

Ambatovy Nickel Project

Madagascar

Complaint SG/E/2012/04

Complaints Mechanism - Complaints Mechanism - Complaints Mechanism - Complaints Mechanism

Conclusions Report

19 March 2018

Prepared by

EIB Complaints Mechanism

Damir Petrovic
Complaints Officer

Sonja Derkum
Head of Division
Complaints Mechanism

External Distribution

Complainants: Mr Jean Louis Bérard, Secretary of Fikambanan'ny Mpamboly sy Mpiompy Tantely (FMMT) and General Manager of Les Vergers De Madagascar (VDM) and Mr Randrianasolo, Chairman of FMMT

Ambatovy Management

Internal Distribution

Management Committee
Secretary General
Inspector General
Relevant EIB departments

The EIB Complaints Mechanism

The EIB Complaints Mechanism is designed to provide the public with a tool enabling alternative and pre-emptive resolution of disputes in cases in which members of the public feel that the EIB Group has done something wrong, i.e. if they consider that the EIB has committed an act of maladministration. When exercising the right to lodge a complaint against the EIB, any member of the public has access to a two-tier procedure, one internal – the Complaints Mechanism Division (EIB-CM) – and one external – the European Ombudsman (EO).

Complainants that are not satisfied with the EIB-CM's reply have the opportunity to submit a confirmatory complaint within 15 days of receipt of that reply. In addition, complainants who are not satisfied with the outcome of the procedure before the EIB-CM and who do not wish to make a confirmatory complaint have the right to lodge a complaint of maladministration against the EIB with the EO.

The EO was “created” by the Maastricht Treaty of 1992 as an EU institution to which a citizen or an entity may appeal to investigate an EU institution or a body on the grounds of maladministration. Maladministration means poor or failed administration. This occurs when the EIB Group fails to act in accordance with the applicable legislation and/or established policies, standards and procedures, fails to respect the principles of good administration or violates human rights. Some examples, as set out by the European Ombudsman, are: administrative irregularities, unfairness, discrimination, abuse of power, failure to reply, refusal to provide information, unnecessary delay. Maladministration may also relate to the environmental or social impacts of the EIB Group's activities and to project cycle-related policies and other applicable policies of the EIB.

The EIB Complaints Mechanism is designed not only to address non-compliance by the EIB with its policies and procedures but also to endeavour to solve the problem(s) raised by complainants such as those regarding the implementation of projects.

For further and more detailed information regarding the EIB Complaints Mechanism please visit our website: <http://www.eib.org/about/accountability/complaints/index.htm>

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EXECUTIVE SUMMARY

This report concerns a complaint regarding the Ambatovy nickel mining project in Madagascar which is co-financed by a number of lenders, including the European Investment Bank (EIB) (see Section 2).

The complaint concerns the project's impact on the environment, health and safety of the workers and the affected population as well as the resettlement carried out under the framework of the project. Specific allegations concern the following:

- A. Environment
 - A.1 - Impact on bees
 - A.2 - Water contamination by the tailings facility and the processing plant
 - A.3 - Leaks on the pipeline leading to the tailings facility
 - A.4 - Marine outfall
 - A.5 - Monitoring of water quality of the relevant rivers
- B. Health and safety
 - B.1 - Anti-malaria spraying
 - B.2 - Sulphur dioxide (SO₂) leaks
 - B.3 - Ammonia pipeline
 - B.4 - Sulphur storage and transport
 - B.5 - Impact of the rail trans-port on local inhabitants
 - B.6 - Disaster Management Plan
- C. Resettlement Action Plan
 - C.1 - Quality of resettlement
 - C.2 - Livelihood of resettled people.

The overall responsibility of ensuring conformity of the project with the applicable standards rests with the project promoter. The EIB's responsibility is to monitor the project and to verify that the project complies with those standards (see Section 3).

After conducting the review (see Section 5), the EIB's Complaints Mechanism Division (EIB-CM) grouped the conclusions reached on the basis of the collected evidence concerning the received allegations into one of three categories depending on the compliance of the project with the applicable standards.

Category	Description	Conclusions/allegations
Category 1	the project complies with the applicable standards	A.1, A.4, A.5, B.1, B.3, B.4 and B.5
Category 2	at the time of the complaint, the project encountered challenges in compliance with the applicable standards, but these challenges have since been resolved	A.3, B.6, C.1 and C.2
Category 3	the project is not yet fully compliant with the applicable standards	A.2 and B.2

In respect to the monitoring carried out by the EIB, the EIB-CM concludes that the EIB fulfilled this obligation as required, albeit with one exception. The EIB did not include the project in the implementation problem list (IPL), although there were sufficient reasons to do so.

Therefore, the EIB-CM recommends to the EIB to include the project in the IPL, prepare an action plan for the aspects of the project where the applicable standards are not yet complied with (outstanding environmental and health and safety issues) and follow up on the plan's implementation.

Complainants: Mr Jean Louis Bérard and Mr Randrianasolo, on behalf of the Malagasy association (Fikambanan'ny Mpamboly sy Mpiompy Tantely (FMMT) and the company Les Vergers De Madagascar (VDM)

Complaint received in: April 2012

Project status: Fully disbursed

Board report: July 2007

Contract amount: up to EUR 260 m to be disbursed as USD 300 m

1. COMPLAINT (ALLEGATIONS AND CLAIMS)

- 1.1 In April 2012, the EIB's Complaints Mechanism Division (EIB-CM) received a complaint from Mr Jean Louis Bérard and Mr Randrianasolo on behalf of the FMMT, an association that groups more than 1000 small farmers in the Province of Tamatave, one of the six provinces in Madagascar, as well as from VDM, a fruit company from the same province (hereinafter: the complainant).
- 1.2 The complaint concerns the Ambatovy project, a nickel mining project in Madagascar (see paragraph 2.1) (hereinafter: the project)¹. The project is financed by a number of lenders including the European Investment Bank (EIB). Ambatovy Minerals SA and Dynatec Madagascar SA are the borrowers and the project promoters² (hereinafter: the promoter).
- 1.3 The complaint consists of a number of allegations which were received in the period April – November 2012. The initial allegation concerns the disappearance of the region's bee population caused, according to the complainant, by the promoter's anti-malaria actions undertaken in 2007. In subsequent communications with the EIB-CM, the complainant raised and further detailed additional allegations concerning the project's impact on the environment, health and safety of the workers and the affected population as well as the resettlement carried out under the framework of the project. Although the sources of these allegations differed (e.g. farmers, residents, fishermen), they were communicated to the EIB-CM through the complainant.
- 1.4 Table 1 below shows a summary of the allegations received by the EIB-CM from the complainant. The allegations presented in Table 1 are contextualised within the framework of the EIB's responsibility, as per role and mandate of the EIB-CM. All of the allegations presented in Table 1 are analysed in Section 5 of this report.

¹ <http://www.eib.org/projects/pipelines/pipeline/20060398>, accessed on 15 November 2017.

² <http://www.ambatovy.com/docs/?p=408>, accessed on 11 December 2017.

TABLE 1 – SUMMARY OF ALLEGATIONS

Main points of the allegations	Summary of allegations received from the complainant
A. Allegations pertaining to the environment	
A.1 Impact on bees	Ambatovy is using chemical anti-malaria vector treatment that has a negative impact on the environment. According to the complainant, the company is spraying deltamethrin and/or cypermethrin to control malaria vectors, which would adversely affect the bee population in the region where Ambatovy's operations take place. As a result, an increasing number of bees have been dying since October 2007. Because bees play an important role in the pollination of crops, a large proportion of crops have been lost. The complainant also stressed that although there is a non-toxic solution (<i>Bacillus Thuringiensis Israelensis</i>), Ambatovy has used deltamethrin and/or cypermethrin.
A.2 Water contamination by the tailings facility and the processing plant	The processing of residues and the tailings facility are contaminating the groundwater of the surrounding region, posing an environmental risk and a health problem for the local population. The complainant also challenges the poor communication of the company in this matter as <i>"the construction of the tailings occurred in the utmost discretion"</i> . In addition, the complainant points to the possible flooding of the lake due to the dumping of laterite in the tailings pond possibly adversely affecting the surrounding rice fields and ponds.
A.3 Leaks on the pipeline leading to the tailings facility	There are several leaks in the pipeline that leads to the tailings facility.
A.4 Marine outfall	The complainant alleges that waste water is not discharged 1500 m from the coast as indicated in the EIA but at a distance of approximately 600m leading to pollution.
A.5 Monitoring of water quality of the relevant rivers	The complainant alleges there is a lack of monitoring of the following rivers for negative impacts: Andranofisotro, Ivondro, Mangoro, and Torotorofotsy.
B. Allegations pertaining to health and safety	
B.1 Anti-malaria spraying	The spraying of the anti-malaria vector treatment will have negative impacts on the health of the workers.
B.2 Sulphur dioxide (SO ₂) leaks	At least four sulphur dioxide leaks occurred during start-up testing at the refinery between 26 February and 13 March 2012. The complainant claims that this led to the deaths of two adults and two babies, and the illness of about 50 people.
B.3 Ammonia pipeline	The complainant claims that the design of the ammonia pipeline that crosses the city is dangerous for the lives of the population; in fact, according to the complainant, the workers of the processing plant have already reported leaks from the open-air ammonia pipeline within the premises of the processing plant.
B.4 Sulphur storage and transport	The open-air storage of sulphur powder (dust) increases the danger for the health of the local population in the event of strong winds and tropical storms. The transport of sulphur in open wagons that cross the town would have an impact on the health of the population.
B.5 Impact of the rail transport on local inhabitants	There is significant distance between the railway crossings, which are difficult to pass and unsafe. The overhead crossings are too steep.
B.6 Disaster Management Plan	The promoter has not designed any coordinated disaster plan with the authorities nor set aside resources to be used in the event of a disaster.
C. Allegations pertaining to the Resettlement Action Plan	
C.1 Quality of resettlement	The complainant also alleges that the resettlement carried out by the company is of substandard quality; in addition, that there is a lack of health facilities.
C.2 Livelihood of resettled people	Livelihoods have not been restored, leading to unemployment and a majority of the people leaving the resettlement areas.

- 1.5 Table 2 below presents specific claims of the complainant. The claims are contextualised to relate to the allegations made.

TABLE 2 – CLAIMS OF THE COMPLAINANT

Main points of the claims	Claims received from the complainant
<p>Applicable environmental and health and safety standards must be respected</p> <p>Obligations set out in the Resettlement Action Plan must be respected</p> <p>The complainant should be provided with the information on breaches of applicable standards</p>	<ul style="list-style-type: none"> • Stop spraying with non-organic products. • Before the Ambatovy project is allowed to continue and before the delivery of approval to start production, the rights and needs of farmers and people affected by the construction phase - with regard to impacts on land, water, fish and forests - must be respected; the costs for compensation as a result of removals, damage and accidents must be paid; and the promises made to communities when they were relocated must be fully honoured. • Further displacement of people for the project must cease immediately. • Ambatovy must ensure that its industrial process is completely trustworthy, using “state-of-the-art” equipment and avoiding any risk to the health of its employees and the communities around the processing plant. • The relevant environmental documents of the project must be made available to the general public. This will enable civil society and the affected communities to monitor corrective and preventive actions related to the environmental and human impacts of the Ambatovy project. The documents concerned are the complementary document to the ESMP for the Ambatovy processing plant in Toamasina which was signed on 17 November 2011 between Ambatovy and ONE, as well as the other ESMPs and the entire EIA. According to the complainant, the citizens of Toamasina, especially the inhabitants that live close to the processing plant, are anxious about their land, the water they drink, their health and their futures. They have the right to be informed about the project’s completed and current activities, about the concrete measures taken by the company and of its precise commitments during the phases of pre-production, the 27 years of production and the post-production phase.

2. BACKGROUND INFORMATION

- 2.1 The project is located in Madagascar and consists of the development, construction and operation of a nickel mine with associated infrastructure. The project’s capacity is 60 000 tons of nickel and 5 600 tons of cobalt per year, therefore, making it one of the largest nickel mining and processing developments in the world. The project consists of five components:
- **Mine site:** A new open pit, lateritic nickel mine site has been developed near Moramanga, approximately 80 km east of Madagascar’s capital Antananarivo. The reserves of 125 million tons are expected to last for approximately 19 years.
 - **Pipeline:** From the ore preparation plant at the mine site, a slurry mix of water and laterite is pumped into the slurry pipeline where it begins a 220 km, 30 hour downhill journey to the processing plant. For most of the length, the pipeline is buried to an average depth of 1.5m.
 - **Processing plant:** In the processing plant the ore undergoes a hydrometallurgical process that yields refined nickel and cobalt. The processing plant is located within the

Toamasina II municipality approximately 11 km outside Madagascar's main port of Toamasina.

