

LARGE-SCALE MINING'S IMPACTS: A CASE STUDY OF RIO TINTO/QMM MINE IN MADAGASCAR

Weir Threshold and Buffer Zone
Reduction in Mandena

HIGHLIGHTS

March 2022

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ACRONYMS

ALT-MG	Andry-Lalana-Tohana Madagascar
ANDEA	Autorité Nationale de l'Eau et de l'Assainissement
CCR	Coordinated Community Response
CEM	Conférence Episcopale de Madagascar
CLL	Comité Local de Liaison
CRAAD-OI	Centre de Recherches et d'Appui pour les Alternatives de Développement - Océan Indien
CSB	Centre de Santé de Base
CSER	Comité de Suivi Environnemental Régional
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility
CTD	Collectivités Territoriales Décentralisées
CTE	Comité Technique d'Evaluation
DREDD	Direction Régionale de l'Environnement et du Développement Durable
DRMRS	Direction Régionale des Mines et des Ressources Stratégiques
DRPEB	Direction Régionale de la Pêche et de l'Economie Bleue
EITI	Extractive Industries Transparency Initiative
ESIA	Environmental and Social Impact Assessment
GAHP	Global Alliance on Health and Pollution
IEC	Information, Education and Communication
IFC	International Finance Corporation
IGAs	Income Generating Activities
IIAP	Independent International Advisory Panel
INSTAT	Institut National de la Statistique
M&E	Monitoring and Evaluation
MECIE	Mise En Comptabilité des Investissement avec l'Environnement
META-M	Mobilizing for Extractives Transparency and Accountability in Madagascar
NGO	Non-Governmental Organization
ONE	Office National pour l'Environnement
PAGS	Plan d'Aménagement et de Gestion Simplifié
PGEP	Plan de Gestion Environnemental du Projet
PGES	Plan de Gestion Environnemental Sectoriel
PIC	Pôle Intégré de Croissance
PWYP	Publish What You Pay
PWYP MG	Publish What You Pay Madagascar
QMM	Qit Madagascar Minerals
RT	Rio Tinto
SDGs	Sustainable Development Goals
SEMP	Social and Environmental Management Plan
SRE	Service Régional des Entreprises
TI-MG	Transparency International - Initiative Madagascar
TOC	Theory of Change
WWF	World Wildlife Fund

CONTEXT, AIMS AND OBJECTIVES

Publish What You Pay Madagascar (PWYP MG), the Malagasy PWYP Coalition, coordinated by Transparency International - Initiative Madagascar (TI-MG), is currently running the META-M (Mobilizing for Extractives Transparency and Accountability in Madagascar) project as part of PWYP's global #DiscloseTheDeal Campaign.

One of the specific objectives of the META-M project is to expose through a case study the hidden costs in mining contracts and the impacts of this lack of transparency on affected communities. PWYP MG chose to focus the case study on the Rio Tinto/QMM mine in Mandena as a continuation of its previous research (2020), and because of the size of the company and of its operation.

This study aims to expose the neglected costs or impacts of the "deal" between RT/QMM and the Malagasy Government on communities. The focus is put on an assessment of the impacts of RT/QMM's Weir Threshold and Buffer Zone Breach on local communities. It represents an opportunity to provide a much wider debate about transparency around the "deal" that extractives companies make with governments, and provides a case study that can be replicated and further expanded both in Madagascar and internationally. In doing so, it can open up more holistic consideration about the real costs and benefits of proposed and existing mining projects. The work can also help to inform Madagascar's mining code/laws that are currently under review and assist the development of new activities and awareness of such for local communities.

QMM, as the first large-scale investor in Madagascar is governed by its own convention, separate to the existing and current mining laws that were in place or have been developed since the mine began. This convention has the status of a law, and was signed in 1998. It was valid for 25 years and the agreement is coming up for renewal in

2023. In light of this, it is timely to review the mine's impacts and reassess the 'deal'.

Rio Tinto/QMM's fiscal responsibilities and agreements with the Malagasy Government are relatively transparent, even if they are not disaggregated, since they are required to be reported and quantified by state entities, the company, the World Bank as well as by EITI Madagascar. However, transparency about distribution of fiscal benefits from the QMM operation at the local level is less evident.

Additionally, those less tangible aspects of the 'deal', elements defined and determined under QMM's license agreement in the SEIA and PGEP, are shown in this study to prove difficult to monitor and account for even by those entities expected to participate in such evaluations; elusive, in terms of transparency, public reporting and documentation for a wide range of actors; and subject to contestation from those very beneficiaries who are targeted to be either protected from the negative impacts of the mine and or compensated for losses or harm caused by the operation under these agreements.

Since the QMM mining project was central to the regional development strategy supported by the World Bank to lift the region out of poverty, and the country and the mining company are both committed to Sustainable Development Goals (SDGs) – all of which are represented in the issues reported by villagers, some serious questions arise as to **why the current situation is so lacking in resolution, why commitments have not been met, and why the poorest rural inhabitants and those most immediately impacted by the mine have been so dispossessed of their rights and entitlements, and have been left in such misery.**

PWYP MG is thankful to those who took an active part to this research which is dedicated to all the villagers in Mandena and its surroundings. A promise was made, and we will keep it.

METHODOLOGY

In order to assess RT/QMM's Weir Threshold and Buffer Zone Reduction's impacts on local communities, a mixed method approach was implemented. Following an extensive literature review, the combination of quantitative and qualitative primary data enabled the research team to obtain more statistically valid findings thanks to the size of the survey sample; yet these findings could be further deepened through focus group discussions.

The individual surveys for villagers aimed to understand their perceptions of the impacts of the RT/QMM mine's weir and Buffer Zone Reduction (the latter which resulted in a breach and encroachment beyond permitted limits) on their lives and to identify the strategies adopted to deal with such losses, along with expectations and suggestions for improving the situation. The survey targeting authorities and CSOs aimed to assess their knowledge of RT/QMM's Social and Environmental Management Plan (SEMP), of stakeholders' consultation and involvement, of the impacts of the buffer zone reduction and breach, and to identify actions taken and to be taken to mitigate such impacts. The one dedicated to QMM was specifically made for collecting information related to the companies' operations, impacts, and CSR.

In total :

Individual surveys were conducted with :



368
villagers

residing in three municipalities:

- 📍 Ampasy Nahampoana (170)
- 📍 Taolagnaro (48)
- 📍 Mandromondromotra (150).

- The calculation of the sample size was done in two stages: calculation of n for each municipality, then distribution of n among all the fokontany or villages (of the municipality) selected for the survey, using the following formula:

$$n = \frac{Z^2 N}{Z^2 + (2\alpha)^2 (N - 1)}$$

Z: margin coefficient deduced from the confidence threshold (95%) according to the normal distribution law.

N: size of the population (number of fokontany in the municipality or number of inhabitants of the fokontany).

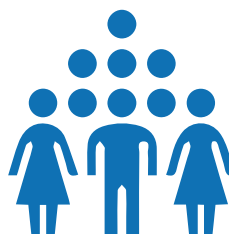
α : margin of error (7%)



17
focus groups (FG)
were organised with
131 people in the same
locations.



