

QIT Madagascar Minerals (QMM) Biodiversity and
Natural Resource Management Committee
Meeting of May 23-25, 2022

Recommendations

The QMM Biodiversity and Natural Resource Management Committee (BNRMC) met for three days in Ft. Dauphin, preceded by site visits to the Mandena and Petriky areas. As in past meetings, detailed, open, and highly informative discussions were held with QMM staff and advisors on numerous topics that relate to the Committee's mandate and Terms of Reference. Significant progress was made on addressing previous recommendations, many of which have been fully implemented. QMM personnel presented carefully prepared and well-documented reports, answered all questions, and participated in frank and constructive discussions about a wide range of successes, issues, challenges, and opportunities, all of which greatly facilitated the Committee's work.

Based on the discussions that took place during the BNRMC meeting, the following key recommendations were formulated and shared with QMM staff in the closing session:

2022.1. – No Net Loss

QMM's commitment to achieve No Net Loss (NNL) of biodiversity by the time of mine closure is a key element in retaining the company's 'license to operate' in Madagascar and is also required to ensure alignment with Rio Tinto's corporate-level environmental policy. The parameters used to determine whether QMM is on track to achieve NNL were established in a forecast published in 2012 [add reference in footnote] based on data and analyses conducted in the preceding years. This forecast is now badly out of date, and as a consequence QMM currently does not have an objective basis to determine whether it will be able to meet this key commitment and is unable to demonstrate that it is on track to do so. The Committee recommends that QMM urgently undertake a comprehensive update of the NNL forecast, taking into consideration the following elements:

- a. the methodology should be based on that used for the 2012 forecast in order to ensure that the results will be comparable, but the update should also explore possible improvements to methods and indicators
- b. the update should be conducted by QMM's Environment Team, with guidance and independent oversight provided by a qualified expert. This will ensure that QMM staff fully participate in the update and that expertise on NNL is available within the company to ensure that the forecast can be further updated on a regular basis in the future, while also ensuring that the forecast has external credibility.
- c. the results of the NNL update should be used to review and, if necessary, revise the measures used to mitigate the impacts of the current mining activities at Mandena and the planned activities at Ste. Luce and Petriky (viz. avoidance, minimization, restoration, and offsetting).

2022.2. – Ecological Restoration

QMM's environmental permit requires that 675 hectares of littoral forest be restored over the course of the mining operation, starting with 225 hectares at Mandena. Ecological Restoration (ER) is also a key component of the company's program to mitigate its significant impacts on littoral forests and to achieve No Net Loss by mine closure. Based on results from years of experimental trials to determine the best approach for achieving this technically challenging objective, QMM has just begun to restore an initial 12 hectares in a sector immediately adjacent to the Mandena protected area that was recently mined. This

represents an important milestone for the company, and it will be critically important to ensure restoration success (i.e., the establishment and maintenance of an ecosystem whose structure, composition, and function closely resemble those of natural littoral forest). If successful, this initiative offers an important opportunity to demonstrate QMM's commitment to environmental stewardship and to make a significant contribution to promoting ER at a regional and national level. It is therefore important that restored areas be carefully monitored using an appropriate set of indicators. Moreover, the process of establishing the restored areas and tracking their development over time should be carefully documented so that information on this unique and globally important initiative can be provided in both the scientific and broader public domains.

2022.3. – Landscape vision for the Mandena area

QMM has developed a vision of how co-management should operate at the Mandena protected area and the adjacent restoration zone, and of how it intends to co-manage the areas designated for rehabilitation. These are important, but achieving sustained success will require placing them within the context of an overall vision of how the Mandena area will look after mining, taking into consideration the needs and aspirations of the local community and other key stakeholder groups, within an evolving regional context, and factoring in Mandena's proximity to Ft. Dauphin. This vision should be co-constructed by QMM and the key stakeholders via a participative and collaborative process. As an initial step, the Committee recommends that QMM establish its own vision of the post-mining landscape, and that this be illustrated by a map of projected land use and management, accompanied by an artist's depiction of what each landscape element will look like. The QMM vision can then serve as an illustrated starting point for developing the needed shared vision of Mandena.

