

SUSTAINABILITY REPORT 2022

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# List of Acronyms

ACA	Additional Conservation Action
AEMS	Ambatovy Environmental Management System
AfDB	African Development Bank
AFNOR	Association Française de Normalisation (French Standardization Association)
AIFR	All Injury Frequency Rate
AIMS	Ambatovy Incident Management System
ALBI	Ambatovy Local Business Initiative
AMSA	Ambatovy Minerals S.A.
APELL	Awareness and Prevention of Emergencies at the Local Level
B2B	Business-to-Business
ВВОР	Business and Biodiversity Offsets Program
BNGRC	Bureau National de Gestion des Risques et des Catastrophes (National Office of Disaster Risk Management)
CAHRA	Conflict-Affected and High-Risk Area
CAZ	Couloir Ankeniheny-Zahamena (Ankeniheny-Zahamena Corridor)
CCDR	Country Climate and Development Report
CCS	Centre Culturel et Social (Cultural and Social Center)
CDP	Communal Development Plan
CEO	Chief Executive Officer
CFAM	Corridor Forestier Analamay Mantadia (Analamay-Mantadia Forest Corridor)
CHRD	Centre Hospitalier de Référence de District (District Reference Hospital Center)
CHU	Centre Hospitalier Universitaire (University Hospital Center)
CI	Cobalt Institute
CIREDD	Circonscription de l'Environnement et du Développement Durable (District for Environment and Sustainable Development)
CLP	Classification, Labeling and Packaging
CNLS	Comité National pour la Lutte contre le Sida (National Committee for the Fight against AIDS)
СОВА	Community-based Association
CPN	Child Protection Network

CR	Critically Endangered Species
CRC	Convention on the Rights of the Child
CRGRC	Comité Régional de Gestion des Risques et des Catastrophes (Regional Committee for Disaster Risk Management)
CSR	Communities and Social Relations
CTD	Collectivités Territorialles Décentralisées (Decentralized Territorial Collectivities)
СТЕ	Comité Technique d'Evaluation (Technical Evaluation Committee)
DGDD	Direction Générale du Développement Durable (General Directorate of Sustainable Development)
DMSA	Dynatec Madagascar S.A.
DRAE	Direction Régionale de l'Agriculture et de l'Elevage (Regional Directorate of Agriculture and Livestock)
DREDD	Direction Régionale de l'Environnement et du Développement Durable (Regional Directorate of Environment and Sustainable Development)
DREN	Direction Régionale de l'Education Nationale (Regional Directorate of National Education)
	(megional birectorate of National Education)
DRETFP	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)
DRETFP	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education
	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the
DRPEB	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique
DRPEB DRSP	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)
DRPEB DRSP EDBM	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)  Economic Development Board of Madagascar
DRPEB DRSP EDBM EGOC	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)  Economic Development Board of Madagascar  External Grievance Oversight Committee
DRPEB  DRSP  EDBM  EGOC  EITI	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)  Economic Development Board of Madagascar  External Grievance Oversight Committee  Extractive Industries Transparency Initiative
DRPEB DRSP EDBM EGOC EITI EN	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)  Economic Development Board of Madagascar  External Grievance Oversight Committee  Extractive Industries Transparency Initiative  Endangered Species
DRPEB  DRSP  EDBM  EGOC  EITI  EN  EPFI	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)  Economic Development Board of Madagascar  External Grievance Oversight Committee  Extractive Industries Transparency Initiative  Endangered Species  Equator Principles Financial Institution
DRPEB  DRSP  EDBM  EGOC  EITI  EN  EPFI  ERP	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)  Economic Development Board of Madagascar  External Grievance Oversight Committee  Extractive Industries Transparency Initiative  Endangered Species  Equator Principles Financial Institution  Emergency Response Plan
DRPEB  DRSP  EDBM  EGOC  EITI  EN  EPFI  ERP  ERT	Direction Régionale de l'Enseignement Technique et de la Formation Professionnelle (Regional Directorate of Technical Education and Vocational Training)  Direction Régionale de la Pêche et de l'Economie Bleue (Regional Directorate of Fisheries and the Blue Economy)  Direction Régionale de la Santé Publique (Regional Directorate of Public Health)  Economic Development Board of Madagascar  External Grievance Oversight Committee  Extractive Industries Transparency Initiative  Endangered Species  Equator Principles Financial Institution  Emergency Response Plan  Emergency Response Team

List of Acronyms

FAI	First Aid Injury	
FAT	Fatality	
FIMIAM	Fikambanambe Mivondrona Ampitambe Mahatsara (Federation of Formal Entities of Ampitambe)	
FOS	Foundations of Supervision	
FTE	Full-Time Equivalent	
GEM	Groupement des Entreprises de Madagascar (Madagascar Business Association)	
GERP	Groupe d'Etude et de Recherche sur les Primates (Primate Study and Research Group)	
GHG	Greenhouse Gas	
GISTM	Global Industry Standard on Tailings Management	
GRI	Global Reporting Initiative	
На	Hectare(s)	
НІА	Health Impact Assessment	
HIV / AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome	
НОР	Human and Organizational Performance	
HR	Human Resources	
HS	Health and Safety	
HSEQ	Health, Safety, Environment and Quality	
ICMM	International Council on Mining and Metals	
IFC	International Finance Corporation	
IGA	Income Generating Activity	
ILCAD	International Level Crossing Awareness Day	
ILO	International Labor Organization	
INGO	International Non-Governmental Organization	
IPCC	Intergovernmental Panel on Climate Change	
IRM	International Raw Materials	
ISO	International Organization for Standardization	
IT	Information Technology	
IUCN	International Union for Conservation of Nature	
JICA	Japan International Cooperation Agency	
kg	Kilogram	
km	Kilometer	

KOMIR	Korea Mine Rehabilitation and Mineral Resources Corporation
KPI	Key Performance Indicator
kt	Kiloton
LGIM	Loi sur les Grands Investissements Miniers (Law on Large Scale Mining Investments)
LME	London Metal Exchange
LPG	Liquid Petroleum Gas
LTI	Lost Time Injury
LTIFR	Lost Time Injury Frequency Rate
LWA	Local Watch Association
MBG	Missouri Botanical Garden
MECIE	Mise en Compatibilité des Investissements avec l'Environnement (Rendering Investments Compatible with the Environment)
MFG	Madagascar Fauna and Flora Group
Min	Minimize
MTI	Medical Treatment Injury
NGO	Non-Governmental Organization
NI	Nickel Institute
NNL	No Net Loss
ОСНА	Office for the Coordination of Humanitarian Affairs
OECD	Organization for Economic Cooperation and Development
ONE	Office National pour l'Environnement (National Office for the Environment)
ОРР	Ore Preparation Plant
ORN	Office Régional de Nutrition (Regional Office of Nutrition)
ORTALMA	Office Régional de Tourisme d'Alaotra Mangoro (Regional Tourism Office of Alaotra Mangoro)
OSCIE	Organisation de la Société Civile sur les Industries Extractives (Civil Society Organization on Extractive Industries)
PAL	Pressure Acid Leach
PAP	People Affected by the Project
PAPRIZ	Projet d'Appui pour l'Amélioration de la Productivité et de l'Industrialisation du Secteur Riz (Support Project for the Improvement of Productivity and Industrialization of the Rice Sector)

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PGEDS	Plan de Gestion Environnementale et de Développement Social (Environmental and Social Development Management Plan)
PGES	Plan de Gestion Environnementale Spécifique (Specific Environmental Management Plan)
PI	Predicted Impact
PPE	Personal Protective Equipment
PPI	Plan Particulier d'Intervention (Particular Plan of Intervention)
PRI	Principles for Responsible Investment
PSHP	Private Sector Humanitarian Platform
QAQC	Quality Assurance Quality Control
QMM	QIT Madagascar Minerals
QMS	Quality Management System
REACH	Registration, Evaluation, Authorization and Restriction of Chemical Substances
RMAP	Responsible Minerals Assurance Process
RMI	Responsible Minerals Initiative
RoW	Right of Way
Rs	Restore
RSE-IDD	Responsabilité Sociétale de l'Entreprise et des Initiatives pour le Développement Durable (Corporate Social Responsibility and Initiatives for Sustainable Development)
RWI	Restricted Work Injury
SCC	Scientific Consultative Committee
SCM	Supply Chain Management
SDGs	Sustainable Development Goals
SDS	Safety Data Sheet
SICE	Social Investment and Community Engagement
SIF	Social Investment Fund

SIM	Syndicat des Industries de Madagascar (Madagascar Industries Union)
SME	Small and Medium-sized Enterprise
SMIMO	Service Médical Inter-entreprise de Moramanga (Inter-enterprise Medical Service of Moramanga)
SMTP	Société Malgache de Transformation de Plastiques (Malagasy Plastics Processing Company)
soc	Species of Concern
SOP	Standard Operating Procedure
SRA	System of Improved Rice Cultivation
SRI	System of Rice Intensification
STI	Sexually Transmitted Infection
TMF	Tailings Management Facility
ТоТ	Training of Trainers
TPSD	Total Plant Shutdown
TRIFR	Total Recordable Injury Frequency Rate
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VPSHR	Voluntary Principles on Security and Human Rights
VSLA	Village Savings and Loan Association
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WUA	Water Users Association

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## Message from our President



Gus Gomes President

"In 2022, Ambatovy celebrated the tenth anniversary of our nickel and cobalt production, an occasion that called for reflection on a decade of achievements and a look forward to the opportunities and challenges that may lie ahead in the coming years. Since beginning our operations, Ambatovy has become the largest mining and processing operation in Madagascar and one of the top five responsible producers of nickel and cobalt in the world."

Dear Readers,

I am very pleased to share with you Ambatovy's thirteenth annual Sustainability Report covering our objectives, approaches and performance over the course of 2022. This report reflects the importance that Sustainability plays in our operations.

In 2022, Ambatovy celebrated the tenth anniversary of our nickel and cobalt production, an occasion that called for reflection on a decade of achievements and a look forward to the opportunities and challenges that may lie ahead in the coming years. Since beginning our operations, Ambatovy has become the largest mining and processing operation in Madagascar and one of the top five responsible producers of nickel and cobalt in the world. In 2022, we achieved our best results in safety since commencing operations, and best production since 2016. As the largest-ever foreign investor in Madagascar, we also continued to play an important role in catalyzing the economic development and social well-being of communities through job creation and training, the purchase of local goods and services, community investment, and the payment of royalties and taxes.

Our goal has always been to produce high-quality nickel and cobalt that creates lasting value for all stakeholders, contributing to sustainable development in Madagascar. The long-term success of our company requires that sustainability be integrated into all aspects of our business and that it be core to our planning and decision-making. This includes having a strong safety culture, demonstrating responsible environmental stewardship and maintaining a robust social engagement program in order to ensure we have significant, positive and lasting impacts in the communities where we operate.

During 2022, we continued to uphold our commitments to the Government of Madagascar, our stakeholders and lenders while striving to meet and exceed the world's best practices in operational efficiency and responsible mining. To strengthen our lens on sustainability, we realigned our business and introduced a new Environmental, Social and Governance (ESG) Department focused on upholding the highest national and international standards and achieving our sustainable development goals. As discussed in further detail throughout this report, we also carried out extensive activities in biodiversity, conservation and community investment.

Some of our performance highlights in 2022 include:

 Ambatovy was awarded the label "Malagasy Ny Antsika" by the Syndicat des Industries de Madagascar (SIM). The

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title recognizes the company's production of high-quality nickel and cobalt, produced entirely in Madagascar, based on the criteria of quality, respect for ethics, and creation of economic value-added. This distinction testifies to Ambatovy's contribution to the creation of wealth, economic returns and sustainable development in Madagascar.