- **Tailings facility:** Materials with no commercial value that are left over after mining, processing and refining are known as tailings. These are neutralised with the addition of limestone and pumped from the processing plant via a 15 km pipeline to a 750 ha tailings facility where treated residue is discharged for permanent safe-keeping.
- **Port expansion:** Every year, the project exports approximately 275 000 tons of refined nickel, refined cobalt and ammonium sulphate fertiliser and imports approximately 3.4 million tons of commodities (limestone, coal, sulphur and ammonia) required for production. This large volume required a port expansion in Toamasina.

The works lasted between 2007 and 2011 and the commercial production, which commenced in 2012, was fully attained in 2014.

- 2.2 The EIB is co-financing the project in accordance with the core objectives of the Investment Facility. The Investment Facility is a revolving fund established under the Cotonou Agreement signed between the Member States of the EU and the Africa, Caribbean and Pacific (ACP) partnership to promote sustainable economic development in the ACP countries. According to the due diligence carried out by the EIB, the project is expected to make a significant contribution to sustainable social and economic development and poverty alleviation through the financing of productive investments promoted by the private sector.
- 2.3 The shareholders of the promoter are:
- Sherritt International Corporation³ - natural resource company (mining, oil and gas) based in Canada; world leader in the mining and refining of nickel; publicly listed
 - Sumitomo Corporation - one of Japan's largest integrated trading and investment enterprises; publicly listed
 - Korea Resources Corporation (KORES) - a government-owned mining support service corporation whose remit is to contribute to a stable flow of raw materials and energy to the Korean economy
 - SNC-Lavalin Incorporated - one of the leading engineering and construction companies in the world; based in Canada; publicly listed.
- 2.4 The project cost estimated by the EIB in 2007 stood at USD 3 780m. Japan Bank for International Cooperation (JBIC), Export-Import Bank of Korea (K-Exim), EIB, Export Development Canada, AfDB and several Equator Banks financed the project and are collectively referred to as lenders.
- 2.5 In 2006, Chlumsky, Ambrust & Meyer (CAM) was selected to carry out the role of the independent engineer (IE) for the project. CAM is a USA based company specialising in providing such services for financial institutions⁴. The use of an IE is a common feature in projects that are financed in parallel by a group of lenders.

³ In November 2017, Sherritt, Sumitomo Corporation and Korea Resources Corporation signed a restructuring agreement concerning Ambatovy Joint Venture. According to this agreement, Sherritt transferred 28% and retained a 12% ownership interest in the Ambatovy Joint Venture - <http://www.sherritt.com/English/Investor-Relations/News-Releases/News-Release-Details/2017/Sherritt-and-Partners-Sign-Definitive-Agreement-to-Restructure-Ambatovy-Joint-Venture/default.aspx>, accessed on 21 November 2017.

⁴ <http://www.cam-llc.com/about/>, accessed on 8 December 2017.

The obligations of the IE include the review of the compliance of the project with the applicable standards and regular reporting on the status of compliance to the lenders, including the EIB. The IE's review encompasses review of the technical, environmental and social aspects of the project.

3. REGULATORY FRAMEWORK

Work of the EIB-CM

- 3.1 The EIB-CM is tasked with addressing complaints concerning alleged maladministration by the EIB⁵.

Maladministration means poor or failed administration. This occurs when the EIB fails to act in accordance with the applicable legislation and/or established policies, standards and procedures. Maladministration may also relate to the environmental or social impacts of EIB's activities⁶. Any person or group who alleges that there may be a case of maladministration within the EIB, can lodge a complaint⁷.

- 3.2 Depending on the circumstances of the case, the EIB-CM, may conduct the initial assessment of the complaint, whose objectives include understand of the raised allegations⁸. In cases where the initial assessment was undertaken, the EIB-CM prepares the initial assessment report (IAR). The initial assessment is then followed by a full inquiry and compliance review into the issues raised by the complainant⁹. For each admissible complaint, the EIB-CM prepares a conclusions report¹⁰.

Project's applicable standards

- 3.3 The project's applicable standards include the following:
- National environmental law, including applicable international agreements
 - Lender Environmental and Social Guidelines and
 - Environmental Specific Management Plans (ESMPs), which must be in line with the above mentioned guidelines.

The Lender Environmental and Social Guidelines include the 2006 International Finance Corporation (IFC) Performance Standards, as interpreted by their Guidance Notes¹¹, and the other pre-August 22nd 2007 World Bank Environmental, Health and Safety (EHS) Guidelines, such as the World Bank's Pollution Prevention and Abatement Handbook from 1998¹².

⁵ Section II, § 3 and 4 and Section III, § 1.4 of the European Investment Bank Complaints Mechanism Principles, Terms of Reference and Rules of Procedure (CMPTR).

⁶ Section II, § 1.2 of the CMPTR.

⁷ Section IV, § 2 of the CMPTR.

⁸ § 5.4 of the European Investment Bank Complaints Mechanism Operating Procedures.

⁹ Section III, § 4 and Section IV, § 7.6 of the CMPTR.

¹⁰ Section IV, § 7.11 of the CMPTR

¹¹ The IFC Guidance Notes: Performance Standards on Social & Environmental Sustainability July 31, 2007, are also relevant.

¹² In addition to 1998 Handbook, other IFC Environmental, Health and Safety Guidelines applicable before 22 August 2007 are also relevant. The Handbook and the other IFC Environmental, Health and Safety Guidelines applicable before 22 August 2007 need to be applied during the development of the project pursuant to Paragraphs 3 and 8 of the 2006 IFC Performance Standard 3 – Pollution Prevention and Abatement.

The ESMPs¹³ were developed to provide additional details about the measures that will be implemented to assure the project meets the set requirements, commitments and obligations. In total five operational ESMPs were prepared including the ones for the processing plant, port expansion and tailings facility.

- 3.4 Following a detailed inspection by the IE, the promoter and the IE signed an Environmental Certificate¹⁴ in June 2015 confirming that:
- Construction and operation of the project conformed with the Lender Environmental and Social Guidelines and national law and
 - Operational ESMPs are in line with the guidelines and the law.

In addition and considering that at that time the project was still in the process of implementation of certain activities, to reinforce the project's commitment to continued implementation of these important programmes, the promoter and the IE prepared the environmental action plan at the request of the lenders, including the EIB. The project must be compliant with this plan.

Responsibility of the EIB

- 3.5 While the promoter has the overall responsibility to ensure that the project is implemented and operated in conformity with applicable standards, the EIB has the responsibility to monitor the project, including verification of compliance with those standards¹⁵.
- 3.6 To fulfil this requirement, the EIB relies on the reporting and direct communication with the promoter, reporting by the IE, EIB's project site visits as well as other sources¹⁶. The EIB is required to review the received information to ensure the project meets the standards.

In case certain challenges are encountered, the EIB should prepare monitoring reports. In any case, after the end of works and first year of operation¹⁷, the EIB is required to prepare the project completion report¹⁸. Monitoring of the project is possible even after the finalisation of the project completion report¹⁹. The EIB should continue monitoring the project until all relevant measures to attain the applicable standards are implemented²⁰.

¹³ ESMPs are developed pursuant to the environmental permit (*permis environnemental*) granted in the name of the Project in 2006 by National Environment Office (*Office National pour l'Environnement* – ONE) and in accordance in all material aspects with the Environmental Management and Social Development Plan (*Plan de gestion environnementale et de développement social* - PGEDS) attached to the environmental permit. The ESMPs are co-signed by ONE and the promoter. The promoter is required to comply with the ESMPs.

¹⁴ The project is completed when the promoter delivers completion certificates, including the Environmental Certificate to the lenders.

¹⁵ EIB's Environmental Statement 2004; Section C1 of the EIB's 2006 Environmental and Social Practices Handbook; Section C1 of the EIB's 2007 Environmental and Social Practices Handbook; Section D.1 of the EIB's 2010 Environmental and Social Practices Handbook; Volume II, Section B.3.1 of the EIB's 2013 Environmental and Social Handbook.

¹⁶ EIB's Environmental Statement 2004.

¹⁷ Paragraph 233 of the EIB's 2007 Environmental and Social Practices Handbook; Paragraph 264 of the EIB's 2010 Environmental and Social Practices Handbook; Volume II, paragraph 276 of the EIB's 2013 Environmental and Social Handbook.

¹⁸ Paragraph 232 of the EIB's 2007 Environmental and Social Practices Handbook; Paragraph 263 of the EIB's 2010 Environmental and Social Practices Handbook; Volume II, paragraph 275 of the EIB's 2013 Environmental and Social Handbook;

²⁰ The EIB-CM's conclusion is reached on the basis of the following: paragraph 203 of the EIB's 2006 Environmental and Social Practices Handbook; paragraphs 178 and 228 of the EIB's 2007 Environmental and Social Practices Handbook; paragraphs 228, 259 and 261, indent 4 of the EIB's 2010 Environmental and Social Practices Handbook; Volume II, paragraphs 217, 238, 271 and 275 of the EIB's 2013 Environmental and Social Handbook; objective of the monitoring, as presented in paragraph 3.5 of the Report.

- 3.7 Also, in case of non-compliance with the applicable standards, the EIB is required to note this in the implementation problem list (IPL) and report this to the EIB's Management Committee²¹. Other possible reasons for inclusion in the list include on-going complaints and involvement of the European Ombudsman.

4. WORK PERFORMED

- 4.1 As per its rules, the work of the EIB-CM was performed over two distinct phases, namely: the initial assessment phase and the compliance review phase.
- 4.2 During the initial assessment phase, the EIB-CM conducted an initial desk review, consulted with the relevant services of the EIB and undertook a fact finding mission to Madagascar (hereinafter: EIB-CM fact finding mission). On the basis of the collected information, the EIB-CM prepared the IAR which was made available to the parties concerned. This IAR set a general scope of the work carried out during the compliance review phase and the content of the conclusions report.
- 4.3 During the compliance review phase, the EIB-CM conducted additional desk review and consultation with the relevant EIB's services. This also included a comprehensive review of the monitoring conducted by the services. Given the large number and the complexity of the allegations, the EIB-CM engaged a specialised external engineering company, COWI²², to support the EIB-CM with the review of the technical aspects of the allegations. Together with representatives of the external engineering company, the EIB-CM undertook an investigative mission to Madagascar (hereinafter: EIB-CM investigative mission).

TEXT BOX 1 – RELIANCE ON THE WORK OF THE INDEPENDENT ENGINEER

The purpose of the consultancy agreement between the EIB-CM and the external engineering company was to conduct a detailed review of the technical aspects of the allegation. To do so, the external engineering company required access to project's technical documents which should be available to the IE.

Numerous attempts to receive this information (e.g. during the EIB-CM investigative mission) did not result in access to all of the requested documents due to, according to Ambatovy, concerns about confidentiality of the requested information. Therefore, in some cases this prevented the external engineer from carrying out a detailed review of the compliance of the project with the applicable standards. In such cases, the EIB-CM focused on the work carried out by the IE (see paragraph 2.5), as presented in numerous IE reports submitted to the lenders, including the EIB, and the Environmental Certificate.

The EIB-CM notes the independent function of the IE, ensured by the contractual relationship between the IE, the promoter and the lenders, including the EIB. The EIB-CM deems this relationship to be sufficient to avoid and/or resolve any potential conflicts of interest of the IE.

- 4.4 On the basis of the collected information, the EIB-CM prepared this conclusions report. The cut-off date for the conclusions report is 17 January 2018.

²¹ Paragraph 205 of the EIB's 2006 Environmental and Social Practices Handbook; Paragraph 231 of the EIB's 2007 Environmental and Social Practices Handbook; Paragraph 262 of the EIB's 2010 Environmental and Social Practices Handbook; Volume II, paragraph 274 of the EIB's 2013 Environmental and Social Handbook.

²² <http://www.cowi.com/>, accessed on 12 December 2017.

5. SPECIFIC ALLEGATIONS' FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Findings, conclusions and recommendations for **specific allegations** are presented in sections 5.1 – 5.3 below. To avoid unnecessary repetition, the findings, conclusions and recommendations on **how the EIB is fulfilling its monitoring obligation** are presented in section 5.4 below.

