie des Bauxites de Guinée (CBG) was the only company mining bauxite in the Boké region. However, over the past decade, the growth of the bauxite mining industry in Guinea has been substantial, with mining activity in and around Boké increasing rapidly through the awarding of new concessions, expansion of existing projects and launch of new projects[1] Today, the Boké region is host to at least 14 companies at different stages of mining activities. Since 2017, three companies including Guineé Alumina Corporation (GAC), Société Minière de Boké (SMB) - Winning, and UC RUSAL Compagnie de Bauxite de Dian-Dian (COBAD) have started to export their bauxite. A few kilometres from Boké, Alufer Mining Limited has also begun exporting bauxite. As a result, bauxite mining in Guinea increased from 15 MT in 2015 to 40 MT in 2018, including 20 MT production by SMB, which is based in Boké. The State has set a target of 100MT per year.

[1] Diallo P. (2019) *Regime Stability, Social Insecurity and Bauxite Mining in Guinea Developments Since the Mid-Twentieth Century*, Routledge

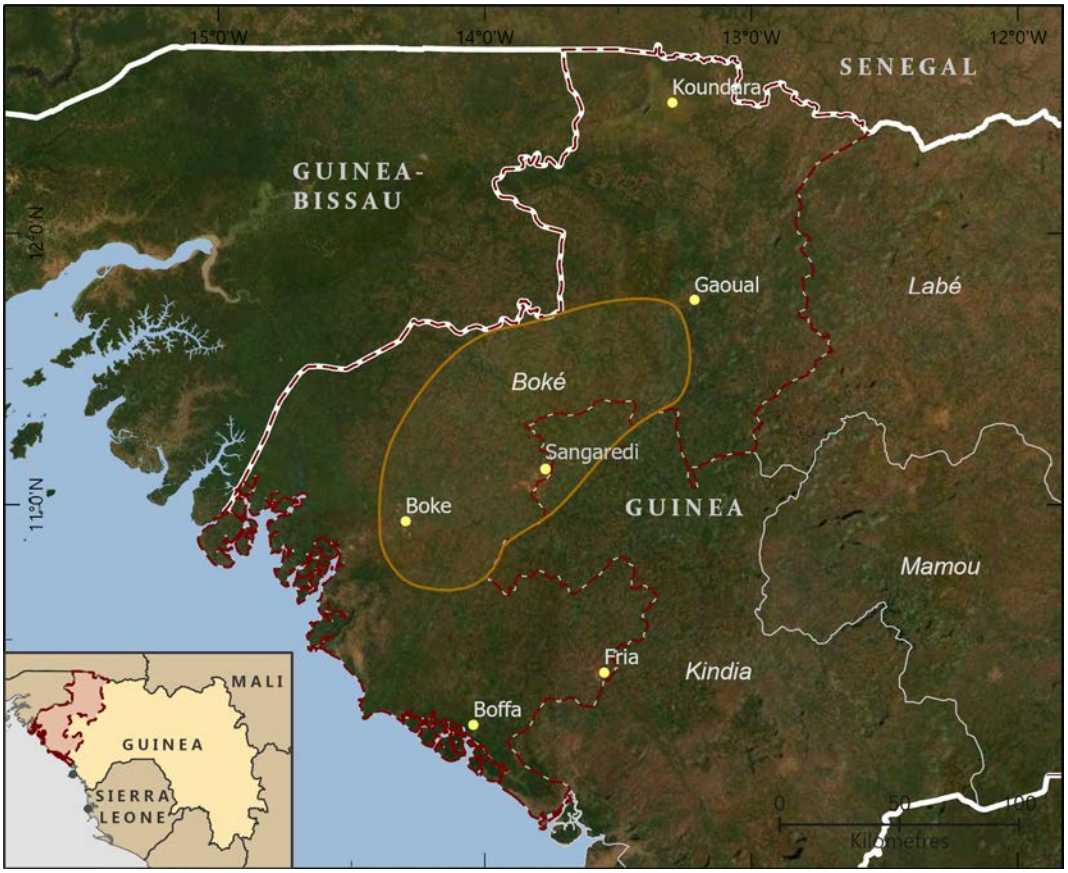

Figure 1 Location of the Boké prefecture (red dashed line) in the Boké region of north-west Guinea, within the Boké region. The bauxite belt is broadly indicated by the area highlighted in orange.