- On March 3<sup>rd</sup>, Ambatovy achieved one-year LTI (Lost Time Injury) free, equivalent to approximately 6,000,000 work-hours without an LTI-related incident. By December 2022, we achieved our best safety performance to date with a record-low Total Recordable Injury Frequency Rate (0.08) and All Injury Frequency Rate (0.35), and a Lost Time Injury Rate of 0.01.
- An independent scientific study carried out by Bangor University in the United Kingdom and released in 2022 suggests that Ambatovy is well on track to achieving our goal of No Net Loss (NNL) of priority habitat and may have already achieved NNL of forest by the end of 2021. This achievement was cited in the Guardian as one of the ten biggest science stories of 2022.
- Ecological reforestation is one of Ambatovy's most important commitments. In 2022, Ambatovy nearly doubled diversity at our nurseries, producing over 500,000 plants from more than 240 endemic species. Replicating the richness of Madagascar's forests is one way in which we are progressing towards our goal of achieving No Net Loss to biodiversity.
- As part of our captive breeding program for the Golden Mantella frog (Mantella aurantiaca), Ambatovy released 1,904 frogs into our conservation area in 2022. This marks the fifth successful year of the reintroduction of firstgeneration amphibians from the Toby Sahona breeding center in Andasibe. To date, over 3,750 critically endangered frogs have been released into the wild.
- Ambatovy launched our "decarbonization journey". The
  first phase of this program focused on the identification
  of decarbonization and offsetting opportunities and the
  development of new Greenhouse Gas (GHG) calculation
  and reporting tools. This work will set the foundation
  for developing a company-wide roadmap for emissions
  abatement in the decade to come.
- In early 2022, a succession of severe cyclones (five within three months) wreaked havoc on the country, destroying homes, ruining livelihoods, and damaging infrastructure. We actively contributed to relief efforts at national and regional levels, by participating in search and rescue missions for flood victims, donating over 34 tons of rice in humanitarian aid, lending the use of our small aircraft to transport critical workers to cyclone-affected areas, and initiating several post-cyclone initiatives aimed at improving the long-term living conditions of impacted communities.

- To support local education, Ambatovy donated school kits to over 7,000 primary school children, awarded scholarship grants to 142 vulnerable girls, and provided meals to 1,240 students through our school nutrition program. We also inaugurated a newly-built primary school and began construction on two additional schools along our Pipeline.
- We increased our local spending by over 50% in 2022, creating significant value-added within the communities where we operate. Goods and services, valued at over US\$ 344 million, were purchased from over 400 local suppliers. Purchases included 152 tons of fruits and vegetables, 319 tons of chickens and over 1.9 million eggs purchased from local farmers near our sites.
- To address health care barriers faced by communities near our Mine Site, Ambatovy collaborated with the Regional Directorate of Public Health (DRSP) to provide mobile medical consultations to villages where limited services and a shortage of health care workers continue to severely hamper people's access to quality health care. Over 1,200 individuals received free consultations and medications as part of this campaign.
- We continued to make donations to help in the fight against Covid-19 in Madagascar. Donations included oxygen concentrators, critical medical equipment, Covid tests and Personal Protective Equipment (PPE) donated to local hospitals and treatment facilities. Ambatovy also continued to implement extensive preventative measures within the workforce and facilitated vaccinations and testing for our employees and contractors.

In 2023, we will continue to focus on meeting the highest standards, having a strong safety culture, demonstrating responsible environmental stewardship and maintaining a robust social engagement program. Through these actions, Ambatovy aims to set an example for responsible mining and to reach new industry benchmarks in sustainability performance.

We acknowledge and sincerely appreciate the continued support, commitment and dedication of all our stakeholders as we work to meet these goals. We look forward to future constructive collaboration in our shared quest for the development of Madagascar.

Thank you for your interest in Ambatovy. We hope that you enjoy the report and welcome any feedback you may have.

Misaotra betsaka!

Gus Gomes President

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## **About This Report**

## **Report Profile**

For the thirteenth year in a row, Ambatovy is publishing our annual Sustainability Report. This report has been prepared in reference to the Global Reporting Initiative (GRI) Standards and gives performance data for January 1<sup>st</sup> through December 31<sup>st</sup> 2022 further to our twelfth annual Sustainability Report covering 2021 that was published during the third quarter of 2022.

The report provides information on Ambatovy's sustainability performance during 2022 and focuses on key areas of interest for Ambatovy's stakeholders. The completeness, relevance and accuracy of Ambatovy's Sustainability Report is validated through internal controls and internal approval processes; each section of the report is reviewed and approved by relevant members of our Senior Management team, including our Vice President of Government and External Relations, Communications. This 2022 Sustainability Report has not been externally assured; however, we submit annual reports to Malagasy authorities and to our

national regulator (the National Office for the Environment or ONE) with information on our sustainability performance, and our work in the field is closely monitored and regularly reviewed by the ONE and Independent Engineers sent by our lenders. A Scientific Consultative Committee (SCC), comprised of national and international independent scientists renowned for their expertise, also convenes every two years in order to review our environmental and social programs, to provide impartial advice, and to bring greater transparency to our work.

No significant changes have been made to the list of material topics compared to the previous reporting period, nor did we significantly diverge from our last report in terms of size, scope, boundary, or measurements that would affect the comparability of previous reports or require a restatement of major disclosures. Any variations in previously reported data have been clarified and disclosed as presented throughout the report.

## Reporting Boundary, Materiality and Scope

Unless otherwise noted, this report discloses material information for the calendar year 2022 (January 1st – December 31st). Our report addresses a wide range of economic, social, environmental and governance issues that Ambatovy considers to be of material importance, as this term is used in the GRI guidance on materiality and completeness. The GRI guidance specifies that sustainability reports should cover topics and indicators that reflect a company's most significant impacts on the economy, environment, and people, including impacts on their human rights or those that would substantively influence the assessments and decisions of stakeholders.

This report includes information about our operations (located fully in Madagascar) and covers Ambatovy and the departments and initiatives directly under our control. As a Joint Venture private entity, there are no other groups, subsidiaries, leased facilities, joint ventures, suppliers, or other bodies that fall under Ambatovy's jurisdiction. The report has drawn the majority of data from internal sources, but, when relevant or necessary, we have included data from external sources. The scope of the report reflects not only the GRI Standards but also the expectations of our stakeholders to cover the topics material to them and to our business. Statements from previous years' reports may appear again in this report in order to provide context and background information for new readers and for those unfamiliar with our operations.

There were two key considerations that stood out for us during the process to determine what is included in the report and how we prioritize content and its organization.

- Organizational commitments: Our obligations to the Malagasy Government and to the national regulator, as well as our commitments to the International Finance Corporation (IFC) Performance Standards and other national and international standards and codes, guided our selection of GRI disclosures to include in this report.
- Materiality of data for internal and external stakeholders: When selecting amongst the various GRI disclosures for our report, Ambatovy chose those that could be considered relevant, important and meaningful to our stakeholders at all levels. We also provided additional information not required in the GRI guidelines that we felt was relevant to our operations and important in light of our mandatory and voluntary commitments to national and international regulatory bodies, associations, and programs. The report therefore gives stakeholders essential information on our structure, strategy and performance with specific information that relates to the sustainability challenges of our industry. Our Senior Management team is part of that process. For a list of our material topics, please refer to the GRI Content Index in the appendices.

We intend this report to be used as a reference for a variety of stakeholders, particularly government authorities, local communities, civil society groups, employees, international organizations, partner companies, financial institutions, suppliers, customers, and other members of the business and media community. More in-depth information on our stakeholder identification process and our engagement activities can be found in the Stakeholder Engagement section of this report.

We welcome comments and questions related to this report. Please contact us at media@ambatovy.mg for further information. Please note, all monetary values in the report are in \$ US Dollars unless otherwise noted.

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## **About Us**

Ambatovy is a large-scale nickel and cobalt mining enterprise in Madagascar, comprised of a lateritic mine near Moramanga and a processing plant and refinery in Toamasina. The two sites are linked by a pipeline of approximately 220 km in length. An auxiliary office in Antananarivo provides administrative, legal, and communications support to both locations and serves as a liaison with government offices and international organizations as well as the media and business sectors.

#### Our Vision

To be recognized as the world's most successful and sustainable producer of high-quality nickel and cobalt.

#### **Our Mission**

To deliver high quality nickel and cobalt to the market, operating at high standards of corporate and social responsibility, with utmost regard for the health and safety of our employees and contractors, the preservation of the surrounding environment, and the creation of long-lasting benefits for the communities in the areas where we operate.

#### Our Values

#### Respect 🐼

• We treat others with dignity and respect, regardless of the situation.

#### Integrity 4

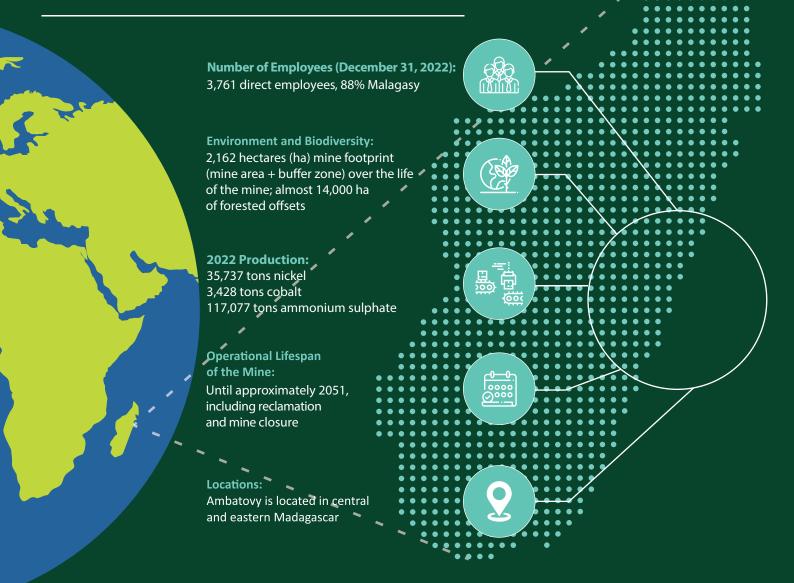
• We are true to our word and are ethical in all that we do.

#### Responsibility (

• We take responsibility for our choices, our words, and our actions.

#### Excellence 🖈

• We never stop seeking to improve our business.



## Our Operations and Facilities



#### **Mine Site**

Our Mine Site is located near the town of Moramanga, in the Alaotra Mangoro Region, about 80 km east of Madagascar's capital. The ore body at the Mine consists of two lateritic nickel deposits: the Ambatovy and the Analamay deposits, with a total footprint of 2,162 ha, including our actual mine area of 1,616 ha and a buffer zone. Ore is surface-mined and turned into slurry for transportation to the Plant Site via a pipeline.



#### **Plant Site**

Our Plant Site is located approximately ten km south of the Port of Toamasina, in the Atsinanana Region. It is an industrial complex covering more than 320 ha. The facility was designed and built to operate in accordance with Malagasy regulations and the IFC Performance Standards. The site's main components include a pressure acid leaching area (PAL), a refinery, and a utilities area to support the process. Site facilities also include a medical clinic, a training center, several canteens, warehouses, workshops, a laboratory, offices, and living quarters.



#### **Tailings Management Facility**

Ambatovy's Tailings Management Facility (TMF) is located nine km west of the Plant Site and will be constructed over the life of the project in three phases, with the continuous raising of the perimeter dams to meet our tailings containment needs. The tailings – residue with no commercial value left over after mining, processing, and refining – are neutralized and pumped from the Plant Site through a 15 km pipeline to the Tailings Site, a secure, stabilized area where the treated residue is deposited for permanent safekeeping. Excess water from the Tailings is discharged into the ocean through a diffuser system designed to minimize localized impacts. A portion of this water is available to be reused at the Plant Site. When the Tailings Site has been filled, it will be reclaimed and drainage systems will be re-established. Ambatovy's TMF was built to specifications consistent with the requirements of the IFC and the site was chosen for its relatively low environmental sensitivity.