29
local and regional
authorities



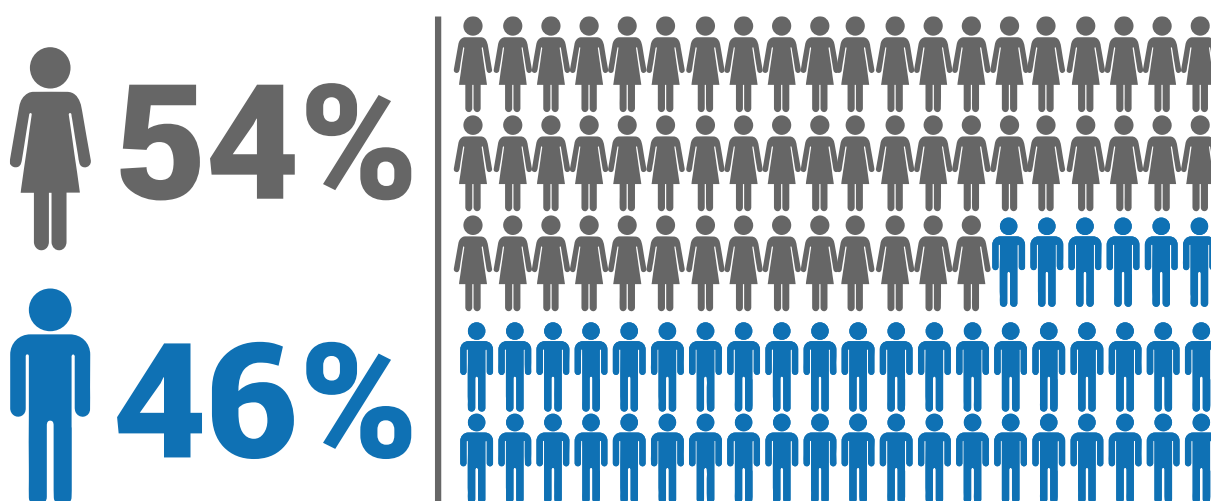
3
CSO
representatives



QMM
officials

The list of surveyed stakeholders (targets) is displayed in the following table:

Households/ Villagers (368)	Local Authorities (29)	Regional Authorities (5)	CSOs (3)	Other (1)
Land occupants Fishermen Weavers Breeder/Farmers	Dignitaries and Elders (15), Teachers (3), Deputy Mayors (3), Secretary (1), President of Municipality Council (1), Trad. Midwife (1), Health Agent (1), Municipal Treasurer (1), School Principal (1), Chief of Fokontany (1), Chief of Fokontany Assistant (1)	ANDEA DRPEB DRMRS SRE DREED ONE*	ALT-MG President of CSOs Platform #1 President of CSOs Platform #2	QMM



As for the 368 surveyed villagers, **54 percent were women** and **46 percent men**. More than **82 percent of the respondents are permanent residents (> 10 years)** of the municipalities of **Ampasy Nahampoana, Fort-Dauphin and Mandromondromotra**. They therefore have a broad temporal perception of the evolution of QMM's mining operations and its effects on the communities.



Field investigations took place from **November 5 to 12, 2021**, preceded by a two-days training for the investigators on October 28 and 29 in Fort-Dauphin. The questionnaires, combining open and closed questions, underwent a pre-test which enabled them to be adjusted. Data mining and analysis, and report writing lasted until March 2022.



SETTING THE SCENE: THE RIO TINTO/QMM MINE IN ANÔSY

Qit Minerals Madagascar (QMM) is a subsidiary of the multinational mining giant, Rio Tinto Plc. It is located in the Anôsy region that is situated in the far south-eastern corner of the island, home to approximately 800,000 people (INSTAT 2021). The capital city Taolagnaro (known also as Fort Dauphin), was an early trading post and the first French colonial settlement on the island. The south is largely isolated and poor, and over 90% of rural people living in this region are living in multidimensional poverty, on less than US \$1.90 dollar per day. The coastal villages are populated by fisherfolk and their families who harvest lobster and prawns for local and international markets. Many communities living around the inland estuary and lagoon systems also fish in local rivers and lakes. Rainfall has been diminishing for many years with direct impacts on harvest yields and drinking water, and the Anôsy region has been affected by drought which has been deepening across the whole south of the island (Reliefweb 2021).

The mine extracts ilmenite from mineral sands along the southeastern coastline of the Anôsy region. It also extracts zircon, which contains zircon used for production of ceramic tiles, television screens and computer monitors (Hoagland 2013). Since 2018, QMM also started to export monazite, a radioactive mineral containing rare earths also present in the sands, (Swanson 2019). The mine is currently operating at the Mandena site. Approximately 15,000 people live within a few kilometers of the QMM mine site in Ampasy Nahampoana, Andrakaraka and Mandromondromotra, and villagers are occupied

with subsistence farming, animal husbandry and fisheries. They rely on forest resources during times of hardship, as well as for firewood and construction needs. Forests also house tombs and are considered sacred.

Known impacts of the mine

Despite the royalties paid by the mining company alongside with fiscal contributions, the benefits of the Rio Tinto/QMM Mine have been overall unequally shared since the start of the operations in 2008. For example, local communities are now more likely to have access to a road, a CSB and a school within 30 minutes of their house (World Bank standards). But **from an economic standpoint, those who have benefitted the most are those who were able to be employed by the mine or its subcontractors**. Procurement contracts with local companies remain rare due to the lower standards of products and services provided therefore limiting potential “spill-over” effects of the mining activities. In addition, the education and training level of people around the mine has often not been adequate for them to find employment at the mine, fueling frustrations (Randrianarisoa 2021).

On top of limited benefits to mining operations, costs of mining are rarely quantified and largely left out of contractual analyses around deal disclosures and negotiations. They are nevertheless potentially substantial – especially from a local community's perspective. They can range from the generational losses experienced by communities from land displacement to corroded governance caused by opacity in local

agreements. **In the case of the QMM mine, its presence has disrupted the local ecosystems, giving rise to a series of concerns about water quality and the health of local rivers and lakes.** .

According to locals, the lakes have seen significant reduction of fish stocks, crocodile migration (upriver and with ensuing attacks on village children), and caused health impacts for local populations living around the mine (PWYP MG 2020).

The mining company recognizes the risk to the environment posed by the QMM mine and, following international calls in 2017 for greater transparency around QMM's environmental impact, publicly stated: *"QMM operations present a significant risk from a water and broader environmental perspective due to their location, the nature of the surrounding environment and*

the mining process. So, we have committed to reviewing our current practices and infrastructure to develop and implement an improved site water management approach by 2023." (Rio Tinto Annual Report, 2019, p.67). The following Figure presents the key dates of the issues related to water management by QMM:

- **2007**: Construction of the weir threshold, PGES 2006 (by QMM)
- **PGES (2014-2018)**: Request to reduce the buffer zone to 50m instead of 80m (ministerial order*)
- **2015**: Approval by ONE for the reduction of the buffer zone.
- **2017**: Independent research confirms that between 2013-2014, QMM violated the already revised 50m limit
- **2019**: QMM admits a 90m breach with a 40m encroachment on the bed of Lake Besaroy

Figure 1: Key dates of RT/QMM water management issues

KEY HIGHLIGHTS

Livelihood activities in the survey area are based on the natural environment.

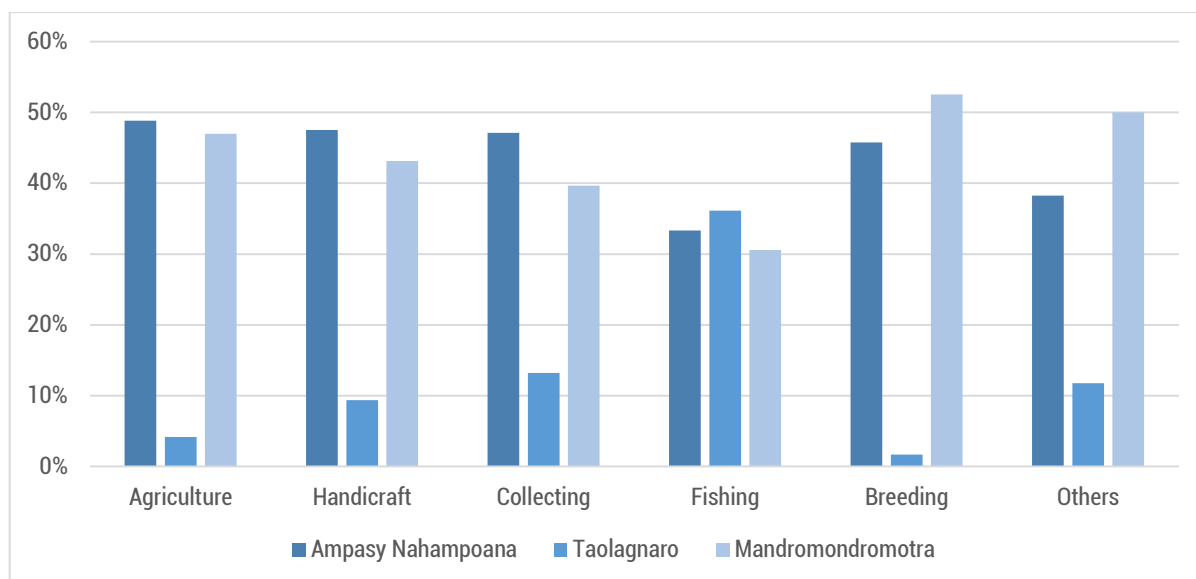


Figure 2: Income-generating activity of the communities surrounding the QMM mine

The three most significant changes that villagers report since the RT/QMM mine began are:

- the degradation and destruction of the natural environment and access to natural resources in the region, especially forest products and *mahampy* reeds;
- the degradation of water quality with accompanying health and livelihood issues;
- and decreased access to land and fertility of the soil, including lack of pasture for cattle, with detrimental impact on food security.