5.1 Allegations pertaining to the environment

5.1.1 A.1 - Impact on bees

Allegation

5.1.1.1 *Ambatovy is using chemical anti-malaria vector treatment that has a negative impact on the environment. As a result, an increasing number of bees have been dying since October 2007. Because bees play an important role in the pollination of crops, a large proportion of crops have been lost.*

Findings

5.1.1.2 This is the original allegation which was later followed by other allegations presented in this report. This allegation was analysed in detail in the IAR. As presented therein, the disappearance of the bees from the region between 2007 and 2013 is a complex issue and it is likely that the disappearance is caused by multiple interacting factors. The IAR further states that the level of uncertainty about the causality between promoter's use of pesticides and subsequent disappearance of bees is high; it is even more difficult to link this to the decrease in crop yields as, apart from pollination by bees, there are numerous other factors that influence the crop yield.

There is an on-going litigation before the Malagasy courts between the complainant and the promoter. The promoter is regularly reporting to the lenders, including the EIB, on the current state of this litigation.

5.1.1.3 In respect to the use of pesticide in 2015, the IE confirmed that pesticide management is in line with the requirements concerning the World Health Organization (WHO) protocol for pesticides selection.

5.1.1.4 The applicable standards require the promoter to select pesticides that are known to be effective against the target species and have minimal effects on non-target species and the environment²³. The promoter is prohibited from using certain pesticides set in the WHO protocols for pesticides selection²⁴. Finally, the promoter is required to report to the EIB information concerning any litigation about environmental issues²⁵.

²³ Paragraph 13 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement.

²⁴ Paragraph 15 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement.

²⁵ Paragraph 204, indent 2 of the EIB's Environmental Statement 2004.

Conclusions and recommendations

5.1.1.5 The EIB-CM concludes that there is uncertainty about the causality between the promoter's use of pesticides, subsequent bee disappearance and decrease in crop yields. Furthermore, the EIB-CM notes that in 2015, the promoter complied with the applicable standards in respect to use of the pesticides.

The EIB-CM concludes that the EIB is fulfilling its monitoring obligation by taking note of the IE's conclusions on the appropriateness of the pesticide use and by acquiring information about the relevant litigation before the Malagasy courts.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

5.1.2 A.2 - Water contamination by the tailings facility and the processing plant

Allegation

5.1.2.1 *The processing plant and the tailings facility are contaminating the groundwater of the surrounding region, posing an environmental risk and a health problem for the local population. Potential overflow from the tailing facility may impact the surface water quality in the surrounding area.*

Findings

5.1.2.2 The tailings facility, in addition to the general information provided in paragraph 2.1 above, consists of several parts including the tailing ponds and a landfill. Similarly, in addition to the information provided above, the processing plant consists of numerous units and plants such as: a water demineralisation unit, a water treatment plant, a hydrogen production plant. Some of the ways in which the water quality may be impacted by the tailings facility and the processing plant include:

- contamination of the ground water by the processing plant²⁶ (for the potential impact on the Ivondro river, see section 5.1.5)
- contamination of surface water from overflows and damages to the tailings ponds' dams²⁷ and
- seepage from the tailings facility²⁸.

Contamination of the groundwater at the processing plant

5.1.2.3 The sources of possible contamination of groundwater include: production activities at the processing plant with contaminating products which could disperse towards unpaved areas and seep into the ground; in the event of fire, the firefighting water mixed with fire-extinguishing foam or chemical releases could end up in the ground. The contaminants could seep into the ground and, eventually, reach the groundwater.

²⁶ Sections 6.2.3 and 6.2.4 of the ESMP concerning the Process Plant – Operation Phase from May 2011.

²⁷ Section 8.1.3 of the ESMP concerning Tailings – Operation Phase from April 2015.

²⁸ Section 8.1.3 of the ESMP concerning Tailings – Operation Phase from April 2015.

Groundwater quality is monitored at the processing plant site with six monitoring wells installed. Parameters and frequency of monitoring are set²⁹ and the data concerning groundwater quality is compared to initial data on groundwater quality³⁰. The EIB's services confirm that over time there were no observed significant changes in the groundwater quality at the processing plant site.

Contamination of surface water from overflows and damages to the tailings ponds' dams

5.1.2.4 Extreme weather conditions may cause overflow from the tailing ponds which may have an impact on the quality of surface water. Cases of dam overflow are known to have happened, such as in 2017. In such cases, according to the ESMP, the impact on the water quality should not be significant due to the dilution effect resulting from the large volume of water during storms³¹.

As for the quality of dams, they are designed in line with the safety criteria compliant with the Canadian Dam Safety Association Guidelines from 2007³² and the tailings facility is designed to withstand a flow rate over a period of 24 hours in case of 50-year rainfall repetition³³. Therefore, damages to the dams due to extreme weather conditions should not be an issue.

5.1.2.5 According to the promoter, in case of extreme high rainfall resulting in overtopping of the tailings dam, residents downstream will be informed and evacuated to safe areas. Finally, the IE concluded that the risk assessment of the operations at the tailings facility has been conducted and that the emergency preparedness and response system has been put in place.

Seepage from the tailings facility

5.1.2.6 Tailings from the processing plant are pumped through a pipeline to the tailings facility where they are deposited in tailing ponds. The water from the tailing ponds is pumped back to the processing plant where some of it is used, and the remainder is discharged in the sea through a marine outfall (see paragraph 5.1.4.2)³⁴. However, some of the water from the tailing ponds may have an impact on the water quality in the surrounding area.

The water quality may also be impacted by the landfill located in the tailings facility where both non-hazardous and hazardous waste is landfilled³⁵. The non-hazardous waste is landfilled directly into the ground and covered with lime and limestone. The hazardous waste is placed in airtight and waterproof concrete cases and landfilled in a special location at the landfill.

5.1.2.7 There are specific measures put in place to limit the impact of the tailings facility on the water quality. For example, the tailing ponds are lined³⁶ and tests are conducted on leaches from

²⁹ Table 5.2 of the ESMP concerning the Processing Plant – Operation Phase from May 2011.

³⁰ Section 5.5 of the ESMP concerning the Processing Plant – Operation Phase from May 2011.

³¹ Section 6.2.3 of the ESMP concerning Tailings – Operation Phase from April 2015.

³² Section 2.1 of the ESMP concerning Tailings – Operation Phase from April 2015.

³³ Section 6.2.2 of the ESMP concerning Tailings – Operation Phase from April 2015.

³⁴ Section 1 of the ESMP concerning Tailings – Operation Phase from April 2015.

³⁵ Annex F of the ESMP concerning Tailings – Operation Phase from April 2015.

³⁶ Volume E of Ambatovy's Environmental Assessment (p. 55).

the concrete cases using certain standards³⁷ in order to ensure that no pollutant is released from these concrete cases.

Perhaps most importantly, there is a groundwater interception system put in place to ensure that seepage from the tailings facility does not impact water quality in the surrounding area³⁸. The system consists of wells whose location was determined on the basis of the 2004 hydrological study, conducted before the construction of the tailings facility, which determined characteristics of the groundwater flow and potential impact of the tailing facility³⁹. The water collected in these wells that does not meet the standards is pumped into the tailings facility⁴⁰. Monitoring is carried out to verify that this system is working as expected⁴¹.

5.1.2.8 However, the system put in place did not and still does not ensure that the water quality in the surrounding area is not impacted by the seepage from the tailings facility. More specifically, until May 2015, the applicable standards for **manganese concentrations** in water were breached⁴².

The breach of applicable standards for manganese was briefly interrupted in May and June 2015 and the June 2015 Environmental Certificate stated that the levels of concentration of manganese were within acceptable limits at the time of its issuance. At that time, this was credited to the additional installed pump back capacity.

However, from July 2015 to this day, the applicable standards for manganese in the impacted water have been breached.

5.1.2.9 Aware of the challenges, in 2015 the lenders, including the EIB, obliged the promoter to prepare an action plan describing the problem and actions to be taken to mitigate the impact and the IE provided guidance in development of the plan (for more information on the plan, see paragraph 3.4). The action plan was revised in 2016 and updated in 2017 because it was not accomplishing the objective, i.e. the set standards for manganese were breached for most of 2016 and 2017, of which the EIB was kept informed.

5.1.2.10 Concerned about the continued breaches, in 2016, the lenders approached the IE with a request to provide its opinion on whether the breaches of the applicable standards for manganese, caused by the tailings facility, could impact the contractual relationship between them and the promoter.

The IE confirmed that the breaches of the applicable standards are a serious problem and that at that time the promoter has not yet fulfilled its commitments under the action plan. Also, the IE confirmed that the promoter was in the process of taking additional actions to meet its commitments under the plan while providing potable water to the affected communities and

³⁷ NF X31-210 - Annex F of the ESMP concerning Tailings – Operation Phase from April 2015.

³⁸ Annex F of the ESMP concerning Tailings – Operation Phase from April 2015.

³⁹ Section 6.2.3 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁴⁰ Section 6.2.3 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁴¹ Annex B of the ESMP concerning Tailings – Operation Phase from April 2015.

⁴² For more information on the impact of higher manganese concentration in drinking water, see section 5 of the Manganese in Drinking-water, Background document for development of WHO Guidelines for Drinking-water Quality, 2011, available at: http://www.who.int/water_sanitation_health/dwg/chemicals/manganese.pdf

therefore, in the IE's view, the problem was not sufficiently material to impact the contractual relationship between the lenders and the promoter.

5.1.2.11 Indeed, pursuant to the action plan, the promoter provided potable water to the affected communities. For example, in April 2017 the promoter established the potable water distribution system for affected communities, which received bottled water prior to the system becoming operational.

5.1.2.12 The original commitment was to carry out monitoring of manganese only biannually assuming that the applicable standards are complied with⁴³. In 2017, monitoring of manganese concentrations was carried out weekly in practice, due to the breaches of the standards. Since 2015, the promoter is required to provide quarterly manganese monitoring reports and, if needed, to discuss these reports with the lenders until manganese standards are complied with for an entire year.

5.1.2.13 The EIB continued monitoring the exceedance of manganese even after it finalised the EIB's project completion report (see paragraph 5.4.1). This was done because to this day the EIB is still receiving information that the manganese levels are being breached. .

Applicable standards

5.1.2.14 The promoter is required to avoid, minimise or control the release of pollutants⁴⁴. The promoter is required to have an emergency preparedness and response system in place⁴⁵. The following specific standards are applicable:

- Applicable water quality standards are set in the ESMP⁴⁶
- Discharge values for the leaches from the hazardous waste concrete cases in the tailings facility must be in line with Decree No. 2003-464 on Classification of Surface Water and Regulation of Liquid Effluent Discharges
- Tailings facility should be designed and constructed in accordance with internationally recognised engineering practices and precipitation conditions⁴⁷
- Liquid effluents should be monitored for metals, including manganese, on a monthly basis⁴⁸
- There are newer standards⁴⁹ for tests on leaches from the concrete cases storing hazardous waste than the ones used, which existed even before the contract signature.

Conclusions and recommendations

5.1.2.15 The EIB-CM concludes that:

- The groundwater quality is monitored at the processing plant and there were no observed significant changes in its quality
- Contamination of surface water from overflows and damages to the tailings ponds' dams has not proven to be an issue

⁴³ Section 10.1.1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁴⁴ Paragraph 4 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement.

⁴⁵ Paragraph 7 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement.

⁴⁶ Annex B, section 4 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁴⁷ Pollution Prevention and Abatement Handbook 1998, Chapter on Base Metal and Iron Ore Mining.

⁴⁸ Pollution Prevention and Abatement Handbook 1998, Chapter on Base Metal and Iron Ore Mining.

⁴⁹ NF EN 12457 (parts 1 to 4) from 2002.

- The applicable standards for manganese in water impacted by the tailings facility have been and still are breached.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note that there were no significant changes in the groundwater quality by the processing plant; that contamination of surface water from overflows and damages to the tailings ponds' dams has not proven to be an issue; and that standards for manganese are breached due to the seepage from the tailings facility. In respect to the latter, the EIB-CM notes that the lenders, including the EIB, took steps to ensure that the promoter works on achieving acceptable levels of manganese. Also, the lenders enquired whether these breaches could impact the contractual relationship between them and the promoter. The EIB is expected to continue monitoring the project until this issue has been resolved.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

While these are not recommendations as such, the EIB-CM notes that: newer standards for tests on leaches from the concrete cases storing hazardous waste exist (see paragraphs 5.1.2.7 and 5.1.2.14). Moreover, the ESMP foresees biannual monitoring for manganese once the standards are no longer breached while the applicable guidance recommends monthly monitoring (see paragraphs 5.1.2.12 and 5.1.2.14).