#### **Pipeline**

Ambatovy's Pipeline, which is approximately 220 km, runs from the Mine to the Plant Site in Toamasina. The route selected for the Pipeline makes some significant deviations to avoid sensitive environmental areas, cultural sites, and local populations. It is buried for the majority of its route, avoiding critical wildlife habitats and residual forest fragments. Deep rooting vegetation was planted along the length of the Pipeline to stabilize steep slopes, prevent erosion, and assist in rehabilitation. A Pipeline Replacement Project was launched in 2022 to replace a significant portion of the Pipeline over the next five to seven years.



#### **Support Facilities**

Ambatovy also has support facilities located near the Plant Site, including the port, railway, road, ammonia storage tanks and the marine outfall. During the construction phase, Ambatovy installed a substantial extension of Pier B at the Port of Toamasina, which includes a new fuel terminal, as well as equipment for handling the importation of bulk raw materials such as limestone, coal, sulphur and ammonia. We also installed a 12 km railway and financed the upgrade of an 11 km road linking the port to the Plant Site. Ambatovy imports ammonia and stores it, first at a large storage tank located four km north of the Plant Site, and then at the Plant Site's ammonia storage tanks. The marine outfall is a pipeline that extends 1.5 km offshore within a rock-filled breakwater structure. Installed in 2011, it is used to dispose of excess reclaimed water from the TMF.

## **Our Products**

Ambatovy uses a hydrometallurgical process to produce finished nickel, cobalt, and ammonium sulphate. We supply a global portfolio of industrial customers located primarily in Asia, Europe, and the United States. Our nickel and cobalt products are mainly used as inputs for the production of stainless steel, chemicals for the manufacture of battery products, and specialty high-performance alloys for turbine components in both aerospace and land-based power generation equipment. They are also consumed in the production of a wide range of other specialty industrial products. Both our nickel and cobalt are registered brands on the London Metal Exchange (LME).





The majority of nickel produced worldwide goes into the manufacturing of stainless steel. Nickel is often also combined with other metals to create super alloys. It is found throughout our modern environment, from jewelry and silverware, to rechargeable battery systems for hybrid and electric vehicles, cell phones and other portable electronics and devices, and in jet turbines and other high-end and high-performance applications. Ambatovy produces Class I nickel briquettes of 99.9% purity for the world market. In 2022, we produced 35,737 tons of nickel.

Cobalt has been used for centuries to add vivid blues to glass, glazes and pottery. In modern times, it is used in hundreds of chemical, metallurgical, and industrial products and is an indispensable component of rechargeable batteries used in a variety of devices including cellphones and tablets, power tools and other portable devices, as well as in hybrid and electric vehicles and other technologies. Ambatovy produces cobalt that is of 99.9% purity. It is sold in briquette and in powdered form. In 2022, we produced 3,428 tons of cobalt.



As a by-product of the hydrometallurgical process, Ambatovy also produces ammonium sulphate, an inorganic, highly water-soluble salt. The primary use of ammonium sulphate is as a fertilizer for soils, as part of a complete agronomic improvement plan. Ambatovy's ammonium sulphate is produced in crystallized granules and is sold mainly on the international market, with a portion of our product also sold locally. In 2022, we produced 117,077 tons of ammonium sulphate.

10<sup>th</sup> anniversary of production



Best safety performance to date



**108** Total Recordable Injury Frequency Rate (TRIFR)

0.35 All Injury Frequency Rate (AIFR)



Over **1,240** students received meals through school nutrition programs







13 % female workforce

**277,033** training

work-hours
(increase of 64% compared to 2021)



Distribution of school kits benefiting

7,080 students





28 public primary schools

4 community schools



merit scholarships for girls' post-primary education



US\$ 344 million

in local purchasing









2022 Highlights

## Corporate Governance

Ambatovy is a joint-venture enterprise held by two shareholders: Sumitomo Corporation (54.18%) and Korea Mine Rehabilitation and Mineral Resources Corporation known as KOMIR (45.82%). Both partners are fully committed to transparent, sustainable and responsible business practices. Indeed, central to Ambatovy's record as a trusted operator is our commitment to ethical business practices and high standards of corporate governance. We recognize the importance of having an integrated approach to managing our operations, risks and relationships.

Ambatovy is comprised of two companies: Ambatovy Minerals S.A. (AMSA) and Dynatec Madagascar S.A. (DMSA), which, together, are responsible for day-to-day operations. AMSA is the holder of the mining title and operates the Mine Site, and DMSA manages the Plant Site and all the activities related to it. Both AMSA and DMSA are subject to the laws of Madagascar, and each has a Board of Directors, chaired by Ambatovy's President, that are responsible for setting the overall strategy of the company. In practice, AMSA and DMSA act in parallel under the purview of Ambatovy's Executive Committee, which consists of members from each of the two partner companies.

The Executive Committee is responsible for upholding and adhering to our Business Ethics Code, Anti-Corruption Policy and Code of Conduct. Guided by these policies, they provide direction and guidance to our business; support our directors and employees; approve strategies, policies and procedures; and promote a culture of integrity, honesty and accountability that upholds Ambatovy's core values.

At the end of 2022, the Executive Committee was comprised of eight individual voting members who are responsible for overseeing the direction and execution of Ambatovy's activities and for overseeing our due diligence.

Ambatovy also has a Senior Management team comprised of 12 persons (as of December 2022) who were selected based on their competencies and who represent a variety skillsets and professional backgrounds that bring a diversity of perspectives to our business. The Senior Management team is composed of ten men and two women. Each member provides a depth of knowledge and experience required to drive our business and undergoes a formal, annual evaluation to ensure their continued contribution to upholding Ambatovy's values and standards.

The Executive Committee meets at least quarterly or as circumstances require and receives regular updates from the Senior Management team and from external advisors on matters including corporate governance, business ethics and sustainability. Members of the Executive Committee and of the Senior Management team participate in a variety of relevant conferences, seminars and workshops to keep astride of

developments in sustainability, responsible mining and ESG, and to share best practices.

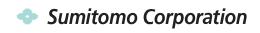
In addition to the Executive Committee, there are three subcommittees whose members are also employees of each of our partners:

- Audit
- Environment, Health and Safety, Sustainability
- Marketing

In November 2022, Ambatovy celebrated the 10<sup>th</sup> anniversary of our production of refined nickel and cobalt and a decade of progress towards our vision of being recognized as the world's most successful and sustainable producer of high-quality nickel and cobalt. Since beginning operations, Ambatovy has become the largest mining and processing operation in Madagascar and one of the top five nickel and cobalt producers in the world. By fully refining our products in-country, we bring significant value added to Madagascar and are proud that our high-purity products are contributing to the progressive use of clean energy; nickel and cobalt both being key components in the batteries that supply the electric vehicle market. Ambatovy constantly strives to be a leader in operational efficiency, health and safely, environmental management and social engagement. As we enter a new decade of production, we remain committed to delivering responsibly and ethically produced goods, while contributing to a bright and sustainable future for all of our stakeholders.



The Environment, Health and Safety, Sustainability sub-committee oversees our policies, practices, programs and disclosures in the areas of environment, tailings management, sustainable development, climate change, health and safety, social performance, community relations, human rights and security. The sub-committee seeks assurance that Ambatovy consistently promotes ethical, transparent and responsible behavior, and meaningfully engages our stakeholders and communities. The sub-committee receives detailed quarterly reports for all sites and works with Ambatovy's leadership team to suggest directives for Senior Management to pursue. The Executive Committee and members of the sub-committee periodically visit our sites in Madagascar for first-hand viewing and interactions with our team.





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## **Our Sustainability Commitment**

Ambatovy believes that our long-term sustainability is directly linked to the quality of our relationships with our stakeholders, along with our resilience to external and internal crises and our ability to weather negative cycles within the mining industry.

In the conduct of our business, we are committed to engaging with our stakeholders and earning their support by operating ethically, creating a rewarding workplace, demonstrating environmental excellence and submitting to external controls.

To meet this commitment Ambatovy will:

- Effectively engage stakeholders in order to understand their expectations and concerns, to build trust, to foster employee pride and community ownership, to maximize socio-economic benefits to the community and country, and to strengthen our social license to operate;
- Demonstrate strong governance ensuring that our internal governance and compliance is flawless, that the country and our neighboring communities receive their fair share of benefits from Ambatovy, and that we operate ethically within our zero tolerance policy and with uncompromising respect for human rights as defined by international standards;
- Comply with national environmental regulations and international standards in order to ensure no net loss of biodiversity via Ambatovy's Environmental Management System (AEMS); to adequately fund and staff the AEMS; to ensure the legal protection, long term management and

financing of Ambatovy's land offsets; and to consistently use clear metrics to measure loss and gain of biodiversity;

- Ensure external controls of our activities through continued use of third party expertise and sound science-based programs, as well as open and transparent collaboration with authorities charged with supervising our environmental and social activities;
- Create a rewarding workplace that attracts the best industry talent, emphasizes skills development, and engages and develops our work force;
- Maintain the safety and security of our surroundings by committing to Zero Harm in order to build a safe working environment, by ensuring the security of our employees and assets in accordance with the guidance of the Voluntary Principles on Security and Human Rights, and by supporting a Safety Culture within Ambatovy's areas through effective risk management, active communication, training and awareness-raising, and ongoing community engagement.

This commitment is reflected in our new Health & Safety, Environment, Community and Quality Policy (which can be found on our website at www.ambatovy.com/en/who-we-are/our-policies). It is not only internalized within Ambatovy's activities but is also expected of our suppliers and contractors. In this way, we hope to further increase the positive impacts we have in the country and extend our best practices across the industry.

## The Sustainable Development Goals

The United Nations' Sustainable Development Goals (SDGs), a follow-up to the Millennium Development Goals, consist of 17 ambitious targets to address global issues and to ensure a sustainable and resilient future for the world by 2030. The success of the SDGs depends on the participation of a range of actors — governments, communities, non-governmental organizations and corporations.

The nature of the work of the natural resources sector has economic, social and environmental impacts on the jurisdictions where projects and operations are located. The natural resources sector has the opportunity and potential to positively contribute to all 17 SDGs. Companies can incorporate relevant SDGs into their business and operations, validate their current efforts, and leverage the transformative power of collaboration and partnership with other stakeholders.

As a responsible company working in both a low-income country and a biological hotspot, we aim to ensure that the potential negative impacts of our activities are minimized and mitigated to the greatest extent possible while also focusing

on actions that positively impact local communities and the country at large. To this end, the SDGs serve as a reference for us to gauge how and to what extent we are contributing to Madagascar's development and to its achievement of these globally recognized sustainability targets.

More information about how we have been contributing to the achievement of the 17 SDGs can be found in Appendix 1.





# Key Impacts, Risks and Opportunities

In recent years, environmental, social and governance (ESG) issues and sustainability considerations, while certainly not new, have become increasingly prominent, both broadly and in the mining and metals sector in particular. ESG principles are increasingly being adopted and ESG dimensions addressed by companies in the mining and metals sector in response to stakeholders' expectations for stronger engagement, transparency, and accountability in areas such as:

- Economic: Local employmment and training, taxes and other government payments, local procurement and local entreprise linkages, infrastructure development.
- Environment: Biodiversity, ecosystem services, protected areas and habitats, water management, tailings, air, noise, energy, climate change (carbon footprint, greenhouse gas), pollution controls, hazardous substances, mine closure.
- Social: Human rights, land acquisition and use, resettlement, local procurement, stakeholder engagement, community investments, diversity, labor practices and working conditions, health and safety, security, artisanal miners, mine closure / after use.
- Governance: Legal compliance, business ethics, antifraud, bribery and corruption, transparency and reporting, corporate governance, risk management systems.