The accelerated increase in bauxite production in the Boké region has wide-ranging impacts on forests, biodiversity and people. Patterns of forest loss in the Boké region reveal peaks of deforestation associated with periods of increased mining activity which may be indicative (at least in part) of induced immigration and associated impacts[2]. In this increasingly crowded landscape, where many operators are present, taking into account the direct, indirect and cumulative impacts of mining on biodiversity and local people is a major challenge: the actions of one operator, for example, can undermine the mitigation efforts of neighbouring operators, particularly where access routes cut across others' concessions. Yet there is also opportunity to reinforce and improve mitigation outcomes if operators work together. Collective action to mitigate the effects of mining on forests, biodiversity and people in this landscape is therefore important for the persistence of rare and threatened species, habitats, and the essential ecosystem services and cultural values they support.

[2] World Bank (2019) Forest-Smart Mining: Identifying Factors Associated with the Impacts of Large-Scale Mining on Forests. World Bank Group: Washington DC.

A PLATFORM FOR COLLABORATION IN THE MINING SECTOR IN BOKE

By Mamadou Samba Barry

Creation of the Réseau Environment Bauxite - the Environment and Bauxite Network

Aware of the impacts that mining has on social and natural systems and with the rapid increase in mining activities in the Boké region, the Réseau Environment Bauxite (REB) network was created with the aim of harmonising practices for managing the cumulative impacts of mining on biodiversity and natural ecosystems, alongside other activities and land uses, and supporting community resilience.

The network was created following recognition among biodiversity managers at the CBG and GAC that to meet best practice requirements, including the International Finance Corporation Performance Standards, and to fulfil commitments to the State as outlined in their respective Environmental and Social Management Plans, it would be necessary to go beyond the boundaries of the individual mining concessions to consider and integrate the impacts generated by neighbouring concessions as well as the actions of other stakeholders including local communities

Under GAC's leadership, letters of intent and invitations to preliminary meetings to explain the objectives of the initiative were sent to bauxite mining companies operating in the Boké region. The first meetings revealed that whilst everyone had obligations to fulfil, approaches varied among operators. However, there was a shared appreciation for the aims of the initiative and participating companies agreed to appoint focal points. The necessary statutes and internal regulations were drawn up and submitted for approval by the respective companies. The Guinean Chamber of Mines and its development partner, the UNDP, were contacted to support the official creation of the network.

On 22 May 2018 a Memorandum of Understanding (MOU) was signed between six member companies and the Guinean Chamber of Mines at an official ceremony presided over by the Ministry of Environment, Water and Forests. The signing of the MOU was followed by the establishment of the Executive Office that manages the Annual Work Plan of the REB, under the coordination of the Guinean Chamber of Mines. This office oversees implementation of the Annual Work Plan through working groups. Currently, the network's membership includes six of the 14 companies operating in the Boké region: GAC, CBG, Alliance Mining Commodities (AMC), Alliance Minière Responsable (AMR), SMB Winning, and Alufer Mining Limited. Two other companies, Dynamic Mining and Chalco, have also expressed their interest in joining the network.

In addition to the mining companies, the network benefits from support of the State through close collaboration with the Guinean Chamber of Mines and the Ministry of Environment which has designated a focal point at the regional level - the Regional Inspector of the Environment of Boké - who is active in the different activities of the REB. The main channel for communication between the REB and the State remains the Guineé Chamber of Mines.

Objectives of the Réseau Environment Bauxite

The strategic objective of the network is to jointly carry out interventions to strengthen the prevention of environmental impacts, specifically for biodiversity. Engaging communities in activities of a social nature are considered where these contribute to the achievement of environmental objectives (REB Memorandum of Understanding).

Priority actions to achieve this strategic objective focus on:

- Reducing cumulative impacts of mining
- Improving community-based land-use planning and natural resource management
- Increasing the resilience of communities to mining activities and climate change through an ecosystem approach
- Prioritising local content in the implementation of biodiversity mitigation measures and compensation.

The network further seeks to:

- Support the sharing of knowledge and expertise among operators in the mining sector, in order to improve the effectiveness of impact mitigation actions and to address cumulative impacts (e.g. through actions to reduce deforestation and improve rehabilitation).
- Explore opportunities to provide technical and financial support for research development and capacity building for biodiversity conservation and social development in mining areas, recognising that capacity building is essential for supporting sustainable development in Guinea's mining regions.

Challenges and success factors in the creation of REB and its ongoing work

To date, the REB has faced a number of challenges in achieving its strategic objectives. Some of the challenges include:

- Reconciling mining companies with very divergent interests and obligations towards a common future vision
- Securing the voluntary commitment of mining companies operating in the Boké area
- Ensuring the availability of company representatives, commitment of mining company leaders, and support of donors to finance the action plan
- How to strengthen the technical capacity of employees across the various companies to promote good practice
- Integration of the social impacts of mining into the objectives of the REB, a process improved through the involvement of community relations department representatives responsible for conflict management and local development support.