5.1.3 A.3 - Leaks on the pipeline leading to the tailings facility

Allegation

5.1.3.1 *There are leaks and spills on the pipeline, leading from the processing plant to the tailing facility, which may have a negative impact on the environment.*

Findings

5.1.3.2 Once processed at the processing plant, the tailings are transported to the tailings facility through a pipeline.

5.1.3.3 During its fact finding mission, the EIB-CM noted that there were leaks in at least two valve connections on the pipeline. The promoter has confirmed existence of minor leaks on the pipeline and some failures of the valves prior to January 2014. Also, during the EIB-CM investigative mission, the promoter confirmed that another leak on the pipeline existed in April 2014.

5.1.3.4 While the collated information for the occurred leaks and their consequences on the environment and human health is not available, information for some individual leaks is available. For example, the April 2014 leak impacted the environment, including the drinking water supply of the local residents, which led to significant concerns within the local communities⁵⁰.

⁵⁰ Annex H of the ESMP concerning Tailings – Operation Phase from April 2015.

5.1.3.5 In terms of the cause of the leaks, the EIB-CM, during its fact finding mission, as well as the IE, noted the problem of pipe/valve corrosion and pipe erosion. The promoter planned to improve the valves and to conduct temporary repairs and ultimately to replace the pipeline. In January 2014, the promoter indicated that valves on the pipeline have been replaced with more suitable ones, including valve upgrade and isolation⁵¹. In 2006, the design of the pipeline relied on unlined steel⁵² but by 2015, the design was changed to also include plastic-lining⁵³.

5.1.3.6 In 2015, the IE regarded the pipeline to be operated and maintained in accordance with generally accepted practices. Furthermore, by then, the IE considered that risk assessments of the operations at the processing plant and the tailings facility had been conducted and that an emergency preparedness and response system, covering responses to specific risks such as pipeline rupture, had been put in place.

5.1.3.7 The applicable standards require the promoter to avoid a release of pollutants with the potential for local impact⁵⁴. The promoter is also required to assess the risk and to put in place an emergency preparedness and response system to prevent negative consequences⁵⁵.

Conclusions and recommendations

5.1.3.8 The EIB-CM concludes that, in the past a number of leaks on the pipeline took place, some of which impacted the environment and human health but that since then the promoter has taken steps to address these leaks. Also, the EIB-CM concludes that the promoter, as required by the applicable standards, has conducted the risk assessment and put in place the emergency preparedness and response system to prevent negative consequences of such leaks.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the IE's reporting concerning the leaks and operation of the pipeline as well as the IE's conclusion that the promoter has carried out the relevant risk assessment and put in place an emergency preparedness and response system.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

5.1.4 A.4 – Marine outfall

Allegation

5.1.4.1 *The marine outfall discharges waste water from the tailings facility at a distance of 600 m from the shore instead of 1500 m which may lead to pollution; the water has a different colour 600 m from the shore which may be an indication of the pollution.*

⁵¹ Annex H of the ESMP concerning Tailings – Operation Phase from April 2015.

⁵² Volume E of Ambatovy's Environmental Assessment (p. 13).

⁵³ Section 2.1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁵⁴ Paragraph 4 of the 2006 IFC Performance Standard 3 – Pollution Prevention and Abatement.

⁵⁵ Paragraph 7 of the 2006 IFC Performance Standard 3 – Pollution Prevention and Abatement.

Findings

5.1.4.2 The excess waste water from the tailing facility is discharged into the sea through a marine outfall. The discharge pipe discharges at 1500 m off the shore at a depth of about 20 – 25 m; the last 500 m have 100 diffusers for a safe discharge and mixing of effluents with seawater⁵⁶.

5.1.4.3 This is in line with the recommended distance for the marine outfall⁵⁷. During its investigative mission, the EIB-CM confirmed that the outfall is located at the correct distance from the shore.

5.1.4.4 In respect to the potential pollution, the marine outfall is located in an area with strong currents⁵⁸, which should enable further dispersion of any pollutants. Prior surveys have shown that the area around the marine outfall is poor in biodiversity with only small fish communities⁵⁹. Nevertheless, according to the ESMP, the marine outfall may have an impact on the marine environment⁶⁰.

This is why monitoring of the marine outfall is carried out near the ocean floor, mid-depth and near the surface⁶¹ every six months⁶². Monitoring also includes analysis of fish flesh⁶³.

The IE has confirmed that the promoter monitors the marine outfall periodically and that it functions as required. Based on the monitoring data the EIB's services have not observed any significant changes due to the marine outfall. More specifically, the EIB's services have not detected increase of heavy metals in fish tissues and breaches of the applicable water quality standards.

5.1.4.5 The applicable standards require the promoter to avoid release of pollutants with the potential for local impact⁶⁴. In terms of the pollution, marine discharges can be considered only when it can be demonstrated that such discharges will not have a significant adverse effect on marine resources⁶⁵. The applicable water quality standards are set in the ESMP⁶⁶.

Conclusions and recommendations

5.1.4.6 The EIB-CM concludes that the marine outfall is located at an appropriate distance from the shore, that the monitoring system is in place and that the results of the monitoring have not shown increased pollution in the marine environment.

⁵⁶ Section 2.1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁵⁷ Volume I of the Environmental Assessment Report (p. 1204).

⁵⁸ Section 1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁵⁹ Section 5.1.5 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁶⁰ Section 8.1.4 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁶¹ Section 5.1.5 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁶² Section 10.1.3 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁶³ Section 9.1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁶⁴ Paragraph 4 of the 2006 IFC Performance Standard 3 – Pollution Prevention and Abatement.

⁶⁵ Pollution Prevention and Abatement Handbook 1998, Chapter on Base Metal and Iron Ore Mining.

⁶⁶ Annex B, section 4 of the ESMP concerning Tailings – Operation Phase from April 2015.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by reviewing the received information on marine pollution around the marine outfall.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

5.1.5 A.5 - Monitoring of water quality of the relevant rivers

Allegation

5.1.5.1 *Andranofisotro, Ivondro, Mangoro, and Torotorofotsy are not monitored to assess the impact of the processing plant and the tailings facility on these rivers. The population in the areas surrounding the processing plant and the tailings facility use the water of the rivers for drinking, bathing, washing clothes, etc.*

Findings

5.1.5.2 The Mangoro⁶⁷ and the Torotorofotsy⁶⁸ rivers are located close to the mine site and, therefore, neither the processing plant nor the tailings facility may have an impact on these two rivers. However, both the processing plant and the tailings facility may have an impact on the quality of the Ivondro river while only the tailings facility⁶⁹ may have an impact on the quality of the Andranofisotro river⁷⁰.

5.1.5.3 As for the monitoring of these rivers, their quality was initially monitored in 2004⁷¹.

Nevertheless, during the subsequent investigative mission, the complainant showed the EIB-CM samples of water, which had different colours. This, in the view of the complainant, was an indication of the lack of monitoring of pollution caused by Ambatovy.

However, the 2015 Environmental Certificate states that there are surface water monitoring programmes in place which set the frequency of water quality sampling; sampling methods and quality assurance. In respect to these programmes: biannual sampling (one wet season and one dry season) is conducted and samples are analysed for a full suite of parameters while more frequent sampling for a reduced list of parameters is conducted on a monthly or periodic basis as circumstances may require; there are two monitoring locations on the Ivondro river and one on the Andranofisotro river⁷²; detailed information on the results of surface water monitoring is presented in the promoter's reports.

5.1.5.4 Concerning the impact of the processing plant and the tailings facility on the quality of water of these rivers, the Environmental Certificate states that some water samples collected outside of the project indicate elevated levels of some constituents; however, these are associated with the rural/urban background conditions.

⁶⁷ Volume A of the Environmental Assessment Report (p. 7 and 10 and Volume A-3).

⁶⁸ According to Volume A of the Environmental Assessment Report, Torotorofotsy wetland is located close to the mine site (p. 7, 9 and 16).

⁶⁹ Annex B, Table 5-1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁷⁰ Annex B, Table 5-1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁷¹ Table 9.1-1 of Volume I of the Environmental Assessment Report.

⁷² Annex B, Table 5-1 of the ESMP concerning Tailings – Operation Phase from April 2015.

More specifically, monitoring on the Andranofisotro river shows that the water is unaffected by the tailings facility⁷³.

In respect to the Ivondro river, the EIA envisaged that the combined effects of the processing plant and tailings facility on water quality of the river would be negligible⁷⁴. In practice, the tailings facility caused higher levels of manganese in the surface water which may impact the quality of Ivondro river. And although there are ongoing activities to bring the levels of manganese in compliance with the applicable standards (see paragraph 5.1.2.15), it was estimated that the excess should not impact the quality of the river due to dilution effect⁷⁵. The processing plant may impact the quality of the Ivondro river through water intake⁷⁶ and accidental discharges. In respect to the latter, for example, in June 2016 levels of a pollutant were exceeded in the surface water but the established procedure was put in place to prevent this polluted surface water from reaching the Pangalanese canal and ultimately the Ivondro river.

Finally, the EIB's services confirmed that the processing plant and the tailings facility have negligible impact on the Andranofisotro and Ivondro rivers.

- 5.1.5.5 The applicable standards require the promoter to avoid a potential release of pollutants⁷⁷ that may adversely impact water used by the affected communities⁷⁸ and to take special precautions to prevent a reduction in the availability and quality of water⁷⁹. To do so, the promoter is encouraged to consider appropriate monitoring parameters, type and frequency, locations and data quality in its wastewater and water quality monitoring programs⁸⁰.

Conclusions and recommendations

- 5.1.5.6 The EIB-CM concludes that the promoter has put in place the surface water monitoring programmes and that the information obtained as part of the monitoring points to the conclusion that the processing plant and the tailings facility have negligible impact on the Andranofisotro and Ivondro rivers.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the IE's conclusion that the surface water monitoring programmes are in place and by reviewing the results of the IE's monitoring.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

⁷³ Annex B, Table 5-1 of the ESMP concerning Tailings – Operation Phase from April 2015.

⁷⁴ Section 2.9.1.3 of Volume G of the Environmental Assessment Report.

⁷⁵ Section 2.9.1.3 of Volume G of the Environmental Assessment Report.

⁷⁶ Section 2.4 of Volume D of the Environmental Assessment Report.

⁷⁷ Paragraph 4 of the 2006 IFC Performance Standard 3 – Pollution Prevention and Abatement.

⁷⁸ Paragraph 9 of the 2006 IFC Performance Standard 4 Community Health, Safety and Security.

⁷⁹ G.16 of the 2007 IFC Guidance Note 4 - Community Health, Safety and Security.

⁸⁰ IFC EHS Guidelines, General EHS for Wastewater and Ambient Water Quality, April 30, 2006.

5.2 Allegations pertaining to health and safety

5.2.1 B.1 - Anti-malaria spraying

Allegation

5.2.1.1 *The spraying of the anti-malaria vector treatment has a negative impact on the health of the workers spraying the pesticide.*

Findings

5.2.1.2 This allegation is related to the allegation presented under section 5.1.1 above. The difference is that in section 5.1.1 the complainant alleges that the used pesticide is impacting bees, whereas in this section, the complainant alleges that its use impacted workers spraying it.

The workers spraying the pesticides are working for companies sub-contracted by the promoter to spray the pesticides in order to control mosquitos around the processing plant and the staff residence in the vicinity of Toamasina.

5.2.1.3 During the EIB-CM fact finding mission, the EIB-CM noted that some of the workers who carried out the spraying indicated that they were getting sick after spraying the pesticide. Apart from this allegation, the EIB-CM did not obtain any other evidence on a potentially negative impact on the health of the workers. For example, the promoter stated that there are no records of this type of allegation in its internal grievance procedure.

5.2.1.4 In accordance with its guidance, the IE concluded that the promoter put in place the Integrated Vector Management Plan for pest management activities. The promoter is contracting pesticide spraying services as part of a commercial agreement with pest control contractors which includes limitations on products that can be used and standard operating procedures for application. The IE reports that in 2015, the promoter conducted an audit of the pesticide contractor and concluded that only approved pesticides are used and that they are used in accordance with the WHO pesticide use and management guidelines. In the 2015 Environmental Certificate, the IE concluded that pesticides management is in line with the applicable standards.

5.2.1.5 The applicable standards require the promoter to prepare and implement the Integrated Vector Management Plan⁸¹, to select pesticides that are low in human toxicity⁸² and that it should use them in a way to protect the health of the project workers and the affected community⁸³. The promoter is prohibited from using certain pesticides set in the WHO protocols for pesticide selection⁸⁴. In case the spraying is carried out by a contractor, the promoter should investigate and influence the contractor to properly address the safety issues⁸⁵.