Villagers see the degradation of the natural environment as being the worst of these, since it affects all other areas (income, expenditure, quality of life).

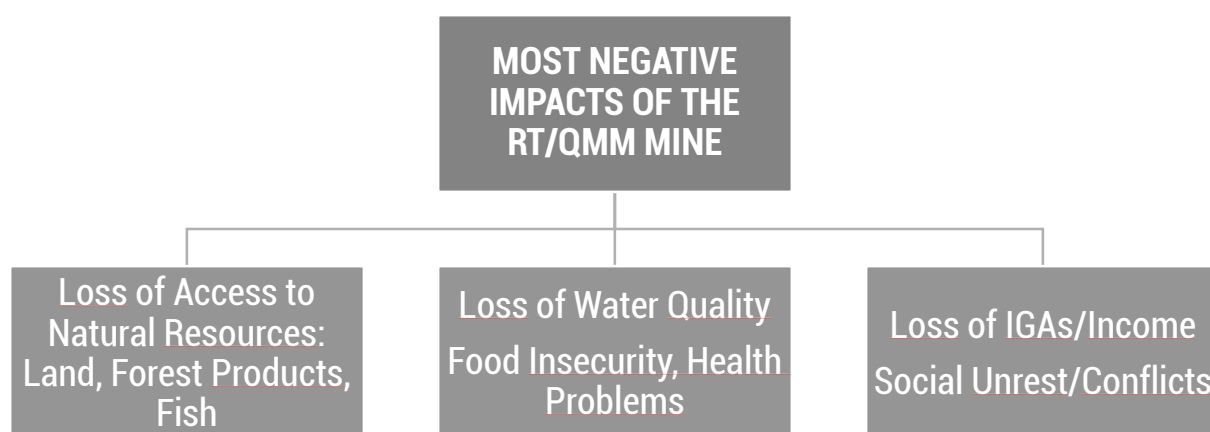
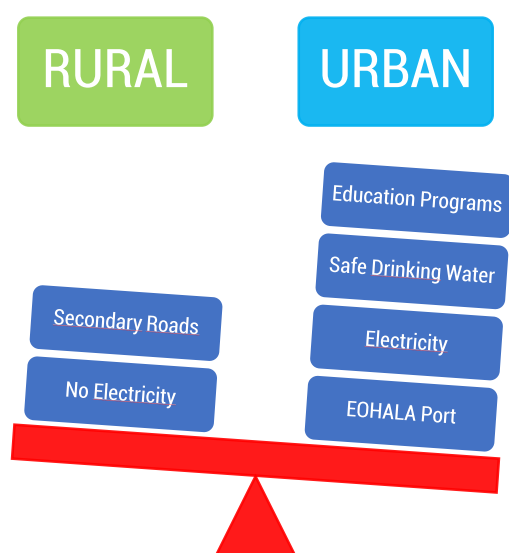


Figure 3. The most negative impacts of the RT/QMM felt by surveyed villagers



69 percent of the authorities interviewed stated that the reduction of the buffer zone has negative effects on the life of the communities, and 86 percent felt the same for the construction of the weir.

Inequalities between rural and urban areas are striking in terms of infrastructure.

Figure 4. An illustration of inequalities between urban and rural areas around the mine

A systematic lack of consultation and information

Large portions of the population directly affected by QMM's mine activities were not consulted before the weir was put in place: 86 percent said so in Ampasy Nahampoana, 54 percent in Fort-Dauphin, and 81 percent in Mandromondromotra. Those who say they were consulted did not give their approval to the project.

None of the interviewed villagers knew about the QMM buffer zone breach or of the changes to the project that were related to the buffer zone – for example the reduction by 30m of the usual statutory limit of 80m meters, which is required to protect the sensitive zone e.g., lakes and waterways from any harmful activity such as mining.

100 percent of the surveyed authorities said they were not consulted either for the reduction of the buffer zone, which is the result of the breach, or for the construction of the weir.

Regarding the breach of the buffer zone

100% of villagers interviewed said **they knew nothing of the breach or of the changes to the project that were related to the buffer zone** – for example the reduction by 30m of the usual statutory limit of 80m metres, which is required to protect the sensitive zone from any harmful activity such as mining.

The fact that the villagers knew nothing is a notable finding since the PGES 2014-2018 specifically required QMM to undertake a series of communications activities including for QMM to « Develop and implement an information program relating to QMM activities and communicate it to local stakeholders and the communities concerned ». Also to « Periodically update and make an intense communication of the PAGS with the local community », amongst other community requirements (PGES 2014-18). The report therefore notes **the lack of findings on this particular point as a negative impact of the mine** since RT/QMM failed to meet citizens' rights to information and comply with its commitments.

Only 34 percent of the authorities questioned stated that they knew of an assessment of the breach impacts. Their involvement in this assessment is minimal or non-existent as only one out of nine authorities report a concrete participation. Two out of eight authorities said they were aware of the results of the assessment and disagreed with them because they did not take into account the communities' expectations of the communities, even though the breach caused many negative impacts.

Only 14 percent of the surveyed authorities stated that they have known of the measures taken by QMM and other authorities in relation to the buffer zone breach, including (according to their knowledge): the measures set by QMM's terms of reference/specifications ("cahier des charges"), approved by ONE; aid provision to the community (through associations); the delivery of a partial authorization to exploit the area around the buffer zone; the donation of 2 chickens and 1 pig per household.

Regarding the weir

In average, 96 percent of the people surveyed felt negative impacts from the installation of the weir by the QMM mine.

The eight most important negative consequences attributed by the survey participants to the weir are health problems (25%), reduced harvests (16%), water-related problems (deterioration of quality, loss of access) (16%), reduced fishery resources (14%), loss of access to natural resources (6%), reduced income and loss of IGAs (5%), land grabbing (4%), and frequent flooding due to the dam (3%).

Only 4% of respondents felt positive impacts from the mine, including job creation and the construction of useful infrastructure thanks to the mining rebates obtained from QMM.