2022.4. – Review of the '*dina*' for management of the Mandena protected area

An important challenge regarding the management of the Mandena protected area (PA) and the protection of its key biodiversity elements involves the fact that there is a weakened application of the '*dina*' (community compact) that provides the framework for co-management. This represents a significant risk to QMM and in particular to meeting its obligations to the Malagasy government with regard to PA management as well as to its>NNL commitment. The Committee recommends that a thorough review be undertaken of the current '*dina*' to determine whether it remains adequate to deliver on these obligations and commitments, and if not, to explore options with the local communities for updating the '*dina*' as needed.

2022.5. – Access to mineral resources at Petriky

Ensuring access to the mineral resources at Petriky (and also at Ste. Luce) is critical to QMM's economic viability. In addition to developing an operational plan for mining, this will require careful and fully integrated planning with regard to both environmental and social issues, each of which involves many significant risks, any one of which could seriously compromise QMM's ability to proceed. Community consent is essential, but cannot and must not be taken for granted. As activities at Mandena move forward, and in the current context of favorable prices for QMM's products, the time frame for initiating the expansion of mining to Petriky is narrowing, making it imperative that careful, comprehensive, and proactive planning be initiated immediately. The Committee recommends that the following elements should be included in this process:

- a. a detailed analysis of risks, fully encompassing and integrating the physical, environmental, and social dimensions of the planned expansion to Petriky

- b. a community-level diagnosis of current land use types and of stakeholder and beneficiary groups within the villages in the vicinity of Petriky
- c. a collaborative initiative working with a broad range of local stakeholder groups to co-construct a shared vision of what the Petriky landscape will look like during and after mining and how it will continue to support the livelihoods of local community members, taking advantage of the lessons learned at Mandena. This will provide an agreed framework for guiding post-mining rehabilitation and restoration efforts as well as identifying benefits and beneficiaries, and will improve the chances for obtaining community-level consent
- d. make use the planned exploratory drilling at Petriky as an opportunity to engage local communities in a joint effort to demonstrate the feasibility of achieving improved productivity on land following mining and to develop robust rehabilitation options that address their current concerns and align with their aspirations for improved livelihoods. This will also improve the likelihood of obtaining community-level consent for expansion to Petriky
- e. explore possibilities for including Petriky and Ste. Luce communities in rehabilitation/restoration activities at Mandena, to demonstrate what can be achieved, including for agricultural land.

2022.6. – Social issues around protected areas (PAs)

QMM's environment team have established a good working relationship with community management organizations in the areas of the three PAs for which it has management responsibility, and the company provides funding for the majority of their operations. However, this engagement is largely restricted to forest management and PA conservation measures. While this provides some waged labor opportunities for community members (e.g. Polisin'Ala patrollers or those engaged in establishing and maintaining firebreaks), a wider program of community engagement in alternative livelihoods activities and other community benefits is lacking at both Petriky and Ste. Luce. In these areas, community access to some natural resources has been restricted because of PA establishment. As PA manager, QMM has a responsibility under both national law and international conventions to ensure that communities are appropriately compensated for access restrictions. This includes working with communities to ensure a sustainable supply of alternative resources, (for example, materials/techniques for langoustine traps to replace those now inaccessible). The company also has a moral duty to ensure that its No Net Less commitment is not achieved at the expense of local communities. In preparation for planned mining at these two sites, QMM also needs to build a broad base of community support. We recommend that QMM:

- a. enlarges its program to include alternative livelihood activities and other community benefits (designed and implemented in conjunction with the community and community forest management institutions). This will likely require greater involvement of the QMM Communities team (with a consequent increase in capacity), working alongside the Environment team.
- b. undertakes an explicit analysis of the resources (both human and financial) that must be invested in social activities in each of the sites (as well as the offset sites). This analysis should be based on:
 - i) revision of the PAG and the social safeguard plan (EIES/PGEES), which will take into account their legal responsibilities as protected area managers to compensate for loss of access to resources, and their moral responsibility, as a company, to ensure that the cost of their commitment to achieve no net loss of biodiversity will not be borne by local communities;
 - ii) a consideration of the financial importance for the company to obtain community consent at Petriky and Ste Luce, which will therefore help to allocate resources appropriately; and

- iii) an analysis of the activities already implemented by the company, including lessons learned at Mandena and the offset sites. This will allow for drawing qualitative lessons but also quantitative estimates of the financial and human resources necessary to achieve a given magnitude of impact.