⁸¹ Paragraph 12 of the 2006 IFC Performance Standard 3 – Pollution Prevention and Abatement.

⁸² Paragraph 13 of the 2006 IFC Performance Standard 3 – Pollution Prevention and Abatement.

⁸³ G.38 of the 2007 IFC Guidance Note 3 - Pollution Prevention and Abatement.

⁸⁴ Paragraph 15 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement.

⁸⁵ G.14 of the 2007 IFC Guidance Note 4 - Community Health, Safety and Security.

Conclusions and recommendations

5.2.1.6 The EIB-CM concludes that there is no evidence to suggest that workers spraying the pesticide were harmed as a consequence. The EIB-CM also concludes that the promoter put in place a system to ensure that the use of pesticides complies with the applicable standards including the impact on human health.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the IE's conclusion that the promoter put in place a system to ensure that the use of pesticides complies with the applicable standards.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

5.2.2 B.2 - Sulphur dioxide (SO₂) leaks

Allegation

5.2.2.1 *At least four SO₂ leaks occurred during start-up testing at the refinery between 26 February and 13 March 2012 with serious impacts on the health of the population including the deaths of two adults and two babies, and the illness of about 50 people.*

Findings

5.2.2.2 Exposure to SO₂ in the ambient air has been associated with a number of health impacts, such as respiratory illnesses and premature mortality⁸⁶.

There were several noted releases of SO₂ from the processing plant which caused higher concentrations of SO₂ in the ambient air over the past several years and impacted the health of the exposed individuals at least once.

5.2.2.3 During the period noted in the allegation, a release of SO₂ from the processing plant took place and while some of the exposed individuals experienced problems, they did not experience permanent or sustained injuries. Also, another less significant release of SO₂ took place in February 2013, which resulted in discomfort to nearby residents. These incidents showed that the emergency preparedness and response system in place was not delivering on its purpose, i.e. to prevent impact on human health.

Following the noted incidents, the promoter introduced improvements to the system. The promoter is monitoring SO₂ levels in ambient air. Its emergency preparedness and response system is triggered when monitoring data shows that SO₂ has reached emergency trigger values, which are still lower than applicable standards. In 2014, there were nine such SO₂ alerts but the applicable SO₂ standards for the ambient air were not exceeded a single time. However, another incident involving SO₂ took place in September 2015. The investigation following the incident showed that, although there were no effects on the local population, the emergency preparedness and response system was not properly implemented, which led to further improvements.

⁸⁶ Pollution Prevention and Abatement Handbook 1998, Chapter on Sulfur Oxides.

5.2.2.4 Concerned about recurrence of incidents, in 2016, the lenders approached the IE with a request to provide its opinion on whether the emissions of SO₂ from the processing plant could impact the contractual relationship between them and the promoter.

The IE noted that the promoter meets the applicable standards most of the time and that there is an adequate detection and response system in place and therefore the occasional exceedances are not of a material nature to impact the relationship between the lenders and the promoter.

5.2.2.5 Occasional releases of SO₂ have continued since. For example, a release took place in the first half of 2017, but no applicable ambient air standards were breached. The IE notes that the promoter continues to implement an effective environmental monitoring program for air quality and the overall implementation of the emergency preparedness and response system has improved since the plant began operations, but fails to describe it as fully satisfactory.

5.2.2.6 The EIB continued monitoring the project after it finalised the project completion report (see paragraph 5.4.1). This is how the EIB learned that occasional releases of SO₂ continue, which proved to be a concern for the lenders, and that there is uncertainty whether the response system is implemented properly.

5.2.2.7 The applicable standards require the promoter to have an emergency preparedness and response system in place to prevent negative consequences of project's operations⁸⁷. Such a system must be, therefore, adequate and implemented properly. Also, the promoter is required to comply with the World Bank's ambient air standards applicable in this case⁸⁸, which could be breached due to SO₂ releases from the processing plant.

Conclusions and recommendations

5.2.2.8 The EIB-CM concludes that while the SO₂ releases occurred in the past, none of the recorded releases had resulted in serious impacts on the health of the local population, including fatalities. The EIB-CM also concludes that the past releases showed that the required emergency preparedness and response system was not implemented properly. More recently the implementation of the system has improved although it is inconclusive whether it is fully satisfactory at the moment. The EIB-CM also concludes that in 2016 there were occasional exceedances of SO₂ standards.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the IE's reporting and conclusions concerning past SO₂ releases and functioning of the emergency preparedness and response system. Also, the lenders enquired whether the SO₂ releases could impact the contractual relationship between them and the promoter. The EIB is expected to continue monitoring the project until this issue has been resolved⁸⁹.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

⁸⁷ Paragraph 7 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement and Paragraph 12 of the 2006 IFC Performance Standard 4 – Community Health, Safety and Security..

⁸⁸ Pollution Prevention and Abatement Handbook 1998, Chapter on Sulfur Oxides (sub-section on recommendations on p. 233).

⁸⁹ It is important to note that the requirement to continue monitoring of this issue is not as obvious as it is in the case of exceedance of the standards for manganese (see paragraphs 5.1.2.12 and 5.1.2.13) because the issue of exceedances of SO₂ standards and uncertainty whether the response system is implemented properly was not encompassed by the environmental action plan (see paragraph 3.4) as it was in the case of manganese (see paragraph 5.1.2.9).

5.2.3 B.3 - Ammonia pipeline

Allegation

5.2.3.1 *The complainant claims that the design of the ammonia pipeline that crosses the city is dangerous for the lives of the local population; in fact, according to the complainant, the workers of the processing plant have already reported leaks from an open-air ammonia pipeline within the premises of the processing plant.*

Findings

5.2.3.2 Ammonia is a substance that causes severe skin burns and eye damage and is toxic when inhaled⁹⁰.

Once unloaded at the Toamasina port, ammonia is transported to the processing plant in a liquid form through a pipeline. The pipeline goes through a populated area, therefore, posing a risk to the local community due to the risk of a pipeline rupture or break. The ammonia is then stored in liquid form at the processing plant site, from which the local community could also be exposed to, should there be a catastrophic release.

5.2.3.3 During its fact finding mission, the EIB-CM observed that parts of the ammonia pipeline are not buried; the warning signs that indicate the location of the ammonia pipeline are not very clear and the text is displayed only in French, not in Malagasy. The promoter recognised that the ammonia pipeline is not completely buried in two places. As of 2014, the IE confirmed that the ammonia pipeline is located below ground and that markers are in place, albeit these are still only in French.

5.2.3.4 Due to the high risk involved with ammonia transport and storage, the IE has monitored this during the project development. Whereas no problems with the ammonia pipeline were reported, in the past issues with ammonia storage were identified (inability to maintain tank temperatures and pressures), but these issues have been resolved. The EIB-CM did not access evidence on the negative impact of the ammonia pipeline and storage facility on the local population or workers.

Ammonia is transported through the pipeline running underneath the city only during off-loading, which occurs approximately four times a year during which time the project's personnel is present in the corridor to monitor the operation. The promoter has implemented a community strategy to educate people on how to respond to an emergency involving a release of ammonia; signs have been placed along the corridor providing instruction and informing people about contacts for additional information.

⁹⁰ <https://echa.europa.eu/substance-information/-/substanceinfo/100.028.760>, accessed on 30 November 2017. Also see Table 2 of the Guidance for Inspection of and Leak Detection in Liquid Ammonia Pipelines, issued by Fertilisers Europe in 2013: http://www.productstewardship.eu/fileadmin/user_upload/user_upload_prodstew/documents/Inspection_of_and_leak_detection_in_liquid_ammonia_pipelines.pdf, accessed on 3 December 2017.

5.2.3.5 The IE confirms that the ammonia storage facility is designed and constructed according to good international practices. There are no specific applicable standards concerning the design of the pipeline and markers⁹¹.

5.2.3.6 The hazard analysis for ammonia was conducted as part of the Hazard and Operability studies (HAZOP). HAZOP was carried out in accordance with the standard procedures.

A protocol is in place to ensure that the pipeline is fit for service. The ammonia emergency preparedness and response system is in place⁹². The IE confirms that the system in place covers leaks and release detection; fire suppression and emergency response equipment; tested procedures for warning and evacuation in case of ammonia release. The EIB confirms that this system applies to both the pipeline and the ammonia storage facility.

5.2.3.7 The applicable standards require the promoter to design, construct, and operate components of the project in accordance with good international industry practice especially where their failure could result in injury to the community⁹³. Moreover, the promoter must have an emergency plan to prevent negative consequences in case of emergencies⁹⁴. Where a project has the potential to release toxic material or where project operations could result in injury to plant personnel or the public, the promoter should conduct a hazard analysis as part of the HAZOP allowing it to identify the sources of the risks and to allocate resources for emergency response and training⁹⁵.

Conclusions and recommendations

5.2.3.8 The EIB-CM concludes that the hazard analysis for ammonia was carried out and that the ammonia emergency response plan has been put in place. The EIB-CM did not identify any problems with the operation of the ammonia pipeline and the identified issues with the ammonia storage have been resolved. The EIB-CM did not access evidence on the negative impact of the ammonia pipeline and storage facility on the local population or workers.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the IE's reporting and conclusions concerning the ammonia pipeline and ammonia storage facility and the ammonia emergency response plan. Also, the EIB was informed of the hazard analysis for ammonia that was carried out.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

⁹¹ Please note that the approaches taken in other parts of the world are not always consistent. For example, section 6.3 of the 2013 Fertilizer Europe's Guidance for Inspection of and Leak Detection in Liquid Ammonia Pipelines states that whereas ammonia pipeline markers are required in many countries, in one EU country they are not made prominent for security reasons.

⁹² For the plan, see Appendix E of the ESMP concerning Port Expansion – Operation Phase from January 2015.

⁹³ Paragraph 4 of the 2006 IFC Performance Standard 4 Community Health, Safety and Security.

⁹⁴ Paragraph 7 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement.

⁹⁵ G.18 of the 2007 IFC Guidance Note 3 - Pollution Prevention and Abatement.

5.2.4 B.4 - Sulphur storage and transport

Allegation

5.2.4.1 *The open-air storage of sulphur powder (dust) in the processing plant is potentially dangerous for the health of the local population in the event of strong winds and tropical storms. The transport of sulphur in open wagons that cross the town is also potentially dangerous for the health of the local population.*

Findings

5.2.4.2 Sulphur is a substance that is known to cause skin irritation⁹⁶. However, sulphur in its solid form poses very little risk to human health. Nevertheless, in the case of fire, sulphur is flammable and explosive and emits toxic substances such as toxic substance (e.g. SO₂). Also, sulphur dust can cause irritation of skin, eyes, etc.

Sulphur is delivered to the Toamasina port, unloaded and transported in wagons to the processing plant where it is stored. Sulphur is transported and stored in a granular state.

5.2.4.3 The promoter has prepared sulphur management procedures for Madarail, a company responsible for transport of sulphur from the port to the processing plant. Madarail provides reports after each sulphur shipment and its employees are required to clean up any spillage that may occur. However, sulphur has been observed on train tracks by EIB-CM in 2014 and by IE in 2015.

During its fact finding mission, the EIB-CM concluded that sulphur is stored in the open air in the processing plant. The promoter claims that granulated sulphur, as opposed to sulphur dust, resists wind dispersion, as demonstrated during past cyclone seasons in Madagascar. Sulphur is stored on a lined storage pad with a lined runoff pond adjacent to the storage area from which the water collected is pumped to the processing plant and eventually disposed of with the tailings. The promoter is aware that the primary concern in relation to the storage of sulphur is fire, which generates SO₂⁹⁷. Therefore, the promoter put in place a fire control system to manage a potential risk of fire⁹⁸. In case of dousing a fire in the sulphur storage area, the collected water will be retained and collected in the containment system.

Any incidents that may take place are recorded and managed through the project's Incident Management System. The EIB-CM could not find evidence of any recorded incidents related to transport of sulphur from the port to the processing plant and its storage therein.

5.2.4.4 The hazard analysis for sulphur was conducted as part of the HAZOP which was carried out in accordance with the standard procedure. The promoter has put in place an emergency preparedness response system, for which the IE in 2015 concluded that it is appropriate and provides specific management strategies for high-risk issues that have been identified.

⁹⁶ <https://echa.europa.eu/substance-information/-/substanceinfo/100.028.839>, accessed on 1 December 2017.