VILLAGERS' ASSESSMENT OF THE IMPACTS OF THE RT/QMM MINE

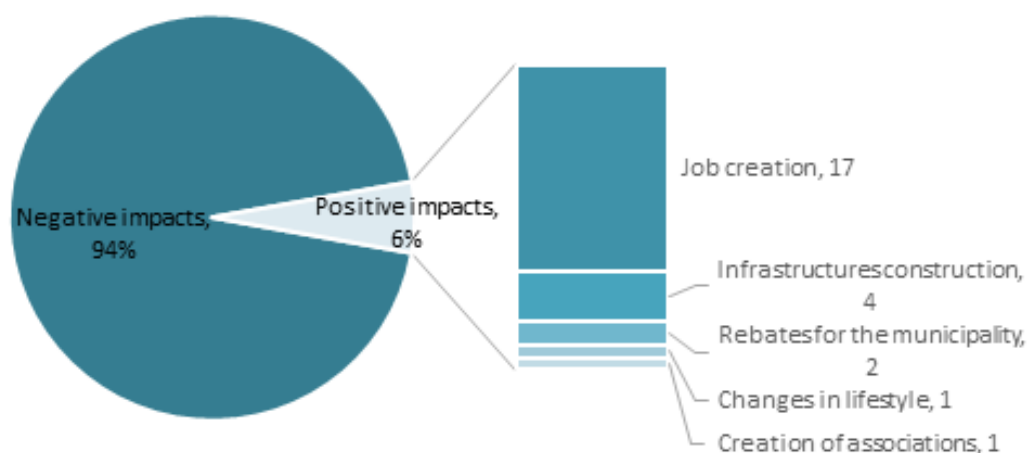


Figure 5. Villagers' assessment of the impacts of the RT/QMM mine

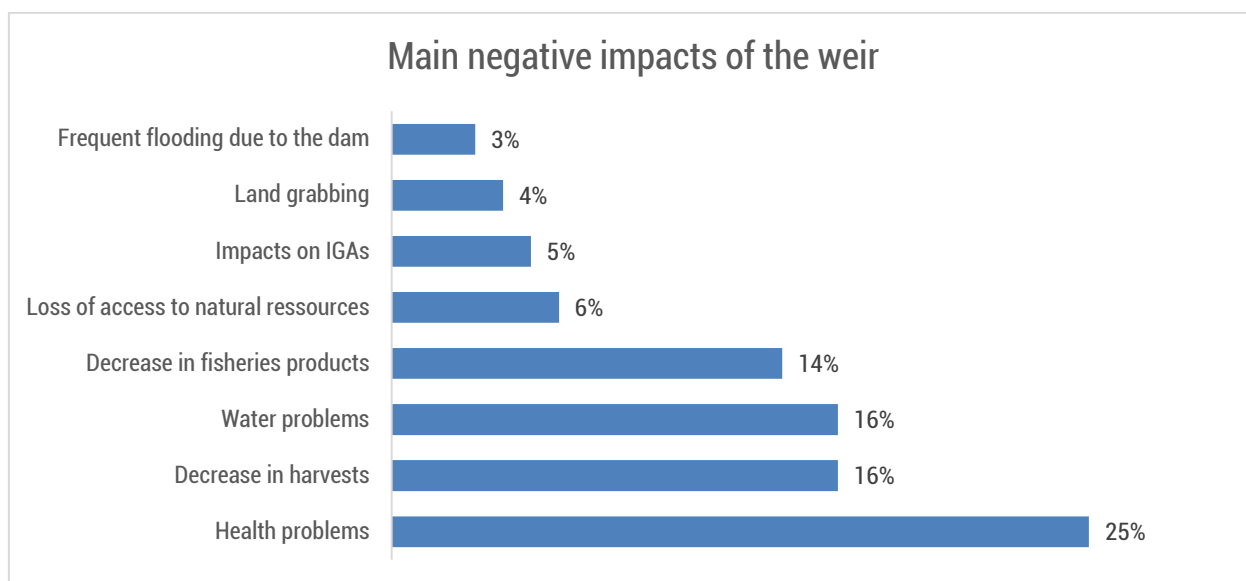


Figure 6. The main negative impacts of the weir according to surveyed villagers

Impacts on water quality in Mandena

- More than 75 percent of the people surveyed in the three municipalities stated that the installation of the weir's had an impact on water quality: 76 percent in Ampasy Nahampoana, 100 percent in Fort-Dauphin, and 89 percent in Mandromondromotra.
- According to the people surveyed, **this deterioration in water quality is the cause of various health problems**: diarrhea (stomach ache), malaria, skin diseases such as scabies, fatigue, unexplained pain and also kidney failure.

Mine-related land losses

- More than 30 percent of surveyed people had land of one to two hectares that is now used by the QMM mine. About 30 percent claim to have lost more than 2 hectares of land.
- 12 percent of respondents valued their lost land at lost land at more than 1,000,000 Ariary.
- 60 percent of the people surveyed said that they had received compensation from the mining company. However, 65 percent of them reported difficulties in collecting this compensation.

Impacts on access to natural resources

The loss of access to natural resources was highlighted by **93 percent of surveyed people in Ampasy Nahampoana, 96 percent in Fort-Dauphin, and 91 percent Mandromondromotra**, as a main negative impact of the mine. Further discussions with fishermen from Andrakaraka in March 2022 led to the establishment of a list of the **27 extinct fish species**, i.e., those who have disappeared since the start of the RT/QMM mining operations.

Loss of livelihood and income

Livelihood activities in the survey area are based on the natural environment. Therefore, **the degradation of the natural environment has direct impact on the population's conditions of living, getting them to engage into alternative activities generating extra-costs, whilst expenses are higher than income.** A non-exhaustive analysis of household expenditures revealed the ten (10) most important increase of household expenditure allocations linked to the mine's impact. By order of priority, they are: **food, healthcare, school fees, fertilization, deficit household budget, decrease of incomes, raw materials for handicrafts,** agricultural labor, other agricultural expenditures, firewood. Items in bold are corresponding to the greatest increase in budget allocations as reported by the surveyed households.

Impacts on the rights of individuals

79 percent of the people surveyed said that their rights were not respected. In particular, the right to access natural resources, the right to access water, the right to a safe environment, the right to access land and land ownership, the right to information, the right to freedom of choice, the right to health, the right to education, the right to a peaceful community, and the right of passage.

Impacts on local culture

30 percent of the respondents report negative consequences of the weir on local culture, among other things: a change in the ancestral way of life (activities, values...), the monopolization of ancestral lands, the non-availability of *mahampy* reeds for funeral rites, the non-respect of cultural rites (*ota fady*, taboo), changes that are not compatible with customs and traditions, the loss of cultural identity as villagers become absorbed in subsistence activities, the loss of community cohesion, and a decline in the practice of traditional medicine due to the inaccessibility of raw materials located in the forest.

Impact on local governance

In terms of governance, respondents primarily noted a list of issues: **corruption, the lack of recourse, the loss of community cohesion, problematic relationships, unaccountable authorities the lack of justice, the persistence of conflicts, the lack of consideration of the realities on the ground, and the non-respect of agreements concluded with the community by QMM.**

A failed complaint mechanism

63 percent of respondents said they had filed complaints about the impacts of the QMM mine's impact, including with local/regional authorities, QMM, ONE, CSOs, researchers and community leaders. **90 percent of those who filed complaints reportedly received no results.** The remaining 10 percent reported **among other outcomes:** QMM's provision of raw (cultivated) materials for the craft, training in composting, limitation of fishing time on Lake Besaroy, promises of employment for local youth. But such promises have not been kept according to the same respondents.

Over 79 percent of those who filed complaints report difficulties including police repression.

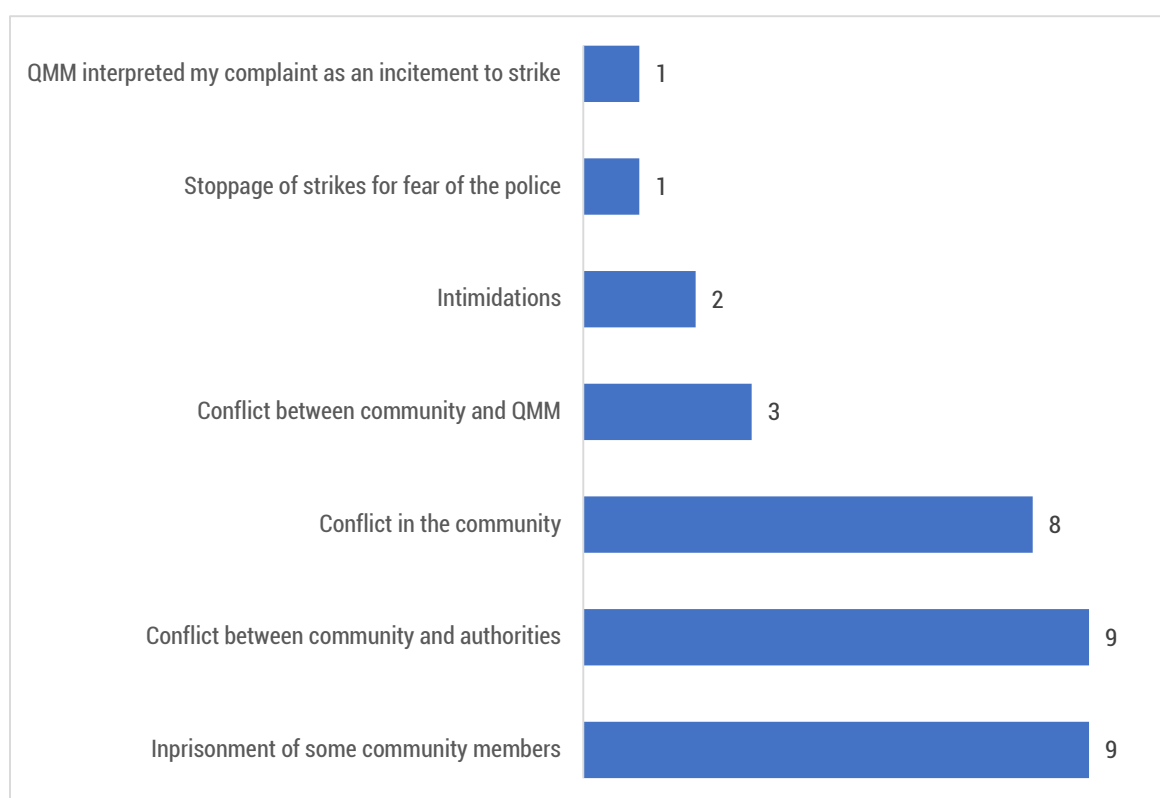


Figure 7: Difficulties encountered in connection with the filing of complaints

DISCUSSION POINTS

The findings from this research trigger several points of discussion related to the impacts of the RT/QMM mine on the lives and livelihoods of surrounding communities, on inequity, on communications and rights, on governance, on conflicts and complaints, and on transparency.