ESG can be used as a lens to gauge a company's exposure to environmental, social and governance risks as well as to assess its performance in these areas. For example, companies need to consider whether there are environmental, social or governance risks that may affect their ability to raise capital; to obtain authorizations and permits; to work with communities, local authorities and civil society groups; and to protect assets from impairments. There may also be opportunities to better manage energy use, improve operational performance, and enhance community and regulatory relationships.

The increased awareness of ESG issues is a challenge yet it also presents a big opportunity for our industry. It is enabling companies like ours to explore and develop ways to reduce their environmental footprint and to benefit society far and wide. It engages not only mining companies and their communities, but also governments, other businesses and partners.

At Ambatovy, we have always understood that in order to work in Madagascar, we must be mindful of the unique economic, social and environmental context of the island. Most of the impacts related to our activities are positive, such as the creation of jobs, contributions to the local economy, construction of

infrastructure, and improved industrial capacity in the country. However, it is necessary to be aware of not only our positive impacts but also any potential or actual negative ones, so that we can develop and implement strategies to minimize, manage, and remediate them.

We are aware that we are working in a country that has high biodiversity and that faces challenging socio-economic issues. If we do not carefully manage our activities, there are risks that we may negatively affect the delicate ecosystem surrounding our activities and worsen the poverty that already exists in Madagascar. These risks were carefully considered before we even broke ground and we continue to assess risks and impacts as they arise. Each year, in consultation with our stakeholders, we identify sustainability-related impacts and opportunities and work to ensure that these impacts are minimized to the extent possible. While each challenge is weighed from within its specific context, in general, we prioritize them based on impacts on stakeholders and the environment, as well as on our ability to operate safely and efficiently. In recent years, our focus has shifted beyond simply establishing a presence in the country and communities, to engaging stakeholders in a meaningful and respectful way, building partnerships, and maintaining the sustainability of our actions and investments.

#### **Economic**

Many extractive companies in sub-Saharan Africa have chosen to refine their minerals in Asia, Europe, or North America. Ambatovy's decision to refine our products in-country brings important local benefits including the creation of thousands of additional jobs (and the subsequent professional training and career development opportunities that come with them), significant earnings for the Government of Madagascar, local spending on goods and services, technology transfer and capacity building, and the construction of important infrastructure. These are all generating substantial economic returns for Madagascar and will continue to do so for many years.

There is enormous potential for extensive positive financial benefits for the communities and the country through wages and supply contracts. There is also the potential to improve capacity to deliver goods and services of international quality.

We work to maximize these positive impacts through targeted programs to increase local supply, promote local employment, and support income generating activities for community members. Identified negative impacts include the potential for price inflation and increased strain on municipal services as people move into the communities surrounding our operations looking for economic opportunities. However, these are more than compensated for by the aforementioned economic benefits.

In recent years, our industry has seen a growing requirement from manufacturers and consumer-facing companies to demonstrate responsibility in their supply chains, which is subsequently putting pressure on upstream mining companies to provide evidence of social and environmental responsibility at their operations, with a particular focus on human rights, labor rights and occupational health and safety. Customer expectations for mining companies today are growing with regards to demonstrating high standards for ESG performance, while also mining and processing safely and efficiently. An increasing number of customers, potential customers and industry groups want to know how we conduct our business, and are requesting risk readiness assessments, due diligence reviews and third-party audits of Ambatovy's operations. We are preparing ourselves to support our customers and the industry groups in this endeavor by aligning with international standards - such as ISO 14001, ISO 45001, the Responsible Minerals Initiative Responsible Minerals Assurance Process (RMI RMAP) and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, conducting internal audits on responsible supply chain requirements, providing training for our suppliers and sub-contractors, doing gap assessments, and leveraging industry associations for insight and support. Our customers can be confident that Ambatovy produces high-quality nickel and cobalt in accordance with applicable laws, regulations and the highest standards.

The emergence of the electric vehicle market has created optimism about the nickel and cobalt markets since both metals are key components in current battery technology. As a low-cost, high purity producer of Class I nickel, Ambatovy is poised to take advantage of growing demand given that our production is primarily in briquette form — a type ideally suited to battery production.

#### **Environmental**

The Mine lies at the southern end of the eastern rainforest so protection of the biodiversity in surrounding areas has been a key priority since the early planning stages. The partially degraded forests around the Mine have undergone considerable humaninduced pressures for many years, often prior to our arrival to the area, including hunting and gathering, selective logging, slashand-burn agriculture, uncontrolled fires, and species collection for trade and consumption. Operating in such a highly sensitive ecosystem therefore obligates us, as an environmentally and socially responsible member of our community, to design and implement extensive avoidance, mitigation and conservation measures to ensure that we continue to minimize our impacts. Ambatovy has devoted considerable time and resources to ensuring these measures are incorporated into our business plans and operational processes. Local communities have also been involved in stewardship activities to preserve the longterm sustainability of Madagascar's diverse flora and fauna.

We are also obliged under the laws of Madagascar and our financing agreements to meet stringent environmental criteria. Aside from those obligations, we have committed ourselves to multiple voluntary compliance and monitoring programs, such as the Business and Biodiversity Offsets Program (BBOP) for which Ambatovy was a pilot project (please see the section on Environment for more on this initiative) in order to achieve No Net Loss. Compliance with these criteria requires a substantial commitment on our part, in terms of both financial and human resources. We have carefully budgeted funds to ensure that we meet or exceed the targets that have been set.

As at many mining companies globally, due to dam failures in Brazil and elsewhere, Ambatovy is reviewing and evaluating our tailings management monitoring systems and risk assessments in order to ensure that our approach is more than robust and current. Our tailings facilities undergo continuous upgrades and construction based on our containment needs and are managed and monitored 24/7 by a dedicated engineering team. Efforts to comply with the new Global Industry Standard on Tailings Management (GISTM) continued during 2022 and will remain a focus in the coming years.

As demand increases for exploration, mining, and processing of raw materials critical to the clean energy transition, companies such as Ambatovy have an opportunity to integrate and enhance environmental policies, congruent with global initiatives.

Ambatovy is proud to have received the label "Malagasy Ny Antsika" from the Syndicat des Industries de Madagascar (SIM). This title, awarded in November 2022, recognizes the company's production of high-quality nickel and cobalt, produced entirely in Madagascar, based on the criteria of quality, respect for ethics, and the creation of economic value-added. Ambatovy constantly strives to maximize the local benefits of our operations - while contributing to the long-term prosperity of Madagascar. Indeed, our decision to refine our products in-country has created thousands of additional jobs, contributed to the construction of roads, railways, and local infrastructure, and resulted in millions of dollars spent each year for the purchase of local goods and services. As the country's largest-ever foreign investor, we are proud to be contributing to sustainable development in Madagascar and are honored to have had our products recognized.



#### Social

In a country with significant poverty and social needs, great expectations can be placed on large companies to solve many, if not all, of the area's inherent socio-economic challenges. Indeed, now more than ever, stakeholders – from local communities and civil society organizations to regional authorities and the national government – expect to experience tangible benefits and improvements in their standard of living from natural resource extraction and processing.

Managing the expectations of our stakeholders is therefore paramount, especially as we struggle with a volatile commodity price environment. We are obligated to be fully compliant with both Madagascar's national regulations and the IFC Performance Standards, and a key focus over the past several years has been avoiding, minimizing, and mitigating negative social impacts and maximizing the positive ones. We are committed to helping improve the lives of people near our operations, but we rely on the government to fulfill its obligations regarding basic services, particularly in the areas of health, education and infrastructure. Moreover, Ambatovy seeks to establish partnerships with other groups in a manner that taps each partner's strengths so as to address stakeholder issues and opportunities and to have a greater and more sustainable impact, but that does not substitute for the government, does not foster dependency, and does not create unrealistic expectations of what we can do.

Currently, the mining sector creates millions of jobs around the world. However, many employees are aged 45 years or older and the sector runs the risk of missing out on skilled, capable workers if it fails to find a way to make mining more attractive to future generations. Demonstrating strong ESG performance could play a key role in ensuring that young, talented people are drawn into establishing and retaining their careers in the sector.

#### Governance

We commit to conducting all activities with integrity and the highest standards of responsible conduct. This includes avoiding actual and perceived conflicts of interest, having zero tolerance for corruption of any form, and respecting the rights of all people with whom we interact. We do this by vigorously implementing our Business Ethics Code, Anti-Corruption Policy and Human Rights Policy at all levels of business. We strive to be as transparent as possible and take an active part in the Extractive Industries Transparency Initiative (EITI) process in Madagascar, which includes disclosure of our financial and operational information, as required under the EITI standard. By implementing the Voluntary Principles on Security and Human Rights (VPSHR), we are also able to align our policies and security operations with the highest international standard for security and human rights.

Sustainability-related risk management is the responsibility of the Executive Committee and the Environment, Health and Safety, Sustainability sub-committee. This sub-committee meets quarterly to discuss issues that have arisen over the period and to authorize any significant changes to our plans and management strategies. We remain committed to managing these impacts, risks and opportunities, and to improving our ESG performance.



# Stakeholder Engagement

Ambatovy has a responsibility and a commitment to engage internal and external stakeholders who are directly or indirectly affected by the company's activities, as well as those who may have interests in the company and/or the ability to influence matters, either positively or negatively. We engage and collaborate regularly with stakeholders where common interests and concerns exist.

The purpose of our stakeholder engagement is fourfold:

- To establish and maintain constructive relationships with our stakeholders and to maximize the shared benefits of our activities;
- To contribute to Ambatovy being a responsible, successful, resilient and sustainable company;
- To enhance and strengthen our reputation, both domestically and internationally;
- To maintain both our regulatory and social licenses to operate in Madagascar.

We recognize that effective stakeholder engagement is critical for establishing mutual understanding of one another's needs, interests, aspirations and concerns, for making decisions to support business objectives related to growth, risk management and operational excellence, and for collaborating to address local stakeholder priorities. In other words, constructive stakeholder relationships are essential to securing and maintaining our social license to operate and creating mutually beneficial outcomes.

Identifying and understanding who our stakeholders are is an important part of our work. Stakeholder influence can vary, from minor to significant, and this influence may change over the course of the different phases of our operations.

Stakeholder engagement is therefore an ongoing process, one that encompasses a range of activities and approaches, that involves all employees of the company including members of Senior Management, and that will span the entire life of the Mine. Like other Ambatovy business functions, our stakeholder engagement is guided by a well-defined strategy with clear objectives, priorities, methods, concrete activities and assigned responsibilities. Our approach is systematic so that we can track and manage stakeholder issues and risks more effectively.

Stakeholder engagement entails building robust, productive relationships through communication, consultations, ongoing dialogue and working partnerships. We want our stakeholders to understand why and how we operate. We especially want input from relevant stakeholders when a particular aspect of our operations directly affects them.