⁹⁷ Section 2.4.1 of the ESMP concerning Port Expansion – Operation Phase from January 2015.

⁹⁸ Section 2.4.1 of the ESMP concerning Port Expansion – Operation Phase from January 2015.

5.2.4.5 The applicable standards require the promoter to identify and evaluate the risks and impacts to the community's health, including exposure to hazardous substances⁹⁹, and to avoid or minimise those risks and impacts¹⁰⁰. The promoter is required to have an emergency preparedness and response system in place to prevent negative consequences of project operations¹⁰¹. The promoter is required to avoid, minimise or control the release of hazardous material resulting from their transportation and storage¹⁰². In case a contractor is tasked with transport of hazardous materials to and from the project, the promoter should communicate its expectations and influence the safety behaviour of the contractor¹⁰³.

Conclusions and recommendations

5.2.4.6 The EIB-CM concludes that the promoter identified and evaluated the risks concerned with sulphur storage and transport and put an emergency preparedness and response system in place. The EIB-CM further concludes that granulated sulphur does not pose a risk to human health but that in case of fire it may. Taking this into account, the promoter took appropriate steps to address this risk by putting in place sulphur management procedures for Madarail and by putting in place a fire control system. The EIB-CM could not find evidence of any recorded incidents related to sulphur transport or storage.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the carried out risk assessment and the existing emergency preparedness and response system. The EIB also took note of perils associated with sulphur and fire and the appropriate steps taken.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

5.2.5 B.5 – Impact of the rail transport on local inhabitants

Allegation

5.2.5.1 *The complainant alleges that: (1) the inhabitants of the Canada quarter of Toamasina feel trapped because there are only official crossings of the rail line at the two extremities (a few kilometres apart); (2) the crossings are not level and uneven, making passing difficult; (3) the crossings are not protected by clearly indicated barriers; (4) the overhead crossings are very steep and do not have enough lights.*

Findings

5.2.5.2 An entirely new 12-km rail line was built in parallel to an existing line to create the capacity needed to efficiently move commodities between the port and the processing plant. The project has increased the frequency and intensity of use of the rail line, with trains passing on average every 20 minutes¹⁰⁴. The rail line is operated and maintained by Madarail, a

⁹⁹ Paragraph 7 of the 2006 IFC Performance Standard 4 Community Health, Safety and Security.

¹⁰⁰ Paragraph 4 of the 2006 IFC Performance Standard 4 Community Health, Safety and Security.

¹⁰¹ Paragraph 7 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement and Paragraph 12 of the 2006 IFC Performance Standard 4 – Community Health, Safety and Security.

¹⁰² Paragraph 6 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement.

¹⁰³ G.14 of the 2007 IFC Guidance Note 4 - Community Health, Safety and Security.

¹⁰⁴ Section 8.3.1 of the ESMP concerning Port Expansion – Operation Phase from January 2015.

public-owned company. Madarail is also responsible for managing and maintaining the crossings along the route.

- 5.2.5.3 Aware of the impact that this increased traffic may have on the local population, the promoter and the Madarail put in place mitigation measures, including: seven kilometres of fencing along the rail line; seven level crossings equipped with automatic gates, traffic signs, lights and presence of secured agents continuously monitoring pedestrians and children; two overhead crossings; public awareness and information campaign; noise pollution mitigation measures; train maintenance and driver awareness; emergency response system¹⁰⁵.

The fence was put in place to separate the rail line from inhabited areas. The seven crossings and two overhead crossings allow the movement of local population and goods to and from the Canada quarter in Toamasina. There is an emergency response system in place for spills, derailment and other emergencies that could occur along the rail corridor. The project's personnel regularly inspect the area and log their observations about the conditions of the corridor and the performance of Madarail. The IE has confirmed that there are procedures, barriers, and designated crossings along the rail line and that public awareness and information campaign was carried out.

- 5.2.5.4 The applicable standards state that prevention and control of traffic-related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users¹⁰⁶.

Conclusions and recommendations

- 5.2.5.5 The EIB-CM concludes that the mitigation measures put in place include seven level crossings with additional equipment such as gates, two overhead crossings and a fence alongside the rail line. The EIB-CM review has shown that there is an emergency response system in place. However, the EIB-CM did not identify applicable standards containing technical requirements for the level and overhead crossings.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the developments concerning the rail line mitigation measures.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

5.2.6 B.6 – Disaster Management Plan

Allegation

- 5.2.6.1 *The promoter has not designed a coordinated disaster plan with the authorities nor set aside resources to be used in the event of a disaster. Also, the processing plant is too close to the city of Toamasina and the promoter has failed to keep the 10 km distance specified in the promoter's project description.*

¹⁰⁵ Sections 4.2 and 8.3.1 of the ESMP concerning Port Expansion – Operation Phase from January 2015; For the emergency response plan see: Appendix F of the ESMP concerning Port Expansion – Operation Phase from January 2015.

¹⁰⁶ IFC EHS General Guidelines, Community Health and Safety, article 3.4, Traffic and Safety.

Findings

5.2.6.2 During their joint mission in 2013 examining environmental emergency preparedness concerning industrial accidents in Toamasina, the United Nations Environment Programme (UNEP) and the European Union Civil Protection (EUCP) Mechanism concluded that the proximity of the urban area of Toamasina to the project's industrial sites could make any major chemical release a catastrophic event¹⁰⁷. Therefore, appropriate emergency preparedness response systems were needed. There are two types of these systems, an internal one and an external (regional) one.

5.2.6.3 In 2013, UNEP and the EUCP Mechanism concluded that there is an internal system but did not take a view on its quality¹⁰⁸. In 2015, the IE concluded that the project's internal emergency preparedness response system is appropriate and provides specific management strategies for high-risk issues that have been identified.

5.2.6.4 The UNEP and the EUCP Mechanism concluded that the response capability of local authorities is limited¹⁰⁹ and the IE noted that there is a need for a regional emergency preparedness response system.

Due to the limited capacity of the community to respond to emergencies, as required, the promoter has assumed the primary role for incidents involving project activities at its facilities. The project is conducting environmental and social risk assessment on a regular basis; ranking the risks according to probability and severity; and developing risk management approaches to manage the risk. Also, the project developed and communicated to the communities the specific response procedures for incidents.

In respect to a regional emergency preparedness and response system, the Tamatave Region's Industrial Risk Management Committee (*Comité de Gestion des Risques Industriels*) was set up to assess industrial risks, set up management plans to reduce these risks and to develop emergency response capability. The promoter is taking an active part in the work of this Committee. In 2015, the Committee was developing a regional emergency preparedness and response system for industrial and natural emergencies and the EIB confirmed that this system has been put in place later.

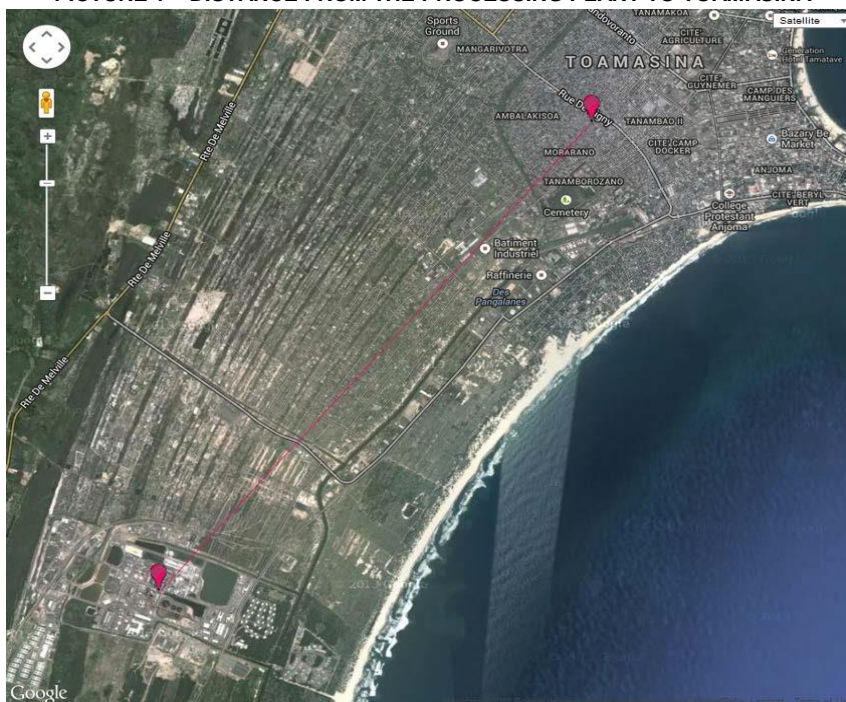
5.2.6.5 Finally, in respect to the proximity of the processing plant to the populated area, according to the EIB's project documents, the hydrometallurgical plant was foreseen 10 km south of Toamasina. However, when measuring the distance from the processing plant to Toamasina using Google Maps® the distance appears to be approximately 4km. The EIA states that the distance between the processing plant and the port will be 10 km. When using the same Google Maps, the distance between the plant and the port appears to be 8 km.

¹⁰⁷ Report on Environmental Emergency Preparedness: Industrial Accidents In Toamasina, Madagascar, Scoping Mission, April 2013, available at: https://reliefweb.int/sites/reliefweb.int/files/resources/Madagascar_report_final_English.pdf, accessed on 28 November 2017.

¹⁰⁸ Report on Environmental Emergency Preparedness: Industrial Accidents In Toamasina, Madagascar, Scoping Mission, April 2013.

¹⁰⁹ Report on Environmental Emergency Preparedness: Industrial Accidents In Toamasina, Madagascar, Scoping Mission, April 2013.

PICTURE 1 – DISTANCE FROM THE PROCESSING PLANT TO TOAMASINA



5.2.6.6 The applicable standards require the promoter to have an emergency preparedness and response system in place to prevent negative consequences of project's operations¹¹⁰. The promoter is also required to assist and collaborate with the community and the local government agencies in their preparations to respond effectively to emergency situations¹¹¹. If local authorities have little or no capacity to respond effectively, the promoter is required to play an active role in preparing for and responding to emergencies associated with the project and to disclose appropriate information to affected communities and relevant authorities¹¹².

Conclusions and recommendations

5.2.6.7 The EIB-CM concludes that there are both internal and external (regional) emergency preparedness and response systems in place at the moment. The preparation of the external one took longer and was finalised after the allegation was made. The EIB-CM also concludes that the promoter played an active role in preparing the external programme and disclosed the appropriate information. In respect to the distance from the processing plant, the EIB-CM could not identify specific applicable standards that require minimum distance between populated areas and such installations.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the existence of the emergency preparedness and response systems and the promoter's involvement in their preparation.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

¹¹⁰ Paragraph 7 of the 2006 IFC Performance Standard 3 - Pollution Prevention and Abatement and Paragraph 12 of the 2006 IFC Performance Standard 4 – Community Health, Safety and Security..

¹¹¹ Paragraph 12 of the 2006 IFC Performance Standard 4 - Community Health, Safety and Security.

¹¹² Paragraph 12 of the 2006 IFC Performance Standard 4 - Community Health, Safety and Security.

5.3 Allegations pertaining to implementation of the Resettlement Action Plan

5.3.1 C.1 - Quality of resettlement

Allegation

5.3.1.1 *The complainant alleges that the resettlement carried out by Ambatovy is of substandard quality. More specifically, the complainant alleges that for project affected people (PAP) resettled from the area where the processing plant and the tailings facility were built, the replacement houses are of low quality and that there is a lack of health facilities.*

Findings

5.3.1.2 In order to carry out the resettlement, the promoter developed and implemented the Resettlement Action Plan (RAP). Pursuant to the RAP, the PAPs from the areas where the processing plant and tailings facility were built were resettled in the villages of Marovato and Vohitrambato, respectively.

5.3.1.3 In line with the RAP, the promoter built houses in these villages. The replacement houses were adapted to the local population's habits and the construction materials were selected in agreement with the population. The promoter warned the PAPs that their choice of construction material is too expensive compared with the free alternative construction materials, which, therefore, impacted PAPs capacity to maintain the houses.

The replacement houses began to degrade by 2011 which continued well into 2014. Although, it was not required to do so, the promoter provided support in the maintenance of these houses. For example, in 2015 it provided repair material for the households who were willing to use it to fix parts of their houses.