1. Mine affected communities - lives and livelihoods

Almost all villagers interviewed (90 percent) across all three municipalities in Mandena, adjacent to the mine, report losses related to the degradation of their environment and reduced access to and quality of natural resources, which they depend upon for survival. Traditional livelihoods have been displaced and disrupted by mine activity and environmental restrictions. Although not always able to accurately quantify the fiscal /revenue losses in detail for the real impact of these changes (and over time), surveyed communities provide clear examples of the costs to their daily lives. These include being unable to feed themselves, pay for their children's education , enjoy security from their livelihoods, or good health.

Importantly, they measure their situation to be worse than before the mine began operations, and therefore see almost no benefit from its activity. Indeed, only 4% of people surveyed were able to express benefits from the mine. Calculations made based on villagers' testimonies and international research, indicate that villagers in the communes around Mandena adjacent to the mine have lost approximately 45 percent of the value of their previous earnings/economic revenues since the mine began its operation (Randrianarisoa 2021).

The mine's negative impacts have additional consequences, beyond the purely economic ones, that are more difficult to quantify. These include decline of societal cohesion, loss of identity, loss of dignity, erosion of culture and traditional lifestyles, generational issues, such as land access for long term family food security, and the health of children in terms of their physical and mental development, all of which impact long term development of the region. Also of concern is that citizens' efforts to have their issues addressed by the mining company and/or through the authorities concerned, as would be their right, appear to have had no meaningful result over a number of years.

One challenge, which has a profoundly detrimental effect on societal cohesion, is that the inequalities created by the mine are at the root of worrying levels of conflict, both intra-community and externally, with the company and in relationship with its agents and partners. This has reduced democratic processes and damaging an already fragile governance landscape.

2. Inequity

Citizens in all three communities adjacent to the mine expressed their desire for basic services such as potable water and electricity supply. Most of the rural areas of Anôsy, and mine affected communities in particular, have no electricity or other forms of modernization. This is in stark contrast to the

town of Fort-Dauphin where QMM offices, the workers' base and new port are situated, all of which enjoy a dedicated water supply and other infrastructure, for example.

Disparities between the urban and rural setting, in terms of spreading benefits to the local populations from the mine's presence, have been noted by NGOs as well as citizens. These, and "the effects of numerous negative factors that have constrained expected growth in the region and led to social tensions" have been observed by the World Bank's advisory panel (World Bank, 2011).

In reality, **only two communes are legally entitled to receive royalty payments from the mine according to current Malagasy laws.** Because the 1999 Mining Code royalty redistribution rules were not designed for the type of large-scale industrial mining, such as the QMM mine, but were largely concerned with small scale artisanal mining at the time, the current Code's provisions (Law Nr. 2005-021 of October 17, 2005) mean that royalty payments are exclusively directed to communes directly adjacent to mining squares. For the QMM project, only two¹ out of about 64 communes in the Anôsy region would be therefore "*de jure* entitled to receive royalty transfers" (World Bank, 2010). As a result, one or two communes would become rich very quickly whereas adjacent ones would not.

We can see this effect where Ampasy Nahampoana appears to be receiving significant fiscal benefits from the mine, whereas Andrakaraka (listed under the commune of Fort-Dauphin) reports almost no benefits, although they have reported their subsistence fisheries losses repeatedly over more than 10 years. Even as the extraction inevitably moves location over time, and beneficiary communes might change, discrepancies at an inter-municipality level are likely to persist and become exacerbated by future royalty payments (ibid).

Compounding this level of inequity is that even in those communes like Ampasy Nahampoana, where the royalty payments are being attributed, it is clear that citizens are either aware of the sums involved, not clear about what they can expect or how to access benefits. Indeed, some villagers report they are excluded from benefits if not on the right terms with the local decision makers e.g., the mayor. QMM staff also expressed this issue: **"The municipality received around 1 billion ariary per year but the community does not know the existence and use of this sum."**

A lack of transparent and open communications about benefits can exacerbate inequities and corruption. For example, there has been no mass communications campaign that would enable citizens in Anôsy generally, or within the target communities, to explain and help them understand the mine's fiscal or other benefits of, nor how disbursements are made in order to allow them to monitor and ensure real accountability. Research has shown that in Madagascar, this kind of public media IEC

¹ In the 2001 ILO survey the population of Ampasy Nahampoana was 5600 and the population of Mandromondromotra was 3590. The population for the 24 communes of the (ancien) fivondronana was 303,691 (World Bank 2010) – Note: population numbers will have increased by approx. 2-3% per year since 2010.

(Information, Education and Communication) process is necessary if capture of funds is to be avoided (Francken et al, 2009).

Instead, it is known that QMM has used individual radio cards to target only certain groups with information, only at certain times. There is no reporting available and little transparency to explain the approach, methodology or outcomes of these interventions. The lack of credible IEC strategies was also evident in the start-up phase in relation to compensation packages, when there were widespread reports of a failed process due to poor communications, and villagers were underpaid for the value of their lands when they were displaced to make way for the mine's infrastructure and the new port (Huff 2016/ Seagle, 2013 / Panos/ALT 2009; NGO Liaison Committee to Rio Tinto, 2013)..

3. Communications and rights

[Communications plays an important role in governance and in enabling accountability.](#) However, communications generally around the mine has been a theme of extensive critique by multiple agencies, including the World Bank, the external advisory panels to QMM, as well as local CSOs and international NGOs working in the region. The recent publication of a review of Rio Tinto's internal 'hyper-masculine' culture, which reported bullying and a "culture of silence" , suggests that if the corporate culture suffers these issues internally, then it follows that external relations may follow similar expressions.

Villagers are clearly unaware of important issues that they are legally expected to be consulted about and that concern decisions that affect them – such as the reduction of the buffer zone. They complain that they feel intimidated and "oppressed" when they seek to assert their rights. They are also unheard and ignored when they do provide their position to consultations – for example, when they expressly voted against the construction of the QMM weir (in Andrakaraka). [This raises the question to what extent rights to freedom of information and rights to access information are understood, respected, encouraged and exercised not only in these communities but in Madagascar in general.](#)

[It also raises questions about attitudinal issues acting as potential barriers to resolving local disputes and complaints.](#) For example, there appears to be hostility towards those communities or citizens who demand compensation or contest QMM. Kraemer (2012) has demonstrated how "complex histories of conflicting resource management regimes are layered into the local landscape near the mining site, and that current resource struggles must be understood in this context". Conflicts around the mine therefore require careful consideration, not convenient oversimplifications, as can happen when visiting Rio Tinto managers presume to understand community disputes, proclaiming after a single visit to the field : "It is just about jealousy. Some people are not happy with what they have and always want more, and throw stones at those who received more than them. ²"

² Visiting Rio Tinto manager during a meeting with the PWYP MG's team of researchers in Fort-Dauphin, on March 05, 2022.

Rights to freedom of expression are also in question. Although QMM states “QMM does not nor will ever suppress community voices in any ways. This is simply not who we are” (Answers QMM 2021), only recently in November 2021, a local lawyer who was defending two community leaders from the local fisherfolk association after they were arrested for leading protests against QMM, observed that it was QMM who was actively pursuing criminalization of the two men. At the end of the judicial hearing, the lawyer for the defendants was surprised that after the signing of an agreement was signed between the various parties, Rio Tinto was still asking for the defendants to be punished by the courts and pay a fine (Collectif Tany, communiqué of 30th November 2021). The fisherfolk were pursuing a remedy for the loss of their livelihoods as a result of the QMM mine’s impacts. Local, national and international lobbying to Rio Tinto and QMM for the rights of the local fisherfolk possibly helped ensure the unconditional release of the arrestees on the 7th December 2021³.