Several factors contributed to the successful launch of the network and are considered important for the ongoing function of the network and both its current and future activity:

- Consultation with key stakeholders and consideration of relevant issues from the outset
- Transparency, clarity of vision and leadership
- Knowledge and capacity of members of the network
- Support of the Chamber of Mines which has been essential for the success and sustainability of the network's activities
- Partnerships with actors in the field of environmental protection and biodiversity conservation
- Alignment of REB's programmes with the priorities of member companies' environmental and social management programmes, government policy and the sustainable development programmes of national and international institutions

What advice would the network give to others who wish to set up a similar network ?

- Early identification of the issues to be addressed, stakeholders, convergence areas and policy opportunities
- Promote clear, transparent and opencommunication amongst members
- Select network leaders who are knowleageable, passionate, committed and driven
- Plan and develop programmes with internal stakeholders across different companies and with external stakeholders
- Promote collaboration, cooperation , sharing and trust amongst all stakeholders

"Collaboration is the only sustainable way to manage cumulative impacts"

Mamadou Samba Barry

BENEFITS AND CHALLENGES OF ENGAGING IN A COLLABORATIVE SECTORAL PLATFORM

An interview with members of the Réseau Environment Bauxite

- **How has participation in the network contributed to improving your understanding of the wider landscape and the impacts of bauxite mining on biodiversity, people and their interactions?**

Participation in the network and its activities (e.g. visits to member mine sites) has given us a better understanding of the landscape, and an appreciation for both the impacts of bauxite mining and the different ways companies approach the mitigation and management of those impacts. For example, operators have very different approaches to rehabilitation and restoration (e.g. varying rehabilitation objectives, use of non-native species including some species that are now known to be invasive in the region such as cashew), and the extent to which the sensitivities of natural habitats are taken into account. All mining companies need to adopt a consistent policy of ecological and economic restoration with a focus on native species for community use and for supporting wildlife. Operators also vary in their contractual obligations. Member companies of REB are all operating in the same type of landscape. The shared landscape, has enabled REB members to initiate a collaborative project involving actions in the Rio Nunez and mangrove ecosystems as well as in terrestrial areas of the landscape with a focus on the conservation of critical habitats and priority species, and wildlife migration corridors.

- **How does operating in a multi-operator environment affect your ability to anticipate and mitigate impacts?**

An example of this is the case of Boullere Key Biodiversity Area - an area that overlaps with the concessions of three operations (GAC, CBG and COBAD). Each company is independent and remains responsible for what happens within its concession. The chimpanzees in this area move between the three concessions on a daily basis, so the efforts of one or two of these companies to mitigate and manage impacts in this area will have limited success if the third concession allows chimpanzee habitat to be destroyed. Other examples include managing collision risks between the barges and protected marine fauna. To conserve biodiversity in this region collaboration is essential and requires the support of all three companies. Through the REB, it is possible to facilitate a collaboration between the three companies in order to preserve biodiversity in the mining areas in an effective and sustainable way.

- **Did the network and the engagement with other operators lead to the identification of common problems, challenges or objectives in the landscape?**

The various meetings organised by the network have helped to identify common challenges. This has informed the development of a collaborative project, supported by stakeholders. The project was presented to the Guinea Chamber of Mines, to the

Economic Community of West African States (ECOWAS), and in New York in 2018 with a view to obtaining funding for the project's 10 year implementation plan.

A major challenge within the network relates to varying levels of capacity. To achieve the objectives of the REB, we need to address capacity gaps in biodiversity management, mine rehabilitation, ecological restoration, waste management, and recycling, as well as capacity building for local communities to support local projects and support for all stakeholders to effectively address the effects of climate change in their activities. Waste management is a concern for both mining companies and the Guinean government.

- **What are the main barriers to collaboration between operators in the landscape?**

Barriers to collaboration include:

- The different starting points, Environmental Social and Governance (ESG) commitments, and operating standards of companies operating in the landscape
- Different approaches to the administrative management of member companies
- The urgency of production imperatives and their prioritisation over environmental and social objectives
- Willingness and commitment vary among mining companies operating in the landscape
- Social unrest

- **In your opinion, what was made possible that could not have happened without the network or the communication or collaboration between the different mines?**

Before the network was set up, each company protected its biodiversity data and action plan and treated it as confidential information. However, the network has facilitated exchanges, improved collaboration and created trust between the different companies. As a result, all the network members agreed to share information and open their doors to others for site visits so that members could better understand current practices and consider corrective measures where necessary. The network has opened communication channels across mining companies and government institutions. Today, the network works closely with the Mininstry of Environment and the Guinean Chamber of Mines. Without the network, it would not have been possible to start a collaborative project which brings together six mining companies and the Ministry of Environment. The network is therefore an important platform for both mining companies and the government.