5.3.1.4 In respect to the health facilities, the promoter constructed, equipped and financed the operation of a health centre in Vohitrambato at an early stage before transferring it to the national authorities in 2015. No health centre was foreseen in Marovato, as it was considered that an existing facility, located some 3-5km away, was accessible at a comparable distance to the health centre to which the population had access prior to the resettlement. It seems that not all PAPs were aware that no health centre was foreseen in Marovato, which could be possibly accredited to the noted problems of communication and misunderstandings between the promoter and the PAPs.

5.3.1.5 Challenges such as these, resulted in the 2011 project audit's conclusion that the project's RAP implementation was non-aligned with the applicable standards¹¹³ in relation to improving living standards. The 2015 Environmental Certificate does not make any specific references to this but recognises that the resettlement process was still ongoing; that there were ongoing and emerging challenges; and that the project had action plans to address them. Indeed, by 2016/2017, the audit of the project's relocation for Vohitrambato and Marovato found that the project had overall fulfilled its commitments in line with the applicable standards.

¹¹³ PGEDS and the national directive on involuntary resettlement prepared for the Ambatovy project.

5.3.1.6 The applicable standards require the promoter to develop a RAP¹¹⁴ for any project that results in physical displacement¹¹⁵. The resettlement must improve living conditions among displaced persons by, inter alia, providing adequate housing at resettlement sites¹¹⁶. To mitigate adverse social impacts, the promoter should ensure that resettlement activities are implemented with appropriate disclosure of information to those affected¹¹⁷. A resettlement will be considered complete when the adverse impacts of resettlement have been addressed in a manner that is consistent with the objectives stated in the RAP¹¹⁸. The promoter may commission an external completion audit of the RAP to determine whether its provisions have been met¹¹⁹.

Conclusions and recommendations

5.3.1.7 The EIB-CM concludes that the resettlement did not comply with the applicable standards concerning living standards at the time of the complaint but by 2016/2017 the promoter met these standards. In respect to the specific examples presented in the allegation, the EIB-CM concludes that the promoter built the replacement houses and ultimately provided its support in their maintenance although their degradation is credited to inadequate building material chosen by the PAPs in respect to which they were informed. Also, as required, the promoter built, equipped and financed the operation of the Vohitrambato health centre at the early stage and the understanding by the PAPs that similar centre will be built in Marovato, is credited to the problems of miscommunication.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the challenges and the final results concerning compliance with the applicable standards and, more specifically, that the obligations in respect to the replacement housing and a health centre were ultimately attained.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

5.3.2 C.2 - Livelihood of resettled people

Allegation

5.3.2.1 *The complainant alleges that livelihoods of the PAPs resettled from the area where the processing plant and the tailings facility were built have not been restored which impacted the income of residents of Vohitrambato and Marovato and ultimately abandonment of Marovato by most PAP families. In addition, the PAPs have uncertainties concerning*

¹¹⁴ Paragraph 12 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement; Guidance on the preparation of the Resettlement Action Plan can be found in the IFC's Corresponding Handbook from 2002 (G.20 of the 2007 IFC Guidance Note 5 – Land Acquisition and Involuntary Resettlement; Handbook for Preparing a Resettlement Action Plan, available at:

<http://www.ifc.org/wps/wcm/connect/22ad720048855b25880cda6a6515bb18/ResettlementHandbook.PDF?MOD=AJPERES&CACHEID=22ad720048855b25880cda6a6515bb18>).

¹¹⁵ G.20 of the 2007 IFC Guidance Note 5 – Land Acquisition and Involuntary Resettlement; Handbook for Preparing a Resettlement Action Plan.

¹¹⁶ Section on Objectives; Paragraph 16 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹¹⁷ Section on Objectives of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹¹⁸ Paragraph 12 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹¹⁹ G.24 of the 2007 IFC Guidance Note 5 – Land Acquisition and Involuntary Resettlement; Handbook for Preparing a Resettlement Action Plan.

compensation (methods used for calculating compensation and how this compensation would be paid) as one of the measures for livelihood restoration.

Findings

5.3.2.2 As indicated in paragraph 5.3.1.2 above, some of the PAPs were resettled in the villages of Marovato and Vohitrambato.

5.3.2.3 In respect to compensation, as part of livelihood restoration/improvement, the project has a compensation plan for resettlement to these villages which is reflected in the RAP. The plan is a land and cash compensation plan that took into account different assets to be compensated. The plan includes the following types of compensation:

- Compensation for lost land
- Compensation for lost harvest and other cash compensation and
- Compensation for loss of commercial structures and commercial activities.

While the PAPs that were physically and economically displaced have received some compensation, a number of compensation related issues were noted in the past such as: that compensation for lost commercial structures and commercial activities was not paid out; size of some of the plots and quality of soil was not adequate; there was a lack of consistency in respect to compensations; some PAPs were not paid fully.

5.3.2.4 Compensation alone does not guarantee the restoration/improvement of livelihoods of PAPs¹²⁰. Therefore, the promoter was required to undertake additional actions. With the support of several NGOs, the promoter invested in a variety of activities. In addition to the compensation activities described in paragraph 5.3.2.3 above, these activities included: employment opportunities and technical assistance for PAPs to improve and enhance their agricultural or other business practices. Individual examples of these activities include: support for provision of commercial activities by PAPs through establishment of a private company that would sell PAPs' agriculture products to the project's canteen; income-generating activities oriented mostly towards animal husbandry. The financial and technical efforts put into the restoration of livelihoods and income generation by the project are recognised by other local development organisations such as local NGOs.

5.3.2.5 However, the initial activities were not fully successful. In 2011, the independent audit of the RAP found that the results of its implementation were non-aligned with the applicable standards¹²¹. There are a number of reasons for these initial challenges including, in addition to the issues noted in paragraph 5.3.2.3 above: misunderstandings around compensation and noted failures of the income restoration strategy; a number of PAPs were not farmers therefore the proposed livelihood restoration measures were not adequate; some of the PAPs seem not to have been able to adopt the proposed new techniques. These challenges had an impact on the PAPs. For example, some of them led to the situation where only 10% of the relocated households resided in Marovato by 2015.

¹²⁰ G.5 of the 2007 IFC Guidance Note 5 – Land Acquisition and Involuntary Resettlement; Handbook for Preparing a Resettlement Action Plan.

¹²¹ IFC performance standards and the government documents regulating the Project (PGEDS) and the national directive on involuntary resettlement prepared for the Ambatovy project in relation to livelihoods restoration.

5.3.2.6 The promoter recognised these shortcomings and pledged to adequately restore/improve the livelihood of the PAPs.

In 2015 the project worked on finalising the compensation for the resettled families to Vohitrambato. By then the project had already put in place a system: that established a procedure for the distribution of payments that affirms that the parties are entitled to compensation as well as the formula to determine the related amounts; that recorded and verified payments to avoid false claims and to receive assurance that the compensation was provided. Also in 2015, the promoter continued working on restoration/improvement of livelihoods through targeted income-generating activities and a securing income program.

Moreover, aware of the challenges, in 2015 the lenders obliged the promoter to prepare an action plan describing the problem and actions to ensure that the applicable standards are complied with (for more information on the plan, see paragraph 3.4). The promoter complied with this request and prepared an action plan and a schedule for implementing actions during the period 2015 - 2017.

5.3.2.7 Considering that involuntary resettlement may give rise to grievances among affected persons and communities over a number of issues¹²², the project put in place a grievance mechanism. The mechanism is community led with representation from community members, independent third parties and Ambatovy. The mechanism also deals with concerns about compensation and physical or economic displacement.

Also, the promoter put in place a system for monitoring the effectiveness of livelihood restoration/improvement. In 2016, the promoter assessed the livelihoods of the resettled parties and the development of Vohitrambato and compared it to the pre-relocation livelihoods of the affected parties. Later that year the promoter reported that the programs to facilitate income generating activities, as part of livelihood restoration/improvement, were completed.

5.3.2.8 The IE states that the resettlement programmes of Marovato and Vohitrambato achieved all the expected results¹²³. The IE concluded that 11 years after the relocation, Vohitrambato is a village with social and economic systems similar to other villages in the area. In addition to this, there are still additional project activities aimed at following up and supporting various income generating activities including improvement in agriculture and enhancement of the artisanal sectors. The EIB expects to receive a full report by the IE on the implementation of the RAP concerning Vohitrambato and Marovato villages in the first half of 2018.

An audit performed in 2016 and 2017 found the project's social performance, including PAPs' livelihood restoration/improvement to be in alignment with the applicable standards¹²⁴.

Finally, in respect to Marovato, which, as indicated in paragraph 5.3.2.5 above, saw a large number of PAPs leave the village, the EIB's services understand that following the receipt of

¹²² G.17 of the 2007 IFC Guidance Note 5 – Land Acquisition and Involuntary Resettlement; Handbook for Preparing a Resettlement Action Plan.

¹²³ With the exception of a land dispute issue pending before the courts for several years and which are regularly reported to lenders. However, since these issues are not covered under the allegation, they are not included in the text above.

¹²⁴ Malagasy legal framework, the World Bank's Operational Guidelines, the Equator Principles and the International Finance Corporation.

the respective land ownership titles, these households opted to sell and have since moved away from the village area. The EIB's services regard that the resettlement activities committed to under the RAP in Marovato for the remaining households (i.e. PAPs identified under the original RAP) met the same level of satisfaction as the similar activities in Vohitrambato.

5.3.2.9 The applicable standards require the promoter to offer displaced persons and communities compensation for loss of assets at full replacement cost and other assistance to help them improve or at least restore their livelihoods¹²⁵. In cases where a project's land acquisition caused loss of income or livelihood, the promoter is also required to compensate the cost of re-establishing commercial activities elsewhere and lost net income during the period of transition¹²⁶. Standards for compensation must be consistent within the project¹²⁷. Compensation for land and other assets should be calculated at the market value plus the transaction costs related to restoring the assets¹²⁸.

Moreover, the standards require the promoter to establish such a grievance mechanism to receive and address specific concerns about compensation and relocation that are raised by displaced persons or members of host communities¹²⁹. Also, the standards require the promoter to establish procedures to monitor and audit/evaluate the implementation of resettlement plans and take corrective action as necessary¹³⁰. A resettlement will be considered complete when the adverse impacts of resettlement have been addressed in a manner that is consistent with the objectives stated in the resettlement plan¹³¹.

Conclusions and recommendations

5.3.2.10 The EIB-CM concludes that at the time of the complaint the project faced challenges concerning the compensation and the overall restoration/improvement of livelihood. The EIB-CM concludes that the promoter dealt with these challenges and, as confirmed by the IE and independent audit, ultimately complied with the applicable standards. Moreover, the EIB-CM concludes that the promoter implemented the action plan, required by the lenders, to address the identified challenges, put in place the grievance mechanism, system for monitoring and conducted two audits of its related activities.

The EIB-CM concludes that the EIB fulfilled its monitoring obligation by taking note of the challenges and the final results concerning restoration/improvement of livelihood of the PAPs. When the applicable standards were not attained, the EIB, together with other lenders took steps to ensure that the promoter works on achieving the applicable standards.

Therefore, the EIB-CM does not make any specific recommendations in this respect.

¹²⁵ Paragraph 8 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹²⁶ Paragraph 20 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹²⁷ Paragraph 8 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹²⁸ G.3 of the 2007 IFC Guidance Note 5 – Land Acquisition and Involuntary Resettlement; Handbook for Preparing a Resettlement Action Plan; additional information on calculation is provided in G.11 of the 2007 IFC Guidance Note 5 – Land Acquisition and Involuntary Resettlement.

¹²⁹ Paragraph 10 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹³⁰ Paragraph 12 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

¹³¹ Paragraph 12 of the 2006 IFC Performance Standard 5 Land Acquisition and Involuntary Resettlement.

5.4 General overview of the EIB's monitoring obligation

Finding

- 5.4.1. On the basis of the information received and collected (e.g. information received from the promoter, the IE and the EIB's project site visits), the EIB prepared and validated a large number of monitoring reports. Majority of these reports were prepared before the finalisation of the project completion report by the EIB in October 2014, but a number of them were completed afterwards.

These reports, numerous handwritten notes, e-mails and the records of the lenders' meetings illustrate the EIB's review of the information received from the promoter and the IE. Moreover, the lenders, including the EIB, took additional steps to attain compliance with the applicable standards by the promoter. These steps include: requiring the promoter to prepare an action plan to deal with specific identified challenges (see paragraphs 5.1.2.9 and 5.3.2.6); exploring consequences that the failure to comply with the standards may have on the contractual relationship between them and the promoter (see paragraphs: 5.1.2.10 and 5.2.2.4).