Human rights are undermined when villagers are not consulted or informed. When they have difficulty soliciting responses from powerful actors such as ONE and QMM, whilst also trying to negotiate intra-community conflicts in order to reach consensus and enjoy equitable relationships. **Rights are especially undermined when local governance processes are inadequate and fail citizens in their search for justice and a fair hearing.**

4. Governance

As explained previously, the SEIA, PGEP, and SEMP for the QMM project set out the company’s engagements to the Malagasy Government in respect of the project, especially in relation to the mine’s negative impacts. They are the documents by which the company must be held to account. They contain extensive detailed requirements including for consultation, monitoring and mitigation, all of which are applicable to the two main issues studied in this research, namely: the QMM weir and the Buffer Zone Reduction. They also apply to the related issues of land and natural resources, water quality, and consequent impacts on livelihoods and health. Significant questions and issues arose as to the extent that the pledges made in the SEIA/PGEP and SEMP, have been adhered to and delivered.

ONE is the principal entity responsible for monitoring the delivery of QMM’s SEIA, PGEP and SEMP. In order to do its statutory work, it has required fiscal support from QMM and is essentially salaried at local level by the private mining company to deliver the prerequisite monitoring services. Although this is legally provided for under the MECIE decree, concerns have been raised over many years including by QMM’s external advisers, since it appears to undermine objectivity and transparency of the monitoring and evaluation processes, and **the relationship between QMM and the ONE has been deemed “compromised”**. In addition, most of communities do believe that local authorities and decision-makers have been co-opted by QMM, and that the mining company itself breaks promises and is not seen to act in good faith.

³ <https://www.business-humanrights.org/en/latest-news/madagascar-4/>

It is equally of concerning that those decentralized services who are expected to assist in external monitoring of the mine's commitments, as well as in arbitration and dispute resolution – including the technical issues set out in the SEMP, seem to lack the capacity to undertake such challenges. The perception of “moral debt” to QMM due to the company's provision of other services to them or the town of Fort-Dauphin, such as electricity, acts as a Damocles' sword above the head of the local government, decentralized services, some local CSOs, QMM's employees, and the whole community in Mandena and its surroundings. **Authorities and administrative services are acutely aware of the negative impacts of the mine's on adjacent communities but appear powerless to act or intervene in meaningful ways to help defend or promote citizens' rights.**

The dearth of transparent communication, lack of baseline data for social and environmental indicators, lack of public access to reports and relevant documentation, the lack of methodology included in QMM studies e.g., the QMM water discharge monitoring data report (2021): all these shortcomings contribute to a scenario in which local actors, and any internationals they call on to assist, are disabled from engaging in meaningful ways on the environmental and social monitoring of the mine.

5. Conflict, complaint - arbitration and compensation

The local dispute mechanism, facilitated through a protocol drawn up between QMM and the CSER, is first and foremost meant to ensure that complaints that relate to the SEIA/PGEF and SEMP are fully investigated (QMM/CSER 2007). The CSER is meant to be involved in all stages of problem solving from “Collection of complaints from the community; joint observation of the veracity and the merits of the facts related in the complaints received; validation of the proposals/measures put forward by QMM S.A.; communication of the results of complaint handling (6.3.2).” **Given this structure has been in place for over a decade, it is not clear why there appear to be no public records or accounts available of the dispute mechanisms processes, and hundreds of villagers are still waiting to have response to their complaints.**

Clearly there are outstanding complaints, including claims about compensation, and it is concerning that in parallel to QMM staff attitudes, local civil servants who participate in the CSER – i.e., those monitoring QMM performance and meant to assist in arbitration processes, perceive that the villagers who make claims or complaints are “spoilt” or simply “thirsty” for money. It is unclear on what basis these service providers have concluded such a judgement. No formal reports from the arbitration process are readily available to verify all plausible claims have been met or dealt with satisfactorily.

QMM claims to “acknowledge that the presence of the weir has impacted the fish population as it was anticipated in the SEIA and for which communities has been compensated” (QMM Answers, August 2021). However, asked by CSOs to then provide details of what compensation had been paid and when, no further information was provided. **Lack of documentation and open, transparent reporting encourages contested scenarios.**

Indeed, verbally claiming that villagers have already received compensation is not sufficient for any meaningful analysis. Such claims must be evidenced and arbitration mechanisms must be engaged, and fully and transparently reported, so that there is no room for rumor, disinformation or misunderstanding. **This research found gaping holes in the arbitration and dispute mechanism. Additionally, compensation that has been paid out appears to have been piecemeal, only at certain moments and brief periods, and does not reflect the annual losses that producers, weavers, breeders, farmers and fisherfolk are experiencing.** Where are the relevant reports to evidence what has been paid, to whom, when and for what, and what basis was used for the calculations?

Moreover, the expectation in this protocol that the local CSOs platform (Comité Local de Liaison - CLL) meet between 1-4 times per year and be the conduit for information and communications, should raise alarm. According to this research findings, CSOs do not appear to be engaged in this process and indeed report feeling disempowered and unable to respond to the concerns of citizens affected by the mine. When they have contacted the CSER members to assist with citizens' concerns, they get no response. CSOs, as watchdogs, have to report injustices, ask questions accordingly and advocate for reforms and corrective actions, for the sake and on behalf of the communities where they work. Whilst CSOs can be members of committees such as the CLL, they cannot communicate on behalf of the company or the CSER because this will compromise their status. By crossing such an invisible but important line, they risk losing their constituents' trust.

In addition to that, it is also unclear how well CSER members are contributing. This research uncovered only one case when CSER members had been involved in looking into complaints – this was regarding the dead fish in the lake in 2018. Given there are hundreds of other complaints, why have the technical services who are supposed to participate in the dispute mechanism failed to discuss others when the subject is raised in interview?

The emerging picture is one of uncoordinated and incoherent management of issues and complaints. Some very unhelpful and derogatory attitudes (othering) towards those who do complain. A disjoint between expectations, promises and delivery. Civil society's and local services' obvious lack of resources. And so on. Citizens' complaints continue to exist, with notably 63 percent of the respondents in this study reporting they have made complaints, the majority with no result.

QMM seems unaware of the problems and state that the company: "Maintains a continuous engagement process with this same community and a grievance process is in place. Surrounding communities is at the heart of the development of the project since day one through the ESIA and SEMP. A stakeholder engagement plan and a grievance program has been in place and is working efficiently to address concerns and issues regarding our operations. There are currently 2 grievances opened that we are managing to resolve in a timely manner".

How can the disjoint between the company perceptions of its own external processes and the reality experienced by local actors and CSOs be explained? More importantly, how can it be addressed and repaired?

6. Commitments to transparency

Respondents in this study, from communities through to QMM's own staff, seem unaware of at least one or other element of key QMM operational activities – either in relation to the weir construction or the buffer zone reduction. All of which, according to the SEIA/PGEP and/or SEMP, require QMM to be transparently ensuring risk assessments, public consultation, robust monitoring and reporting. Failures in transparency and governance means that social and environmental risks that can affect local people's interests, rights, safety and livelihoods, including all those identified and outlined in the SEIA, PGEP and SEMPs, many of which are explored in this study, are not being transparently addressed and/or are ostensibly being passed on to citizens to manage.

The IIAP in 2001 rightly understood that the SEIA, to have meaning beyond a series of pledges, presented the "urgent challenge to all parties will be to convert that document from a broad strategic framework into detailed implementation strategies that include monitoring, evaluation of progress and impact, and the agility to make constant and ongoing adjustments based on feedback." It is not clear that this challenge has been met satisfactorily. Those entities who have been expected to play a role in actively monitoring the mine and its strategies, or arbitrating complaints, appear to have their own interests in not challenging the status quo, thereby reinforcing a disabling power asymmetry whereby QMM enjoys a quasi-state status.

The company acknowledges this power asymmetry between QMM and the surrounding communities and explains: "This is the reason why we maintain continuous engagement with the local community to build trust and understanding between us. For example, in pre-COVID time like 2019, there were 164 direct face-to-face engagements with the communities. There is also a process in place for complaints to be expressed and for QMM to resolve them: internal with CCR team and external with the National and Regional Committee (CTE/CSER), led by ONE." (QMM Answers to CSOs, Aug. 2021)

Despite QMM's assurances, the ONE/CSER arbitration process does not appear to be working as expected. Moreover, how does multiple meetings resolve compensation complaints in real terms – in actual payments for example? How are the challenges recognized and resources and capacity building achieved in order to address the gaps and ensure remedy?