- **How do you see the network evolving in the future?**

With good leadership, this network will be extended to other mining sectors beyond bauxite in Guinea. When the funding of its action plans and projects takes place, it will provide local expertise capable of handling large-scale projects whilst managing adverse impacts and delivering some positive outcomes for beneficiary communities and biodiversity. The network has set a precedent and can serve as a model for other countries in the sub-region.

Through this network, member companies can improve their reputation with donors and governments and it can help in securing a social licence to operate with local

communities. Through the development of joint projects and the inclusion of stakeholders' concerns, the network can be the platform that brings together environmental and social issues related to mining.

- **What challenges have you encountered in trying to implement this type of approach?**

It has been challenging to secure strong commitment from business leaders to provide sufficient expertise and financial resources to deliver actions as a contribution to programme implementation.

- **What are you most proud of?**

The REB has established a good reputation and is known among respected authorities (IFC, UNDP, GIZ, ECOWAS, Regional Chamber of Mines, Ministry of Environment).

"Nowadays, all the signatory companies of this network speak the same language and others want to join."

Mamadou Samba Barry

LEARNING FOR THE FUTURE

By Mr Samba Barry and Dr Penda Diallo

- **How can mining companies support biodiversity conservation in the future, both on and off concession?**

Mining companies will always have an impact on local people and their environment. From the outset of research for exploitation, companies should conduct serious environmental and social impact assessments, clearly identify sensitivities and build an environmental and social management plan that complies with international best practice such as the IFC's Performance Standards. Within the concessions, procedures must be applied according to the different phases of the project, rigorously implementing the mitigation hierarchy (avoid, minimise, restore) including the protection, in collaboration with communities, of areas within concessions that have high biodiversity value (i.e. avoidance areas or set asides). Where residual impacts are anticipated, early investigation of biodiversity offset options should be considered. Environmental and social compliance inspections are very important to encourage companies to invest more in biodiversity management.

Given the importance of natural systems and the species, functions and services they support, biodiversity conservation must be mainstreamed in the mining sector. This must be reflected in a strong commitment to biodiversity conservation at all levels:

- Through state initiatives with clear policies that are supported by the necessary human resources and institutional capacities to ensure robust application of policies on the ground. These policies should also include sanctions for non-compliance with

relevant laws that are applied and applied consistently in instances of non-compliance.

- By mining companies which must act to anticipate and mitigate their respective adverse impacts on biodiversity and communities and must work together to minimise the cumulative negative impacts of their activities.
- Local communities must be recognised as key actors in biodiversity conservation and therefore the state, NGOs and mining companies must maintain ongoing engagement with communities at all phases of mining, from exploration to closure.

To support more sustainable outcomes, all stakeholders including the state, mining companies, local communities and civil society must be engaged and motivated to contribute to local biodiversity conservation.

- **What lessons can we learn from Boké?**

Boké has rich and varied natural ecosystems, not all of which have been destroyed, but its proximity to the sea and its bauxite wealth make it a coveted location for multinationals in extractives industry.

"In the absence of collective action to mitigate and manage impacts, the region risks becoming uninhabitable after bauxite mining. Efforts must be made today to coordinate actions and build a better life in Boké now and into the future."

Dr Penda Diallo

Yet there is an opportunity here to ensure responsible exploitation of these resources, contribute to local development and to maintain and restore biodiversity in the region. The challenges are immense, but with committed stakeholders and active collaboration we can manage cumulative impacts over the long term.

Environmental impacts can lead to conflicts between local communities and mining companies. For sustainable collaboration between mining communities and local communities, it is important that mining companies and the state put in place initiatives that ensure responsible and sustainable mining practices.

The protection of biodiversity and the effective mitigation of social and environmental impacts from mining can help to improve the relationship between mining companies and local communities. To protect biodiversity from the effects of mining it is important to build a shared vision for the landscape among the different companies, with each operator making a commitment to contribute towards its implementation. The REB wants to develop effective collaboration amongst all stakeholders both internal and external to the network and to work closely with local communities and state institutions to achieve biodiversity conservation objectives. The REB calls for all bauxite mining companies the landscape to engage in the collective effort to mitigate and manage the effects of mining in Boké.

Coordinated and collaborative application of the mitigation hierarchy in complex multi-use landscapes in Africa: Guinea

FAUNA & FLORA INTERNATIONAL

The David Attenborough Building, Pembroke Street, Cambridge, CB2 3QZ, United Kingdom.
Telephone +44 (0) 1223 571 000
Email info@fauna-flora.org · www.fauna-flora.org