QMM will also need to engage in the reform of the *Cadre de Gestion Environnemental et Social* (CGES) at the national level, which will impact their responsibilities as PA managers. The Committee (in particular NH) is willing to help with this.

2022.7. – Management transfer

Builds on/replaces recommendation 2019.1.9.

Apparently well-functioning community management institutions have now been established at each of the three sites where QMM is involved (the committee met with representatives of those at Ste. Luce and Petriky). However, it is notable that none of these community institutions have entered into a formal management transfer (*transfert de gestion*) contract with the state (e.g. through GCF). Formal management transfer may not be possible at present for certain resources (such as areas where temporary rehabilitation is being implemented at Mandena) due to current or future mining activities, and we note with approval QMM's efforts to support community management institutions despite these limitations (see recommendation 2019.1.9). However, the continued lack of formal management transfer could leave communities vulnerable to losing control over these resources at some time in the future, which would be problematic for them as well as for QMM. We therefore suggest that QMM explore the possibility of transferring the management of resources that are not going to be exploited by the mine at Ste. Luce and Petriky (and which may be of lower biological value), and consider whether this will be possible before mine closure at these two sites. This could form part of the negotiations with the communities and could help to strengthen community confidence in QMM as a partner.

2022.8. – Water management at Mandena

QMM has recently had to deal with some serious issues in the Mandena area related to water management during periods of high precipitation, which can be expected to occur again in the future. The Committee was able to view some of the measures that QMM is trialing on site to achieve better management of water levels, including the construction of a water treatment plant and experimental irrigation to increase evapotranspiration.. These approaches have promise, but it is too early to say whether they will be sufficient to achieve the control of water levels necessary to withstand future heavy rainfall events. In addition, QMM has been the subject of protests, in which concerns over water quality issues were a stated factor (though far from the only factor). The committee notes that QMM has taken steps to improve its own monitoring of water quality issues, but these have not assuaged public concerns, which are exacerbated by the absence of published, independent monitoring by state organizations. In part due to protests ongoing during the Committee's visit, we were not able to spend as much time on the water issues as we would have liked, and we will return to this issue during future online meetings (see 2022.10, below). In the meantime, the committee recommends that QMM:

- a. ensures that it is investing sufficient resources to deal with likely high rainfall events in the near future; and
- b. works with independent water quality experts to ensure that its own monitoring program is appropriate and has external credibility, for both ongoing monitoring and targeted monitoring of planned or accidental releases.

While it is not part of the committee's remit to advise actors other than QMM, the Committee calls on the Malagasy state agencies responsible for monitoring QMM's environmental impacts to be more transparent in publishing the results of their monitoring.

2022.9. – Growing importance of the social dimension

As can be seen from the recommendations presented above, Committee's review and input with regard to biodiversity and natural resource management, and more broadly to the company's efforts to meet its commitments and obligations, has increasingly included the social dimension, which represents the '*clé de voute*' for success in all of the areas in which QMM is involved. It is therefore more important than ever that the work of the Environment and Community teams be highly coordinated and integrated, working toward a common set of goals and objectives.

2022.10. – Future discussions

The Committee has identified several other issues that deserve further consideration, and recommends that a series of dedicated virtual meetings be scheduled to discuss them, which could potentially lead to the formulation of additional recommendations. These issues include (but are not limited to) the following:

- a. the QMM Carbon Project and its possible role in providing additional conservation actions in terms of biodiversity conservation).
- b. the possibility of diversifying the activities in the rehabilitation zones beyond the current initiative to test vanilla production, in an effort to integrate some of the aspirations expressed by the local communities as part of the development of a shared vision at Mandena
- c. options for ensuring the long-term financial sustainability of the Mandena, Petriky, and Ste. Luce protected areas beyond the life of the mining project (e.g., by means of a dedicated investment in the Madagascar protected areas and biodiversity Fund (FAPBM).
- d. water quality issues at Mandena.