The mine went ahead to attract similar large-scale investment into Madagascar as the country moved towards greater liberalization and free market economics. However, as Parker (2004) pointed out in her analysis of the Rio Tinto/QMM deal before the mining project began, "*QMM treats the social costs as external costs which are left for the local community to pick up. As a result, the local community absorbs the price differences that should have been passed on to the market, hence the decline in economic welfare. Consequently, the long-term economic viability is not improved, and this destroys the proposition of sustainable development.*"

Although fiscal measures and mechanisms of wealth distribution from the mine may be regarded as the remit of government, it is nevertheless important that QMM adheres to the SEIA to *'work with the relevant authorities and other stakeholders to promote and achieve the equitable distribution of project tax and royalty revenues to alleviate poverty in the region'*. The current situation does not reflect the IIAP's recommendations to QMM "for detailed discussions between different levels of government (national, regional and local), with other stakeholders and with QMM with a view to drafting the kind of financial covenant that would ensure adequate and equitable financial returns for reinvestment in the Fort-Dauphin community."

Given the QMM mine is a model for the country's extractive sector, what are the implications of the failures to a) monitor and account for citizens' losses on the wider extractive environment in Madagascar as the sector is set to grow? b) ensure equitable distribution of revenues and benefits? How must the regulatory environment change to promote improved equity, protect citizens rights and improve the standards of foreign companies and their activities? Since Rio Tinto represents one of the top tier mining companies globally, how can Madagascar ensure that it delivers the mine to the international level standards it espouses, and set an example for other companies working on the island?

7. Beyond Anôsy

Malagasy civil society platforms have taken up the governance and water issues and lobbied the Malagasy government, including demanding a social and environmental audit of the mine. These have included a demand for transparency on the buffer breach (CEM Taratra & PWYP MG, with multiple signatories, 2019⁴); an investigation (Plateforme OSC Taolagnaro, 2020⁵) and an audit (Collectif TANY, CRAAD-OI, 2020⁶). **The proposed study by ANDEA in the first quarter of 2022 is the first manifestation of a state level investigation into the questions raised by local citizens, CSOs and international NGOs concerning water quality and related issues around the QMM mine.**

As ONE did not reply to the invitation to participate in this study or to the questions sent about these issues, it is impossible to know how it intends to respond to and resolve outstanding questions related to the QMM weir and buffer zone and related water quality concerns. Nor is it yet clear how the Malagasy Government, as a 20 percent shareholder in the QMM mine, intends to hold itself legally and fiscally accountable when agreements with the mine are not met to local citizens.

The Minister for the Environment visited Anôsy in September 2020 and on her social media postings communicated that she was keen to impress on QMM the need for compliance, saying *"a great deal of effort expected of the company to prosecute all the contents of the social security code*

⁴ <http://www.andrewleestrust.org/blog/wp-content/uploads/2019/10/Letter-from-civil-society-to-Malagasy-Government-Ministers-August2019.pdf>

⁵ <http://www.andrewleestrust.org/blog/wp-content/uploads/2020/04/03-02-20-communique-pfnoscm-1-copy.pdf>

⁶ <http://terresmalgaches.info/newsletter/article/newsletter-no-137>

directly to the residents directly, whether in Mandena or those close to the weir. The same goes for water pollution and the provision of long-term solutions to people who use forests and materials for handicrafts and buildings in the QMM assigned area."

The Minister for Fisheries and the Blue Economy visited Ampasy Nahampoana in January 2022 to see a fisheries project funded by Rio Tinto/QMM to "train the people of Andrakaraka with technical support from the NGO Aquatic Service". The Minister posted that the project consists of two 150 -meter concrete ponds and a total of more than 2,000 fish are farmed. What is not explained is why the initial project attempt in Andrakaraka failed and then a new project for the villagers from Andrakaraka is taking place in another commune, and moved further *upstream*, some distance away.

Importantly, **detailed public reporting about these projects against clear "Theory of Change" (TOC) and verifiable indicators for outcomes are not readily available**, as has been largely the case since the mine's social programme began. Where NGOs have to report against international donor standards for monitoring and evaluation purposes, it is not clear what basis or standards are applied for QMM social projects. **QMM should be keener to publish, in full, the social projects M&E reports.**

External monitoring of the mine by independent bodies, especially from international level agencies, has also suffered from systemic weaknesses and constraints. For example, the World Bank has so far been unable to provide an investigation into the water issues raised. A complaint forwarded to the World Bank by PWYP MG in 2020 about the QMM water contamination was rejected because such complaints are expected to be delivered within 15 months of the IFC funded project closure. The PIC Programme Phase 1 for Anôsy was completed in 2014. The QMM buffer breach only happened towards the end of the project (circa 2013-2014). Therefore, any complaint would have to be submitted latest mid-2016. Since it took two years of inquiry and three studies before RT/QMM admitted the breach (in 2019), it can be assumed the World Bank deadline would have been missed, even if inquiries had begun immediately after the breach occurred.

Beyond those state and international agencies directly related to the mine, **it is unclear why there are so few international bodies or NGOs taking an interest in the water and related health and livelihoods issues.** Multiple agencies have a mandate from conservation organisations on the environmental impacts through to water and health agencies for water quality issues. Although a number of international NGOs have participated in meetings with QMM about the water issues (e.g., in March and September 2021) there is nothing available to suggest these organisations are currently undertaking studies or engaged in inquiry to understand the impacts of the QMM mine although some, like WWF, were actively questioning the mining proposal before the project began.

Given the attention citizens have drawn to ill health due to pollution in their drinking water, it is hard to understand why none of the main agencies have stepped in to explore what is occurring. A National Pollution Action Plan has been developed for Madagascar and brings international support from the Global Alliance on Health and Pollution (GAHP). [The relevant parties have been contacted and alerted about the issues in Anôsy \(both nationally and internationally, since 2020\), but as yet there has been no exploration of the water pollution and related health threats in the communities around the QMM mine.](#)

Ongoing Questions

Given this study is limited by time and resources, and given the lack of publicly available documentation and reporting, the conclusions here can only reflect what it has been possible to find and study, together with what local people, service providers, decision-makers and CSOs have told the research team. Any failure to capture realities beyond this must raise the same questions that this report asks:

1. *How is it possible that mine affected communities are still suffering in Anôsy, their standard of living continually declining in the face of the mine's presence?*
2. *Why is there no baseline study for water quality and extensive, regular follow up monitoring of water quality with regard to health and livelihood impacts as required against the SEIA/PGEPP?*
3. *Why is it so difficult to access the necessary documentation in order to evaluate, or assess if the mine is honoring its SEIA/PGEPP and SEMP commitments?*
4. *Why do repeated attempts to create transparency and accountability mechanisms at local level continue to fail? Why do dialogue processes falter and collapse?*
5. *What is standing in the way of resolving the conflicts, complaints and contestations – many of which, according to the communities, remain unaddressed?*
6. *What dispute mechanisms are required to ensure remedy when rights and entitlements are harmed?*
7. *How can the political space be maintained to allow for healthy democratic debate, dynamic civic engagement and robust governance around QMM mine and other mining concessions?*

COMMUNITY DEMANDS

To Rio Tinto/QMM

- Consideration of all complaints, not just those of associations
- Information on complaints to be given directly to the community without the intermediary of the municipality
- Compensation and support by QMM for losses incurred
- Recruitment of premises by QMM
- Meeting between the community and QMM with written minutes to improve relations and to collect expectations without intermediaries
- Cessation of mining extraction if no impact on the community
- Suppression of the weir
- Compensate fairly for damages to the community
- Ensure fairness in the granting of aid (without intermediaries)
- Take into account the demands of the community and respect the specifications
- Supply of drinking water
- Community aid (monthly, quarterly) from QMM and/or the government for the elderly and women
- New written contract between QMM, the community and the authorities