Our stakeholder engagement is guided by the following principles:

- Through our actions and behaviors, Ambatovy actively strives to earn the respect, trust and cooperation of all stakeholders. We create and maintain relationships that are inclusive, honest, transparent and mutually beneficial. These relationships are a tangible, valuable asset and integral to the company's business outcomes.
- Ambatovy is committed to sustainable development, i.e., meeting the needs of the present without compromising the ability of future generations to meet their own needs. As such, Ambatovy creates long-term value and benefits for our stakeholders while seeking to understand and respond to their issues and interests.
- Ambatovy recognizes that we need to be accountable for our actions and impacts. If our operations are not managed appropriately, they have the potential to impact local communities and the environment negatively. Thus, the company attempts to minimize the impact of our operations by operating our facilities to the appropriate industry and national and international standards, and by working collaboratively with stakeholders to identify and mitigate negative impacts, and to maximize positive ones.
- All Ambatovy employees and contractors, including members
  of our Senior Management, have a responsibility to conduct
  meaningful stakeholder engagement as "ambassadors"
  for the company. Ambatovy understands that to achieve
  success in stakeholder engagement, we must integrate the
  principles of stakeholder engagement within all aspects of
  our business.



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Through our various stakeholder engagement activities, the following topics and/or critical concerns were raised in 2022:

- Health, safety and security issues related to our installations and operations
- Humanitarian relief and emergency response, especially after cyclones
- · Livelihoods development
- · Access to resources
- Royalties
- Employment and business opportunities
- Impacts of our operations on the environment, human health, the economy and society
- Compliance with national regulations and international standards
- Social investments
- Restoration of rice fields
- · Grievance management
- · Good governance and responsible sourcing
- Mining sector in Madagascar and revision of the Mining Code
- Opportunities to collaborate and to partner on various initiatives
- Global nickel prices and the electric vehicle market
- Launch of our Pipeline Replacement Project

Each of these topics has been raised by several of our stakeholder groups (indicated below), signaling to us that these are the key topics of interest and concern. We regularly engage, report and communicate on these topics with the relevant or concerned stakeholders. As described below, our engagement tactics vary depending on the type of stakeholder group involved, the nature of the interaction, and the topics and issues raised.

Ambatovy's stakeholders are identified as those who have been directly or indirectly impacted by our activities, who have an interest in the company and/or who have an ability to influence matters, be it positively or negatively. Through our stakeholder identification process, we have identified ten groups of national and international stakeholders:

- Malagasy Government and Regulatory Bodies
- Regional and Local Authorities
- Local Communities and People Affected by the Project (PAPs)
- Malagasy General Public
- International Community
- Civil Society Organizations and Local Non-Governmental Organizations (NGOs)
- Press and Media
- Private Sector/Business Community
- Our Employees and Contractors
- Our Shareholders and Lenders

# Malagasy Government and Regulatory Bodies

Ambatovy strives to have an open and transparent relationship with the Government of Madagascar at all levels as well as with regulatory bodies that are authorized to oversee our operations. This transparency is achieved through ongoing engagement and reporting that frequently go beyond what Ambatovy's legal obligations require. We meet with relevant ministries and authorities at national, regional, and local levels and often host members of these institutions for site visits to help them better understand Ambatovy's operations, approaches and challenges. In 2022, Ambatovy engaged with government officials on a wide range of important matters and policy issues specifically related to Ambatovy, and hosted several key authorities at the Mine and Plant Sites. We continued our extensive engagement with officials on issues related to the Covid-19 pandemic including health measures taken at our sites, voluntary access to vaccines for our employees, and donations towards the fight against Covid-19. As in previous years, Ambatovy continued to work closely with the ONE with regards to our environmental and social commitments.

In 2022, Ambatovy pledged to support the country's goal of achieving food self-sufficiency. Three projects have been identified as part of this commitment including a rural electrification project, an agricultural project with the ammonium sulphate we produce, and an initiative to develop our scrap metal into agricultural tools and farming equipment (such as rakes, shovels, ploughs, weeders, etc.). As part of this commitment, a 181-ton donation of ammonium sulphate was made in late 2022 to the Ministry of Agriculture and to the Japan International Cooperation Agency (JICA) in order to help farmers increase their rice yields across Madagascar through improved rice cultivation techniques. Arrangements have been made for an additional 320-ton donation in early 2023. All three projects are expected to continue and make progress in 2023.

## Regional and Local Authorities

As with counterparts on the national level, Ambatovy collaborates with regional and local authorities in many aspects of our operations. In order to encourage transparency through continuous and open communication, Ambatovy regularly offers informational visits and tours to regional and local authorities. In 2022, we continued to work closely with regional authorities to help in the fight against Covid-19 and coordinated to assist authorities in their emergency response and relief efforts following a series of devastating cyclones. We also participated in the country's largest economic trade fairs and engaged with relevant local authorities on opportunities

to partner and collaborate on activities such as WASH¹, technical assistance for farmers, reforestation programs, youth development, child protection, and the construction of schools and classrooms. We also continued to work with regional and local authorities from the Decentralized Territorial Collectivities to develop good governance initiatives and prepare/update their Communal Development Plans.

## Local Communities and People Affected by the Project (PAPs)

We understand that individuals who reside in communities near our sites are the very people who can be most impacted by our activities. They are therefore very important to us and we aim to build enduring relationships with our neighbors to make sure we manage our operations in an open, respectful and transparent manner. Our teams continue to maintain constructive dialogue with various actors in the communities, ranging from traditional local authorities to representatives of the fokontany.2 In 2022, Ambatovy continued to engage local communities near our sites, along the Pipeline and near our conservation zones by organizing information-sharing and awareness-raising sessions, promoting income generating activities (IGAs), developing forest stewardship initiatives, strengthening local capacity for resource management, facilitating partnerships with farmers' organizations, and collaborating with Local Watch Associations (LWAs) on community monitoring of Pipeline infrastructure. Our Community and Social Relations (CSR) and Communications teams also held over 3,200 formal and informal interactions with stakeholders during the year with a focus on raising local awareness about social risks and impacts, security, child protection issues and the sustainable use of natural resources.

## Malagasy General Public

Ambatovy's stakeholder engagement focuses not only on the local communities around our sites but also on the general public in Madagascar. We organize a range of events and activities to allow the public opportunities to exchange with Ambatovy employees in order to obtain information on the nature of Ambatovy's activities, to get a better understanding of the mining industry and the international standards we follow, and to dispel rumors. In 2022, we were pleased to be able to resume visits to our sites, organize public information sessions and mini open-door events, and conduct community field trips - which had all been curtailed, scaled back or held virtually since the onset of the pandemic. During the year we were able to reconnect, directly, with over 21,000 members of our communities and of the general public to share key developments in our operations and highlight the social, economic and environmental aspects of our work.

Ambatovy also participates in local and national fairs as well as conferences and workshops, especially in the domains of sustainability, employment, the environment, health and safety, good governance, local content, and socio-economic development – areas that we consider key to sustainable development and responsible mining. In 2022, Ambatovy actively took part in the annual Conference on Corporate Social Responsibility and Sustainable Development Initiatives (*Salon RSE-IDD*); made a presentation on our commitment to sustainable development and conservation at the Forum on Natural Capital; and contributed to the National Forum on Transparency in the Extractive Sector organized by Publish What You Pay. We also joined a series of consultations on best practices in corporate social responsibility and sustainability performance in Madagascar held by the Ministry of Environment, the Economic Development Board of Madagascar (EDBM), and USAID's *Hay Tao* Program and participated in and/or sponsored several other events.



## **International Community**

Ambatovy engages with the international community in Madagascar, including diplomatic missions, UN agencies, donors and international non-governmental organizations (INGOs). This engagement helps create and reinforce synergies between Ambatovy and other international groups, and provides valuable opportunities to establish a climate of trust, respect and openness, to exchange information, to develop best practices and to establish partnerships. Such partnerships are extremely important for Ambatovy to maintain our social license to operate, to ensure that Ambatovy's interventions are complementary with other groups, to tap each partner's strengths and expertise in order to have a greater and more sustainable impact, and to share experiences and lessons learned. In 2022, Ambatovy participated in the eighth International Symposium on Mine Reclamation held in Seoul, Korea and contributed to the Extractive Industries Transparency Initiative (EITI) International workshop on "Putting a Gender Lens on EITI Implementation". We also participated in consultations with the World Bank Group on the preparation of the Country Climate and Development Report (CCDR) for Madagascar and collaborated with the African Development Bank's Business Linkage Program by participating in a series of Business-to-Business (B2B) meetings organized with small and medium-sized enterprises (SMEs). This program aims to develop the capability of SMEs in Madagascar by introducing and connecting them to larger companies, such as Ambatovy.

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<sup>&</sup>lt;sup>1</sup>WASH stands for Water, Sanitation and Hygiene. Universal, affordable and sustainable access to WASH is a key public health issue and is the focus of Sustainable Development Goal 6.

<sup>&</sup>lt;sup>2</sup>In Madagascar, the *fokontany* is a political subdivision equivalent to a village or group of villages.

## Civil Society Organizations and Local Non-Governmental Organizations (NGOs)

We engage actively with civil society organizations where common interests and concerns exist, whether these are broad policy issues with a national scope or local issues that affect communities around our operations. Consistent with our approach to all stakeholders, we respect the views of civil society groups and seek to build dialogue in a constructive manner. We are pleased to partner with a number of civil society organizations that collaborate with us on the implementation of programs that fulfill our commitments to our stakeholders and that help meet our objectives. In 2022, we continued our collaboration with the local association *Mitsinjo* on the special conservation program for the Golden Mantella frog near the Mine Site as well as our collaboration with Asity Madagascar, an affiliate of BirdLife International, for the management of the Torotorofotsy offset site. We also continued our partnerships with the Madagascar Flora and Fauna group (MFG) as part of the Asian Toad Control and Mitigation Program and with the local NGO SAHA<sup>3</sup> in Phase II of the support and accompaniment of communes that are due royalty payments from Ambatovy. In addition, we engaged regularly with civil society groups such as the OSCIE and Transparency International to inform them about Ambatovy's approaches and activities, about the mining sector in Madagascar, about the nickel market, etc.

## Press and Media

The press community constitutes one of Ambatovy's most important stakeholders and is a key partner in information-sharing with the general public. Collaboration with the press and media occurs on a regular basis and is especially important in disseminating clear and timely information and in dispelling rumors. Our engagement focuses on broadening public understanding of Ambatovy's activities and providing a more holistic view of our objectives and responsibilities as part of the wider mining industry. Ambatovy regularly issues press releases and newsletters and offers site visits to journalists in order to cultivate a truthful public record of our activities. In 2022, we shared updates about our activities with the press via news articles, press releases, and briefings. We also worked to expand our presence across digital and social media platforms to more fully engage local and international audiences. During the year we produced a variety of short videos highlighting the company's achievements, filmed a virtual tour of our sites, and began translating our website into multiple languages. As of December 2022, we had over 38,000 LinkedIn followers, 157,000 Facebook followers and 1,800 followers on Instagram.

## **Private Sector/Business Community**

Ambatovy has an extensive supply chain, and our suppliers are integral stakeholders for us. While we have a range of suppliers around the world, Ambatovy emphasizes local procurement

through the Ambatovy Local Business Initiative (ALBI) as part of our commitment to support the Malagasy economy. ALBI offers technical support to local enterprises, thereby allowing them to supply a range of goods and services while meeting our high standards, such as caustic soda, workers' uniforms and raincoats, wooden pallets and windsocks. Our focus on local procurement remained in place in 2022, with more than US\$ 344 million in goods and services purchased from local businesses throughout the year and approximately US\$ 100 million purchased from "local-local" suppliers, i.e. from our zones of operations. More information about our commitment to local procurement can be found in the section on Economic Performance.