- 5.4.2. Related to the project monitoring, the EIB did not include the project in the IPL despite noting this in a monitoring report.
- 5.4.3 Also, as indicated in paragraphs 5.1.2.13 and 5.2.2.6, the EIB is expected to continue monitoring the project until all the noted issues have been resolved.

Conclusions and recommendations

- 5.4.4 Conclusions concerning the expected continuation of EIB's monitoring are presented in paragraphs 5.1.2.15 and 5.2.2.8, regarding water contamination by the tailings facility and SO₂ releases, respectively, and, therefore, are not repeated here.
- 5.4.5. The EIB-CM concludes that, as presented in sections 5.1 – 5.3 above, the EIB had access to the relevant information stemming from different sources. Moreover, the EIB-CM concludes that the EIB reviewed the received information as required (see paragraph 3.6). Also, the EIB-CM concludes that the lenders, including the EIB, took additional steps to attain compliance with the applicable standards by the promoter.

However, the EIB-CM furthermore concludes that, considering that: the EIB was aware that the project was not in compliance with some applicable standards (e.g. paragraph 5.1.2.15); the on-going EIB-CM complaints procedure; and a monitoring report (see paragraph 5.4.2); the EIB should have included the project in the IPL as required (see paragraph 3.7).

Therefore, the EIB-CM recommends to the EIB to include the project in the IPL, prepare an action plan¹³² and follow up on its implementation periodically.

¹³² An argument could be made that the environmental action plan prepared by the IE (see paragraph 3.4) could substitute this action plan. However, this only applies partially since not all of the noted breaches of applicable standards during the course of the implementation of the project were covered by the environmental action plan.

6. SUMMARY OF THE CONCLUSIONS AND RECOMMENDATIONS

- 6.1 After conducting the review, the EIB-CM grouped the conclusions reached on the basis of the collected evidence concerning the received allegations into one of the three categories depending on the compliance of the project with the applicable standards.

Most of the allegations fall under Category 1, i.e. the EIB-CM concludes that in respect to those allegations the project complies with the applicable standards.

There are four Category 2 allegations, meaning that at the time of the complaint the project encountered challenges in compliance with the applicable standards, but these challenges have since been resolved. More specifically, the EIB-CM concludes that:

- in the past there were **leaks on the pipeline leading to the tailings facility** but this issue has been resolved in the meantime (**allegation A.3**, paragraph 5.1.3.8)
- at the moment both internal and external (regional) emergency preparedness and response systems (**disaster management plans**) are in place, although the preparation of the external one took longer and was finalised after the allegation was made (**allegation B.6**, paragraph 5.2.6.7)
- the carried out resettlement did not comply with the applicable standards concerning living standards (**quality of resettlement**) at the time of the complaint but this was rectified subsequently (**allegation C.1**, paragraph 5.3.1.7)
- at the time of the complaint, the project faced challenges concerning the compensation and the overall **restoration/improvement of livelihood** but these have been resolved since then (**allegation C.2**, paragraph 5.3.2.10)

Finally, the EIB-CM concludes that the project is not yet fully compliant with the applicable standards in respect to two allegations, which, therefore, fall under Category 3. The EIB-CM concludes that:

- the **water contaminated by the tailings facility** still does not comply with the applicable standards (**allegation A.2**, paragraph 5.1.2.15)
- there are occasional **leaks of SO₂** exceeding applicable standards and it is inconclusive whether the implementation of the emergency preparedness and response system in respect to SO₂ is fully satisfactory at the moment (**allegation B.2**, paragraph 5.2.2.8).

- 6.2 In respect to the monitoring carried out by the EIB, the EIB-CM concludes that the EIB fulfilled this obligation as required, albeit with one exception. The EIB did not include the project in the IPL, although there were sufficient reasons to do so.
- 6.3 Therefore, the EIB-CM recommends to the EIB to include the project in the IPL, prepare an action plan for the aspects of the project where the applicable standards are not yet complied with (outstanding environmental and health and safety issues) and follow up on the plan's implementation.
- 6.4 For each specific allegation, Table 3 below presents a summary of conclusions pertaining to: (i) project's applicable standards and (ii) responsibilities of the EIB, as well as specific associated recommendations, if applicable.

TABLE 3 – SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Allegation	Conclusions (project's applicable standards)	Cat.	Conclusions (responsibility of the EIB)	Recomm.
A.1 Impact on bees	There is uncertainty about the causality between promoter's use of pesticides, subsequent bee disappearance and decrease in crop yields. In 2015, the promoter complied with the applicable standards in respect to use of the pesticides.	1	The EIB fulfilled its monitoring obligation by taking note of the IE's conclusions on the appropriateness of the pesticide use and by acquiring information about the relevant litigation before the Malagasy courts.	None
A.2 Water contamination by the tailings facility and the processing plant	The groundwater quality is monitored at the processing plant and there were no observed significant changes in its quality; contamination of surface water from overflows and damages to the tailings ponds' dams has not proven to be an issue; the applicable standards for manganese in water impacted by the tailings facility have been and are still breached.	3	The EIB fulfilled its monitoring obligation in the past. With respect to the breach of applicable standards for manganese, the lenders, including EIB, have taken steps to ensure that the promoter works on achieving the applicable standards and have explored the possible consequences that such breaches may have. The EIB is expected to continue monitoring the project until this issue has been resolved.	None
A.3 Leaks on the pipeline leading to the tailings facility	In the past a number of leaks took place, some of which impacted the environment. The promoter has taken steps to address the leaks; carried out a risk assessment and put in place the emergency preparedness and response system to prevent negative consequences of such leaks.	2	The EIB fulfilled its monitoring obligation by taking note of the IE's reporting concerning: leaks and operation of the pipeline and its conclusion that the relevant risk assessment has been carried out and an appropriate emergency system is in place.	None
A.4 Marine outfall	The marine outfall is located at an appropriate distance from the shore, a monitoring system is in place; the monitoring has not shown increased pollution in the marine environment.	1	The EIB fulfilled its monitoring obligation by reviewing the received information on marine pollution.	None
A.5 Monitoring of water quality of the relevant rivers	The promoter has put in place surface water monitoring programmes whose results point to the conclusion that the processing plant and the tailings facility have negligible impact on Andranofisotro and Ivondro rivers.	1	The EIB fulfilled its monitoring obligation by taking note of the IE's conclusion that the surface water monitoring programmes are in place and by reviewing the results of the monitoring.	None
B.1 Anti-malaria spraying	There is no factual evidence to suggest that workers spraying the pesticide were harmed by the use of pesticide. The promoter put in place a system to ensure that the use of pesticides complies with applicable standards.	1	The EIB fulfilled its monitoring obligation by taking note of the IE's conclusion that the promoter put in place a system to ensure that the use of pesticides complies with applicable standards.	None
B.2 SO₂ leaks	The recorded SO ₂ releases that occurred in the past did not result in serious impacts on the health of the local population. In the past, the required emergency preparedness and response system was not effective in respect to SO ₂ but more recently the implementation of the system has improved although it is	3	The EIB fulfilled its monitoring obligation by taking note of the IE's reporting and conclusions concerning past SO ₂ releases and functioning of the emergency system. Also, the lenders, including the EIB, have explored the possible consequences that such SO ₂ emissions may	None

Allegation	Conclusions (project's applicable standards)	Cat.	Conclusions (responsibility of the EIB)	Recomm.
	inconclusive whether it is fully satisfactory at the moment. Also, in 2016 there were still occasional exceedances of SO ₂ standards.		have. The EIB is expected to continue monitoring the project until this issue has been resolved.	
B.3 Ammonia pipeline	The hazard analysis for ammonia was carried out and the ammonia emergency response plan has been put in place. No problems with the operation of the ammonia pipeline were identified and the identified issues with the ammonia storage have been resolved. No evidence on the negative impact of the ammonia pipeline and storage facility on the local population or workers was identified.	1	The EIB fulfilled its monitoring obligation by taking note of the IE's reporting and conclusions concerning the ammonia pipeline and ammonia storage facility and the ammonia emergency response plan as well as by being informed that the hazard analysis for ammonia was carried out.	None
B.4 Sulphur storage and transport	The promoter identified and evaluated the risks concerned with sulphur storage and transport and put an emergency preparedness and response system in place. The promoter has taken into account that granulated sulphur does not pose a risk to human health but that in case of fire it may and, therefore, took appropriate steps. No recorded incidents related to sulphur transport or storage are found.	1	The EIB fulfilled its monitoring obligation by taking note of: risk assessment carried out; emergency system in place; perils associated with sulphur and fire and the appropriate steps taken.	None
B.5 Impact of the rail transport on local inhabitants	There are mitigation measures in place including seven level crossings with additional equipment such as gates; two overhead crossings; fence alongside the rail line; emergency response procedure. No applicable standards containing technical requirements for the level and overhead crossings were identified.	1	The EIB fulfilled its monitoring obligation by taking note of the developments concerning the rail line mitigation measures.	None
B.6 Disaster Management Plan	There are both internal and external emergency preparedness and response systems in place. The preparation of the external one took longer and was finalised after the allegation was made. There are no applicable standards that set specific requirements concerning the distance.	2	The EIB fulfilled its monitoring obligation by taking note of the existence of the emergency systems.	None
C.1 Quality of resettlement	The carried out resettlement did not comply with the applicable standards concerning living standards at the time of the complaint but by 2016/2017, the promoter met these standards. The promoter built the replacement houses and ultimately provided its support in their maintenance although their degradation is credited to inadequate building material chosen by the PAPs. Also, the promoter built, equipped and financed the operation of the Vohitrambato health centre at an early stage and the understanding by the PAPs that similar centre will be built in Marovato, is credited to problems of miscommunication.	2	The EIB fulfilled its monitoring obligation by taking note of the challenges and the final results concerning compliance with the applicable standards and, more specifically, that the obligations in respect to the replacement housing and a health centre were ultimately attained.	None

Allegation	Conclusions (project's applicable standards)	Cat.	Conclusions (responsibility of the EIB)	Recomm.
C.2 Livelihood of resettled people	At the time of the complaint, the project faced challenges concerning the compensation and the overall restoration/improvement of livelihoods. The promoter dealt with these challenges and ultimately complied with the applicable standards. The promoter also put in place the grievance mechanism, system for monitoring and conducted two audits of its related activities.	2	The EIB fulfilled its monitoring obligation by taking note of the challenges and the final results concerning restoration/improvement of livelihood of the PAPs. When the applicable standards were not attained, the EIB, together with other lenders took steps to ensure that the promoter works on achieving the applicable standards.	None
General overview of the EIB's monitoring obligation	n/a	n/a	<p>The EIB had access to and reviewed the relevant information. When informed of the encountered challenges, the lenders, including the EIB, took additional steps to attain compliance with the applicable standards by the promoter.</p> <p>Considering that: the EIB was aware that the project was not in compliance with some applicable standards; the on-going EIB-CM complaints procedure; and a monitoring report; the EIB should have included the project in the IPL.</p>	The EIB should include the project in the IPL, prepare an action plan for the aspects of the project where the applicable standards are not yet complied with (outstanding environmental and health and safety issues) and follow up on its implementation

S. Derkum
Head of Division
Complaints Mechanism
19.03.2018

D. Petrovic
Complaints Officer

19.03.2018

LIST OF ABBREVIATIONS

ACP	Africa, Caribbean and Pacific
AfDB	African Development Bank
CAM	Chlumsky, Ambrust & Meyer
CMPTR	European Investment Bank Complaints Mechanism Principles, Terms of Reference and Rules of Procedure
EHS	Environmental, Health and Safety
EIB	European Investment Bank
EIB-CM	EIB's Complaints Mechanism Division
EO	European Ombudsman
ESMP	Environmental Specific Management Plan
EUCP	European Union Civil Protection
EUR	Euro
FMMT	<i>Fikambanan'ny Mpamboly sy Mpiompy Tantely</i>
HAZOP	Hazard and Operability studies
IAR	Initial assessment report
IE	Independent Engineer, CAM
IFC	International Finance Corporation
IPL	Implementation problem list
JBIC	Japan Bank for International Cooperation
K-Exim	Export-Import Bank of Korea
ONE	<i>Office National pour l'Environnement</i> – National Environment Office
PAP	Project affected people
PGEDS	<i>Plan de gestion environnementale et de développement social</i> - Environmental Management and Social Development Plan

RAP	Resettlement Action Plan
UNEP	United Nations Environment Programme
USD	United States Dollar
VDM	<i>Les Vergers De Madagascar</i> – Orchards of Madagascar
WHO	World Health Organization