To the Ministry of Land Management and Land Service

- Possibility of choosing whether or not to transfer the land
- Return back of requisitioned land if compensation is not paid
- Compensation for land losses up to the true value of the land
- Aid to landowners
- Buyback requisitioned land at low prices
- No intermediary between QMM and landowners
- Compensation for land losses paid directly to the beneficiary
- Avoid destruction of infrastructure
- Respect agreements with QMM
- Application for aid to QMM with the approval of the municipality

To the National Office for Environment (ONE)

- Frequent field visits by experts needed, taking into account the needs expressed by the community
- Ensure impartiality and communicate results of monitoring studies to the public

- Ensure compliance with environmental standards
- Ensure compliance with agreements between the parties
- Educate community members
- Conduct independent and corruption-free monitoring
- Include community representatives in the process for greater transparency
- Effectively follow up on complaints
- Report regularly to the central authorities and take strict measures in case of infractions
- Follow up on the fulfillment of promises made by QMM
- Community consultation prior to the establishment of an operation
- Regular sharing of information with the community
- No discrimination but consensus building within the community
- Granting of aid directly to the community without the intermediary of the commune
- Field visit of the central authorities to see the real facts
- Effective collaboration between the authorities at all levels
- Ensure compliance with environmental standards

To the Decentralized Territorial Collectivities (CTD)

- Cessation of all forms of corruption (from municipalities to the Fokontany)
- Transparency in the management of mining royalties collected by municipalities
- Transparency in the granting of aid to the community
- Sharing of information with the community regarding activities undertaken by the municipalities
- Transparency in the management of complaints
- Accountability and impartiality of local authorities
- Community consultation by authorities to gather expectations

To the Ministry of Environment and Sustainable Development (MEDD)

- Delimitation of forests to be exploited by the community
- Access to forest resources for the collection of mahampy, wood, etc.

- Government assistance to compensate for loss of access to natural resources
- Respect and control of environmental standards for the mining exploitation

To Donors, Ministry of Agriculture & Ministry of Fisheries and Blue Economy

- Donations: fertilizers, seeds, farm equipment
- Compensation for yield losses
- Access to fisheries resources
- Access to land for agriculture
- Training on rice growing techniques and crop diversification
- Setting up agricultural development policy
- Aid to fishermen, breeders and farmers
- Prioritize agriculture

To the Ministry of Public Health

- Creation of hospitals and free care and medicines for common pathologies in the region
- Preventive measures against common local diseases
- Monitoring the health of the local population

To the Ministry of National Education

- Support for children's schooling
- Use of royalties for the construction of infrastructure and schools

To the Ministry of Water and Sanitation/ ANDEA

- Provide drinking water supply
- Repair of defective hydrants or installation of new hydrants
- Compensation for loss of water quality

To Donors and Government

- Creation of sustainable jobs for youth, men, women, and local residents
- Financial aid to the community from the government
- Promotion of projects involving local associations
- Financial aid to artisans and household aids after a case-by-case study
- Food aid for children and the elderly
- Electrification
- Aid granted directly to the community, to households without going through the municipality and without intermediaries
- Put pressure on QMM for the protection of the environment and the economy

OUR RECOMMENDATIONS

More information, consultation and involvement of communities into decision-making processes

No intermediaries: communities want to deal directly with RT/QMM

Tailor-made aid, compensation and assistance, in proportion to the losses and in accordance with the needs

No more corruption, collusion, favoritism, etc. "Cleaner" relationships between RT/QMM and authorities

A better and independent, corruption-free monitoring of RT/QMM's environmental and social obligations

More accountability and transparency: communities deserve to know what is going on, what is at stake, what are the risks, etc.

A well-organized, non-discriminatory and transparent complaint mechanism

MORE INVOLVEMENT OF THE MALAGASY GOVERNMENT AND AUTHORITIES in providing aid and basic social services to population



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NEED MORE? ADDITIONAL FINDINGS FROM ALTERNATIVE RESEARCH

ECONOMIC AND SOCIAL CHANGES SINCE THE ARRIVAL OF THE QMM/RIO TINTO MINE IN MANDENA (2005-2019)

Many changes have taken place since QMM/Rio Tinto began construction at Mandena in 2005. Some of these changes can be attributed to the mine but many others are the result of more complex factors. This note summarizes some of the changes and highlights what still needs to be improved in order for the mining industry to benefit everyone in a sustainable way. 362 households living within 20km of the mine participated in the survey in June 2019

ECONOMIC CHANGES

Job creation

19%

Only 2 in 10 people think that the arrival of the mine has created jobs locally .



82%

Most (8 out of 10) felt that these jobs benefited primarily men.



Income

66%

Almost 7 out of 10 households earned less than 150,000 Ariary per month .



38%

Almost 4 out of 10 people say that their income has decreased since 2005 (38%) and are mainly farmers, fishermen and basket makers.



Expenses

79%

Eight out of 10 people said their expenses had increased since 2005 (79%) because of rising commodity prices ahead of health or education costs.



CHANGES ON HEALTH AND FOOD SAFETY

Health

62%

More than 6 in 10 people are relatively satisfied with their level of health (62%),



Access to

medicinal plants

More than **9 out of 10** people regret that access to medicinal plants is more difficult .



Access to drinking water

Households have gained **5 minutes** in access to drinking water since the mine's arrival.

Food security

4 out of 10 people skip meals due to lack of food.



97% respondents regret that access to halieutic and forest resources is more difficult .

[40%] of the mining communities deplore the fact that a large part of the forest has disappeared as well as sacred tombs **[30%]**.

89%

Almost 9 in 10 agree that their level of health has declined since 2005.



Sanitation

More than **5 out of 10** households have access to an "improved" toilet that is not shared with other households, meaning one type of flush or latrine, or an improved ventilated pit or composting toilet, provided it is not shared since 2005 (54%), a 40% improvement since 2005.



Almost **5 out of 10** households now have access to a standpipe (+161%).



On average, individuals consume less animal protein per month (fish, meat, poultry)

than before 2005 (**6 days less per month**).

SOCIAL AND CULTURAL CHANGES

Changes in traditional customs

87%

Almost 9 out of 10 people said that local customs had changed as a result of the disappearance of certain sacred places and parts of the forest, as well as water pollution.



Community trust

78%

Almost 8 in 10 say they trust people in their community.



Level of tension or violence

5 in 10

people find the level of tension or violence in the community relatively low. But most people think that tensions arise from decisions about how to spend mining revenues (82%).



CHANGES IN ACCESS TO BASIC INFRASTRUCTURE

Access to a health centre (CSB) and school

6 / 10

households have access to a CSB (+12% since 2005) and more than 9 out of 10 to a public elementary school (+8% since 2005) within 30 minutes of their home.

Access to a road

99%

of participants having access to a road now within 2km of their home (World Bank standard) with 1 in 10 more people having access to a road since 2005.

Access to electricity

Less than **2 out of 10** households have access to electricity even though the number has increased **1.8 times**.

Access to a mobile phone network and banking services

The number of people with access to a mobile phone network was multiplied by **3.5** (62% in total) and **4.3** (30% in total) for access to banking services since 2005.

RECOMMENDATIONS

JOB OPPORTUNITIES

- Provide access to vocational training for locals to be in a position of benefitting from the jobs created by the arrival of the mine (direct, e.g., employees/indirect, e.g., maintenance, catering/induced, e.g., through direct and indirect employee spending).
- Establish specific programs to support women so they can benefit from these jobs.

DIRECT TRANSFERS

- Beyond work opportunities, develop mechanisms for direct transfers of mining revenues to mining communities (e.g. cash for resources with or without conditions).

ACCESS TO BASIC INFRASTRUCTURE

- Continue efforts to ensure that mining communities have access to secondary education, well-equipped health centers and modern means of communication and payment.
- Tax the consumption of non-renewable resources such as water used by the mine to fund basic local infrastructure.

HEALTH, SANITATION/HYGIENE AND FOOD SAFETY

- Improve access to traditional medicinal plants, halieutic resources and forests.
- Improve food security in mining communities by increasing the number of beneficiaries of current programs and by developing other programs.

SOCIAL AND CULTURE

- Eliminate the risk of water pollution in a sustainable manner.
- Restore access to important places for the local population.
- Manage tensions over the spending of mining revenues by organizing representative consultations, participatory budgeting and updating the local development plans ("PCDs").
- Ensure access to information on mining activities, including information on operations, revenues, their distribution and use, and water pollution for all industry stakeholders (mining communities, civil society, government, other private and public enterprises).



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