We also engage regularly with the wider business community in Madagascar to discuss issues of mutual interest or concern. We are a member of the Chamber of Mines of Madagascar as well as the Madagascar Business Association (Groupement des Entreprises de Madagascar, GEM), the Madagascar Industries Union (Syndicat des Industries de Madagascar, SIM), the Private Sector Humanitarian Platform (PSHP) and other groups. Through our engagement with the wider business community, our goal is to contribute to promoting exchanges and learning, strengthening the voice of the private sector, enhancing the business climate in Madagascar, and demonstrating responsible business practices. In 2022, we worked closely with the PSHP to sensitize private companies in our areas to disaster and risk prevention strategies and participated as a special guest editor for the American Chamber of Commerce in Madagascar's quarterly publication "The American" on the topic of Sustainability and Corporate Social Responsibility, published to coincide with the annual Salon RSE-IDD.

In 2022, Ambatovy launched a new visual identity, including our new logo which recognizes the company's Malagasy roots, environmental and social commitments, and unwavering dedication to serving as a beacon for responsible mining and sustainable development in Madagascar.



## Our Employees and Contractors

At Ambatovy, we aim to recruit national employees whenever possible and are committed to developing a skilled local workforce. Indeed, recruiting, developing and retaining talented and motivated employees helps us to be more productive, to deliver better business results and to be an employer of choice in Madagascar. As of December 2022, Ambatovy had 3,761 direct employees (of whom 88% are Malagasy). Ambatovy also has many contractor companies that work at our sites for various projects and assignments

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<sup>&</sup>lt;sup>3</sup>SAHA stands for "Sahan'Asa Hampandrosoana ny eny Ambanivohitra", meaning Rural Development Program.

and for various durations. Thousands of Malagasy employees and contractors have, over the years, received technical, operational, leadership and administrative training. Investing in such training provides them with the skills required to assume roles with increasing responsibility during the life of our operations. Moreover, the partnerships we maintain with local technical schools ensure capacity building for our workforce and the local population.

In 2022, our objectives were focused on keeping employees safe, engaged and informed, while continuing to build solidarity across the business and within the local community. Civic engagement, family outings and community events were organized to encourage employees to embrace their role as "ambassadors" for the company, and an employee exchange program was initiated to give participants the opportunity to experience our operations at other sites. We also continued to carry out a variety of programs to promote the health and well-being of our employees and contractors. These included

a two-week campaign to mark World No Tobacco Day, multiple HIV/AIDS awareness events, ongoing Covid-19 vaccination and awareness raising, and several mini health campaigns on topics including stress, fatigue, blood pressure, and occupational health.

### Our Shareholders and Lenders

Our shareholders and lenders play an integral role in supporting our operations. In 2007, Ambatovy partners reached a financing agreement with a consortium of 14 lending institutions. <sup>4</sup> This consortium is comprised of government-sponsored export credit agencies, international development banks, and commercial banks from around the world. We report regularly to the lenders on a wide range of sustainability issues and we communicate through our partner companies to financial and industry analysts who assess commodity markets.

To support the potential of local Malagasy companies, Ambatovy implements the Ambatovy Local Business Initiative (ALBI) and continuously works to identify new and unique opportunities to promote local purchasing. Through ALBI, we purchase goods and services from over 400 local businesses each year, including more than 250 local-local suppliers from within our areas of operation.

To further support the start-up of new local businesses, Ambatovy introduced a Business Incubators program in 2022. This initiative was developed to help local companies innovate and grow their businesses through a program of training, mentorship and technical support. As part of this project, we have been identifying currently imported products that could potentially be sourced locally and are working to pair these opportunities with local entrepreneurs in our areas of influence. Our target is to identify 50 youth start-ups to receive our initial support, with the objective of reducing unemployment, supporting vulnerable populations, and creating positive economic impacts.



Stakeholder Engagement 25

<sup>&</sup>lt;sup>4</sup>Ambatovy received US\$ 2.1 billion in financing from this consortium. Please see our website, www.ambatovy.com, for a complete list of these 14 lending institutions.















## **Governance and Human Rights**

## **Objectives**

- · Endeavor to meet and, when possible, exceed the mandatory and voluntary compliance requirements of our agreements with the Government of Madagascar, our lenders and other stakeholders.
- Ensure that our employees and contractors comply with Ambatovy's standards of ethical behavior, good governance and human
- · Contribute to good governance in the mining sector within Madagascar.

## **Approach**

Our commitment to working with integrity, transparency, respect and the highest ethical standards provides the framework to ensure that Ambatovy is an organization that respects our communities, our partners, and our employees. Ambatovy is committed to taking into consideration the interests of our stakeholders in our decisionmaking, and to respecting culture, customs, values and human rights in our interactions with all those affected by our activities. This includes avoiding actual and perceived conflicts of interest, having zero tolerance for corruption of any form, and respecting the rights of all people with whom we interact. We do this by rigorously implementing our Business Ethics Code, Anti-Corruption Policy and Human Rights Policy, and by ensuring we have the systems and programs in place to realize our expectations. Our policies for responsible business conduct can be found on our website at: www.ambatovy.com/en/who-we-are/our-policies/.

We hold all employees, regardless of their position, responsible for respecting both their fellow employees and the communities around our operations. We also expect that the companies with which we work maintain the same level of ethical behavior. Our suppliers and contractors are required to sign a Supplier Code of Conduct and to fulfill certain labor requirements if they wish to do business with us. Our Supply Chain Management (SCM) team is responsible for educating our suppliers and ensuring their compliance with our standards.

Human rights issues are an inherent risk to all mining sites around the world. To manage this risk, we are aligning with international best practices and expectations regarding human rights, and we take human rights very seriously, in line with our commitment to minimizing actual and potential negative impacts of our operations on local communities. Human rights protection and awareness have been integrated into our operational and sustainability strategies. We have a formal Human Rights Policy that affirms the commitment of Ambatovy to operate in a way that respects human rights as set forth in the Universal Declaration of Human Rights (UDHR). Human rights are addressed through the IFC Performance Standards, with which we are obliged to comply, and we adhere to the Voluntary Principles on Security and Human Rights (VPSHR) in all of our areas.

We believe that human rights are everyone's responsibility and, as a major purchaser of goods and services in Madagascar, we have worked to ensure that human rights violations are not present in our supply chains. Both employees and external stakeholders have access to Ambatovy's Grievance Management and Whistleblower Systems for filing grievances on any subject and raising issues of concern, including unethical behavior and human rights violations. We are committed to investigating any violations and ultimately aim to prevent such violations before they take place by informing our employees and key stakeholders of our expectations with regards to respect, honesty and integrity.

# Performance 2







## Compliance to External Initiatives (Mandatory and Voluntary)

Ambatovy strives to maintain the highest standards, to respect local culture and traditions, and to comply with the laws and regulations of Madagascar. We endeavor to meet and, when possible, exceed the mandatory compliance requirements of our agreements with the Government of Madagascar, our lenders and other stakeholders. We are also committed to several voluntary measures that go beyond our legal obligations. More information about each of these mandatory compliance and voluntary commitments can be found in Appendix 3.

#### **Mandatory Compliance**

REPORT WATER MADAGARKARA	Law on Large Scale Mining Investments (Loi sur les Grands Investissements Miniers, LGIM)
ONE Dita Maked pad Norweard	Decree on Rendering Investments Compatible with the Environment ( <i>Décret sur la Mise en Compatibilité des Investissements avec l'Environnement</i> , MECIE)
International Finance Corporation WORLD BANK GROUP	International Finance Corporation (IFC) Performance Standards
EQUATOR PRINCIPLES	Equator Principles

#### **Voluntary Commitments**

BB&P Surroutfolderly Officialization	Standard on Biodiversity Offsets (BBOP, 2012) <sup>5</sup>
VOLUNTARY PRINCIPLES ON RECURITY ORGANIZATE STREET	Voluntary Principles on Security and Human Rights (VPSHR)
EITI	Extractive Industries Transparency Initiative (EITI)
ISO	International Organization for Standardization <sup>6</sup>
SEPONSIBLE INTERPORTED INTERPO	Responsible Minerals Initiative (RMI)
Global Tailings Review.org	Global Industry Standard on Tailings Management (GISTM)
ICMM International Council on Mining & Metals	International Council on Mining and Metals (ICMM)

Some highlights in our work with regards to these standards in 2022:

- Ambatovy organized 12 sessions on the VPSHR to more than 800 private and public security providers as part of their orientations for working at the Mine and Plant Sites.
- Ambatovy continued our active participation on the National Committee of EITI Madagascar. Important work during the year included: finalizing and publishing the 2020-2021 reports in June, following the "flexible reporting" option proposed to implementing countries by EITI International due to

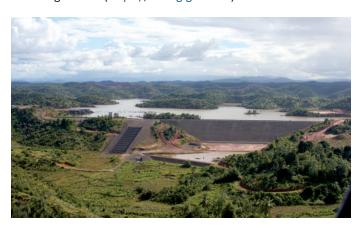
- challenges faced as a result of Covid-19; publishing a study to take stock of systematic disclosure in Madagascar and to make recommendations for moving forward in this regard; working on the revision of the legal status of EITI Madagascar as a public administrative institution in order to ensure its long-term viability and sustainability; starting preparations for the third validation that will be carried out by EITI International in 2023 to assess EITI Madagascar's progress against the standard; and conducting some awareness-raising, sensitization and training activities with different stakeholder groups on issues related to governance in the extractive sector.
- Since receiving our ISO 9001 renewal certification in 2020, annual audits have been completed every year to confirm compliance of our Quality Management System (QMS) with ISO 9001 requirements. In March 2022, an audit was completed on the scope of refining, analytical services and shipping activities. Ambatovy achieved zero nonconformities, six strong points, three areas of concern and five opportunities for improvement. This maintenance of our certification demonstrates Ambatovy's commitment to quality and to our customers. A re-certification audit is scheduled for 2023.
- As part of our strategic directions and to be in line with LME responsible sourcing requirements, Ambatovy is also working towards certification against the ISO 14001 standard (environmental management system) and the ISO 45001 standard (occupational health and safety management system) by December 2023, and towards alignment with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (CAHRA).
- As described in last year's report, in 2021, Ambatovy became engaged with the Responsible Minerals Initiative's Responsible Minerals Assurance Process (RMI RMAP). In late 2021 and early 2022, we commissioned a robust, thorough, credible CAHRA assessment to determine whether Madagascar should be considered a conflict-affected and high-risk area as per the OECD definition. The CAHRA assessment was carried out by an independent third party with expertise in ESG risks in Madagascar's mining sector areas; their report concluded that Ambatovy does not source from, produce in or transit through any CAHRAs. The methodology developed and adopted for the assessment will allow us to do regular updates on the status of Madagascar. In April 2022, we had our first RMAP audit. We were assessed against the Cobalt Refiner Supply Chain Due Diligence Standard and the Joint Due Diligence Standard for Copper, Lead, Nickel and Zinc, both of which are assured by RMI and recognized by the LME. We plan to finalize our Responsible Sourcing policy in the first quarter of 2023 and to make it publicly available on our website, thereby bringing us in full conformity with the RMAP Standard. A renewal audit will take place in 2023. More information about our responsible sourcing efforts can be found in the Responsible Production section.

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<sup>&</sup>lt;sup>5</sup>The Business and Biodiversity Offsets Program (BBOP), initiated in 2004, was a partnership of some 80 leading organizations, companies, financial institutions, governments and civil society groups from around the world. The aim was to develop and test best practices for conservation and biodiversity offsets by following the mitigation hierarchy. It is considered a best practice approach to reducing the negative impacts of public and private sector development projects on biodiversity and ecosystem services. The BBOP officially ended in December 2018; however, its principles have been adopted by international standards to which Ambatovy adheres, including the IFC Performance Standards and the Equator Principles.

<sup>&</sup>lt;sup>6</sup>The International Organization for Standardization (ISO) is an independent, non-governmental organization and developer of voluntary international standards. It facilitates world trade by providing common standards across nations. Use of these standards ensures that products and services are safe, reliable, and of good quality.

 Ambatovy has also decided to adhere to the Global Industry Standard for Tailings Management (GISTM). The Standard strives for zero harm to people and the environment, with zero tolerance for human fatality, by prioritizing the safety of Tailings Management Facilities through all phases of the mine lifecycle. Ambatovy is committed to implementing the GISTM for any "extreme" potential consequences at the Tailings Management Facility and has been working towards achieving full compliance by 2024. Towards that end, we have completed a gap analysis and self-assessment, prepared a comprehensive action plan to comply with the Standard's 77 requirements (which has been reviewed by our Independent Tailings Review Board), and are working closely with the Engineer of Record company in this regard. In 2023, we plan to conduct a Dam Safety Review, to finalize an emergency preparedness and response plan and an afterfailure recovery plan for the TMF, carry out training, and disclose information about our tailings facility on the Global Tailings Portal (https://tailing.grida.no).



#### **Business Ethics**

Ambatovy's core values require that we conduct our business in a moral and ethical manner and that our employees comply with all applicable laws. To support this conduct and to provide clear guidance on what it means to act with integrity, Ambatovy has a Business Ethics Code, an Anti-Corruption Policy, a Code of Conduct, a Zero-Tolerance Policy and a policy against discrimination and harassment in the workplace, all of which apply to all employees, up to and including members of the Board and of our Executive Committee.

The requirements of our Anti-Corruption Policy have been established in compliance with the Malagasy law on the fight against corruption as well as other applicable international legislation, and our Code of Conduct and Zero-Tolerance Policy outline the company's commitment to ethical conduct, compliance with the law, and avoidance of conflicts of interest. All Ambatovy employees are sensitized on our Anti-Corruption Policy and Code of Conduct upon being hired and compliance is compulsory. Refresher courses are given to our employees each year. All new employees (national and expatriate) are required to complete the SkillMine anti-corruption module as part of their onboarding program, within six months of their employment commencement date. In order to facilitate employees' and contractors' understanding and application of these various policies and codes, Ambatovy has an Integrity Guide, wich gathers them all in single document.

Our contractors are also required to comply with these policies and codes. A requirement to comply with Business Ethics, Anti-Corruption, and Code of Conduct Policies, such as Ambatovy's Environmental Code of Conduct, is included in all contracts awarded to new contractors to ensure they comply with our expectations in these areas; these policies and codes are regularly renewed and updated. When needed, Ambatovy reaches out to our contractors and provides training on different topics, where contractor representatives acquire the necessary information with the expectation that they will return to their respective companies and share the knowledge and skills they have acquired with their co-workers.

Ambatovy also requires contractors to disclose familial relationships with Ambatovy personnel and to sign an antinepotism agreement to prevent the risk of familial interference and influence during the bidding process and throughout the business relationship.

## **Human Rights**

#### Protection of Children's Rights

Madagascar is a signatory to the Convention on the Rights of the Child (CRC) and Ambatovy's Human Rights Policy articulates our commitment to the CRC. The entire workforce must sign our Zero-Tolerance Policy for child exploitation and all of our contractors are also required to adhere to our policies on child and forced labor and fundamental human rights. For example, when a local business is being considered as a potential future supplier or service provider, human rights considerations are part of the assessment process. For our existing suppliers, audits are carried out sporadically by staff from ALBI and our QMS team. In the event there is an actual or potential violation of human rights, the contractor is immediately suspended from our supplier list as a human rights violation is considered a breach of our mandatory Code of Conduct.

In line with the commitments laid out in the Environmental and Social Development Management Plan (PGEDS), and building on the work we have done through our longstanding partnership with UNICEF in the areas of education, youth development and child protection, Ambatovy is dedicated to the national campaign against child exploitation and works with a range of key stakeholders to broach child protection issues in local communities. In 2022, Ambatovy continued to partner with the Moramanga Child Protection Network (CPN) in order to support the implementation of their 2022 Annual Work Plan. To this effect, Ambatovy ran capacity building sessions for network members, held community awareness sessions with 522 participants in Moramanga and sensitized another 4,228 community members through a variety of targeted activities including sports tournaments, school programs, mass media campaigns and door-to-door visits to targeted businesses and hotels.

To celebrate Children's Month, Ambatovy also supported a drawing contest organized by the CPN for pupils from the District of Moramanga on the theme "In the face of the spread of Covid-19, together, let's respect children's rights." In 2022, Ambatovy awarded prizes to the winners, including dictionaries and school supplies, and displayed the drawings for public viewing at our Information Center in Ambarilava, Moramanga.

Ambatovy's efforts to improve children's access to education, such as distributing school kits and offering scholarships to vulnerable girls, as well as our work to promote livelihoods activities for people living in proximity to our sites, also address some of the conditions that drive child labor in Madagascar. More information on these activities can be found in the subsequent section on Communities and Social Relations.

To support women's rights and promote women's empowerment, Ambatovy supports a range of women's associations in the areas near our operations. In 2022, we partnered with the Kanto Farmers' Organization from Ambavaniasy – a cooperative, comprised uniquely of women, that works in the small-scale production of artisanal jams, ginger, and handicrafts. To support the organization, we constructed a new workshop, kitchen and showroom that will provide members with an autonomous space to prepare and market their products. Our teams are also working to develop a sustainable jar and bottle recycling initiative with *Kanto* that will support the packaging and marketing of the women's jams.

# Voluntary Principles on Security and Human Rights (VPSHR)

We are committed to safeguarding our people, assets, reputation and the environment, while respecting the rights of the public. Our security policy outlines our principles for creating a safe and secure business environment and for conducting security operations in compliance with local, national and international legal requirements, security standards and law enforcement principles. Our management approach to site security involves identifying, understanding and minimizing security threats and risks; working with local law enforcement authorities to respond appropriately to security incidents; reporting and investigating security-related incidents and complaints and taking actions to minimize the probability of recurrence; and implementing relevant international principles, including the VPSHR.

Ambatovy has taken a series of proactive steps to bring our sites into greater conformance with the VPSHR. When our operations were first getting underway approximately ten years ago, Ambatovy conducted third-party rights risk assessments that mapped out human rights and security-related risks to both our company and our stakeholders. The results of the risk assessments were used to strengthen existing policies and procedures as well as to develop new systems and programs to prevent and mitigate the identified risks. In 2019, as a follow-up to the initial baseline assessment and in the spirit of continuous improvement, we commissioned an independent assessment to review relevant policies, procedures, and practices put in place at our sites, to verify whether Ambatovy complies with the requirements of the VPSHR and UNICEF's Child Rights and Security Checklist, and to make recommendations. We plan to have another assessment of our compliance with the requirements of the VPSHR in 2024, five years after the previous one.

We have incorporated VPSHR-related requirements into our agreements with both private and public security providers. Such requirements include pre-employment screening and comprehensive training on security, human rights and the use of force. Human rights awareness is also a requirement of security companies submitting or resubmitting proposals in our contract tender process.

In 2022, Ambatovy organized 12 sessions on the VPSHR with more than 800 private and public security providers as part of their orientations for working at the Mine and Plant Sites. There were no security incidents involving allegations or claims of human rights abuses at Ambatovy during the year. Our Security Manager, or his designate, continued to hold regular meetings with the leadership of the *Gendarmerie* during which the Voluntary Principles were discussed. We also continued to engage with security forces, donor agencies and diplomatic missions, civil society organizations, other extractive companies and other groups that are interested in security and human rights issues at workshops, conferences and seminars.

#### The Ambatovy Grievance Management System

According to the Guiding Principles on Business and Human Rights (often referred to as the "Ruggie Principles"), there is a state duty to protect human rights and a corporate responsibility to respect human rights; there is also a need to provide access to remedy for victims of business-related abuses. As such, an important aspect of engaging with our stakeholders and building our social license is listening and responding to community concerns and incidents. Our ongoing community relations activities are designed to capture and resolve most of these issues before they escalate. However, for those issues that cannot be resolved through direct consultation, it is important to provide a credible, confidential and formal mechanism to receive and address grievances. Grievance mechanisms are processes to receive, classify, acknowledge, investigate and respond to community complaints. These are valuable early warning systems that can resolve sources of friction between stakeholders and companies, and can, over time, build trust.

At Ambatovy, remedies for complaints, up to and including potential human rights violations, are provided through our Grievance Management System. Any critical issues of concern are swiftly communicated to Senior Management and raised in internal weekly reports.

Since it was established in 2012, Ambatovy's Grievance Management System has provided our communities with a transparent, participatory channel through which anyone can raise an issue of concern and be assured of receiving fair and thorough consideration. The system has incorporated best practice guidance from a number of sources in order to ensure it is practical and credible. It includes, for example, an External Grievance Oversight Committee (EGOC), comprised of respected members of local communities, that meets regularly to review the overall grievance management process (the response time, the fairness of the system, the relevance of resolutions, etc.) and to provide feedback and suggestions for improvement. The system also includes a team of external Grievance Registry Officers that handle complaints at the local level first-hand. Ambatovy works with these officers to ensure they have access

to the correct tools and training to carry out their roles and completes regular capacity building and evaluations to monitor their performance. In 2022, four capacity building workshops were held with 37 Grievance Registry Officers.

Ambatovy has continued to make great strides in processing and closing out outstanding grievances. In 2022, a total of 184 complaints were investigated and resolved, including a backlog from previous years. We also received 172 new grievances, mainly relating to livelihood matters. These included two collective grievances: one legacy claim by rice farmers in Ambolomaro, whose rice fields were affected during the construction of the Mine (please see the section on Resettlement Communities for more details), and a collective grievance received from 73 rice farmers in Ampielemana whose fields were impacted by flooding from a drainage canal during the passage of Cyclone Ana in January 2022.

Ambatovy is committed to managing the impacts of our operations through application of the mitigation hierarchy, as required by the IFC Performance Standard 6. In cases such as this, where avoidance is not possible, we work with communities to develop effective mitigation measures that meet the requirements of the IFC Performance Standards. In the case of Ampielemana, we took decisive action to restore all impacted rice fields. 21 hectares of restoration activities were completed in 2022 and compensation for losses was paid to 58 farmers. Ambatovy also covered the cost of soil preparations, provided farmers with inputs for the next plantation season, and trained households in innovative rice cultivation techniques such as the System of Rice Intensification (SRI), the System of Improved Rice Cultivation (SRA) and the PAPRIZ technical package. Repairs and upgrades to the drainage system are also underway. To maximize socio-economic opportunities, labor for these activities is being sourced directly from impacted villages through collaboration with fokontany chiefs. To provide additional support to the impacted community, Ambatovy also targeted Ampielemana to participate in a water supply project carried out this year and is exploring the possibility of supporting the the development of an irrigation network for farmers.

In 2020, a new Whistleblower System was launched in order to replace and upgrade the one originally established in 2017. The system allows employees to anonymously report issues of concern relating to health, safety and security; theft and fraud; violation of laws, policies and procedures; harassment; manipulation or falsification of records and contracts; unethical conduct and conflicts of interest. The confidential system offers employees the opportunity to report issues which they may not be comfortable discussing with their supervisors or with Ambatovy's Senior Management. A toll-free hotline telephone number has been established and callers can speak in Malagasy, French or English; they can also make contact through a website.

The system allows for the thorough investigations of all reports in order to ensure fairness and equitable outcomes, and it is in line with our commitment to respect human rights and with our efforts to create a healthy organizational culture. Our Legal team and Human Resources Department are responsible for monitoring compliance with the Code of Conduct and ensuring proper mechanisms are in place to address concerns about ethics. If we identify adverse human rights impacts, we will take steps to address them promptly (although, to date, no human rights-related grievances have been reported). In 2022, the Whistleblower System continued to gain momentum across the business as employees have become increasingly familiar and confident in the system.

















## **Economic Performance**

## **Objectives**

- Position Ambatovy as amongst the most successful and sustainable nickel laterite operations in the world, with a real competitive advantage, in order to secure long-term company sustainability for the benefit of our employees, the country of Madagascar and our shareholders.
- Maximize the economic returns of our operations to local communities, to the extent possible.
- Prioritize local procurement and invest in local capacity to be able to participate in our supply chain.

## **Approach**

Ambatovy is aware that our presence in Madagascar has had, and will continue to have, considerable economic impacts at the national, regional and local levels. Our vision is to significantly contribute to Madagascar's development and to maximize the economic return of our operations to local communities. Our decision to refine our products in-country brings important value-added for Madagascar, including the creation of thousands of additional jobs, increased earnings for the local communes, regions and the country, and the construction of local infrastructure, to name but a few. At the national level, with Ambatovy's exports beginning in 2012, nickel has become one of the top exported products for the country. Nickel and cobalt export earnings have helped to curb the external current account deficit, maintain the value of the local currency (Ariary), and build up adequate foreign currency reserves. Locally, significant economic returns have already been seen in the form of salaries, wages and employment benefits, improved infrastructure, and business opportunities.

In recognition that an operation of this size can create both positive and negative economic impacts, Ambatovy has implemented a number of proactive programs and mitigation measures to counterbalance any undue results. For example, to help control inflation, to facilitate purchasing procedures and to ensure good quality, we buy our products directly from several farmer's associations and cooperatives. We have also dedicated ourselves to improving the capacity of local companies to deliver goods and services of international quality through regular support and training. Ambatovy also recognizes that with an investment of this size, there is a responsibility to ensure that funds are managed ethically and transparently and that we do our due diligence to lessen the chance of corruption in all of our transactions.

# Performance Market Mark







## **Economic Benefit Footprint**

When evaluating the overall economic impact that our presence delivers at national, regional and local levels, we track our "economic benefit footprint", which includes payment of taxes, royalties and fees to the Government; the procurement of local goods and services; payment of local salaries, wages and employment benefits through our local recruitment efforts; and community investment and donations spending that goes above and beyond our obligations and commitments. In 2022, we calculated our economic benefit footprint as more than US\$ 422 million.

#### Payments to Government

In 2022, Ambatovy made approximately US\$ 46 million in payments of taxes, royalties and fees to the Government, including amounts due to both the Central Government and to the Decentralized Territorial Collectivities. There were no fines related to environmental or product compliance infractions during the year.

#### Local Procurement

In 2022, Ambatovy spent approximately US\$ 344 million in the purchase of goods and services from local suppliers, reflecting 81.5% of our economic benefit footprint. To support our commitment to maximizing the economic returns to local communities, we have implemented a range of programs and have made support tools available to local businesses and entrepreneurs so that they can provide Ambatovy with goods and services that meet our standards of procurement and quality. The Ambatovy Local Business Initiative (ALBI) was established several years ago to support this commitment and to uphold our local procurement policy of "buy locally, hire locally."

Ambatovy continues to remain dedicated to local procurement and has seen success in emphasizing local sourcing whenever it is possible. Since the start of our operations in 2012, Ambatovy has spent more than US\$ 3 billion in local purchases.

As of the end of 2022, 5,285 potential vendors had been vetted and registered in our database. During the year, Ambatovy conducted 34% of our purchasing from over 418 local suppliers across 40 sectors of business including construction, transportation, cleaning and catering services, consumables and materials, increasing our local spending by more than 50% as compared to the previous year. Examples of locally-sourced materials include the pallets and barrels used for our shipments of nickel and cobalt as well as uniforms and raincoats distributed to our employees. These suppliers, in turn, create muchneeded job opportunities. The exact number of jobs created to indirectly support Ambatovy's procurement needs is difficult to calculate – however, we know that at least 500 jobs have been created to build wood pallets, produce uniforms, and recycle plastic, tires and wood.

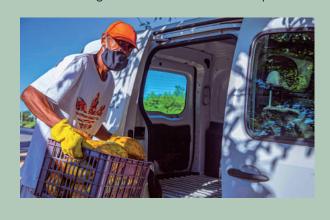
Ambatovy strives to integrate our recycling efforts with a commitment to support local business and to promote community development. By combining our economic development and environmental protection objectives, we have been able to establish several partnerships with local associations and NGOs for waste recycling. Results of these activities in 2022 include:

- 495 m³ of used woods and pallets were converted into school and office furniture by the Toamasina Cultural and Social Center and FIMIAM Association in Moramanga.
- 2,025 m³ of plastic waste were converted into pellets by ECO-AID, Groupe SMTP and STAR (ADONIS).
- 563 m³ of food waste were composted by Arovy Ny Aina and used to grow a variety of fresh fruits and vegetables used in school nutrition programs.
- 4,000 liters of used cooking oil were converted into domestic soap by Innowa.
- 91,373 m³ of fly ash were converted into raw material by Cementis.
- 82 m³ of metal drums and 54 used tires were recycled by Vonjy Aina.
- 240 m³ of used motor oil were recycled by Adonis.

In 2022, to further encourage the start-up of new local businesses, the ALBI and CSR teams introduced a Business Incubation program — a initiative that helps local companies innovate and grow their businesses through mentorship, counseling, and technical support. As part of this program, ALBI works to identify products that are currently imported but that could potentially be sourced locally and works with new suppliers to establish a sustainable calendar of activities for their business. In 2022, ALBI applied this local content strategy to the purchase of brought-in goods with a focus on: developing local contractors and suppliers through capacity-building and skills transfer; increasing the number of local product manufacturers for products which are currently imported and promoting local enterprise development and competitiveness at local levels.

As part of our ongoing effort to identify and engage new suppliers, Ambatovy also partook in a variety of national and regional trade fairs including the International Fair of Madagascar in Antananarivo and the *Toam'Ketrika* Economic and Commercial Fair in Toamasina. Ambatovy also collaborated with the African Development Bank's Business Linkage Program by participating in a series of Business-to-Business (B2B) meetings organized with small and medium-sized enterprises (SMEs). This program aims to develop the capability of SMEs and strengthen supply chains in Madagascar by introducing and connecting SMEs to larger companies.

As part of our Ambatovy Local Business Initiative (ALBI), Ambatovy has been developing a "local-local" supplier base from within areas directly affected by our operations (i.e., inside the Districts of Toamasina I, Toamasina II, Moramanga and Brickaville). During 2022, we purchased approximately US\$ 100 million of goods and services from 256 "local-local" suppliers. This included over 33,000 uniforms, 27,000 pallets and 15,500 metal drums purchased from local manufacturers as well as 152 tons of fruits and vegetables, 319 tons of chickens, and over 1.9 million eggs from local farmers. These "local-local" purchase agreements not only create job opportunities and local economic returns, but also help to support Ambatovy's goal of contributing to improved health and wellbeing for vulnerable populations through social and economic integration and sustainable development.



Our vendors continue to have access to training modules and mentoring support in areas such as quality, health and safety, environment, the labor code and financial analysis.

Audits are conducted periodically to verify our vendors' capacities to safely and reliably deliver goods and services, in compliance with legal, regulatory and tax requirements in Madagascar, as well as with Ambatovy's policies and standards with regards to quality, health and safety, our environmental code of conduct, business ethics and human rights. The ALBI team provides coaching to audited companies to help them address and take corrective action for any identified nonconformities; if companies are not able to do so within an agreed timeframe, Ambatovy will re-assess the continuation of the partnership. In 2022, eight local vendors were audited, making a total of 600 audits carried out since 2011.

#### Local Salaries, Wages and Benefits

Local salaries, wages and employment benefits for our direct employees totalled US\$ 32 million in 2022, accounting for approximately 7.5% of our economic benefit footprint. This reflects our commitment to maximizing employment opportunities for the Malagasy population and our contributions to raising the standard of living and creating wealth in communities near our operating sites through competitive wages and working conditions. For more information on recruitment and training, please see the section on A Safe and Rewarding Workplace.

#### **Community Investment and Donations**

We endeavor to achieve maximum local impact with the funds we spend on community investment and with the donations we make. Our Community Investment and Donations spending reflects all community spending above and beyond our legal requirements and obligations. In 2022, it totalled almost US\$ 340,000, with an important portion continuing to be through the Social Investment Fund (SIF), a US\$ 25 million allocation established in 2012 in partnership with the Government of Madagascar. The SIF supports several projects, such as rehabilitating public infrastructure, like schools and electric generators, and building new ones, like markets and roads. In order to be eligible for SIF funding, projects require support from communities, the Government of Madagascar and Ambatovy. Most of the SIF projects have now been completed and two are ongoing. In 2022, Ambatovy continued delivering on our commitments for the two ongoing SIF projects, notably through:

- the provision of water analysis equipment and materials to complete a laboratory constructed for the National Office for the Environment (ONE) in Toamasina;
- an ongoing partnership with the local NGO SAHA on the preparation/update of Communal Development Plans (CDPs) and Inter-Communal Spatial Development documents, as part of the *Tsara Tantana* (Good Governance) Project; in 2022, two additional Communes requested support to develop their CDPs, Anivorano Est and Vohitranivona.

In addition to the implementation of projects supported through the SIF and as described further in the section on Communities and Social Relations, Ambatovy also carries out extensive activities in livelihoods development, education, community health and safety, work with resettled families, local economic development, and cultural heritage.

Every year, Ambatovy also sets aside funds to respond to requests for donations and sponsorships. In 2022, Ambatovy continued to support the fight against Covid-19 in communities and urban centers near the Mine and Plant Sites. Ambatovy's public health-related contributions included:

- A donation of medical supplies and equipment including ten oxygen concentrators, fifteen rotameters and fifteen humidifiers to the Morafeno University Hospital Center (CHU) in Toamasina.
- A donation of hygiene kits and PPEs (including protective suits, gloves, surgical masks, visors, syringes, and cotton blankets donated to the Regional Directorate of Public Health (DRSP) of Atsinanana.

- A donation of specialized equipment to support the operation of a GenXpert testing machine at the Moramanga District Reference Hospital Center (CHRD).
- A donation of over 2,000 rapid antigen test kits to the Inter-Enterprise Medical Service in Moramanga (SMIMO) to assist in Covid-19 diagnoses.



Some examples of other donations that Ambatovy made during the year include:

- A donation of school kits to 7,080 students from 28 public primary schools and four community schools in the Districts of Toamasina I and II, Brickaville and Moramanga.
- Donations of computers and IT equipment to support the Regional Directorate of Public Health in Atsinanana (DRSP), the Advanced Post of the *Gendarmerie* in Ampitambe and the Immigration Police in Toamasina.
- A donation of mattresses, corrugated sheeting, potable water, hygiene kits, PPEs and over 34 tons of rice to support the victims of cyclone damage, plus an additional 19 tons of seed provided to farmers to help them rebuild livelihoods impacted by the storms.
- 181 tons of ammonium sulphate donated to the Ministry of Agriculture to support JICA's PAPRIZ Project. This initial donation will benefit over 75,600 farmers involved in rice cultivation programs and contribute to the country's goal of achieving food self-sufficiency in Madagascar.
- Ten tons of ammonium sulphate donated to the regional water authorities in Toamasina to be used in the treatment of its municipal water supply.
- 500 educational books and games donated to the SOS Malagasy Children's Village in Antananarivo to support the operation of their school and library. Ambatovy also donated sports equipment to the Ravelojaona University in Moramanga and school supplies to students from the Amoron'i Mania Region to facilitate the completion of their First Cycle Certificate exams.
- Two tons of rice, 400 kg of beans, 200 liters of cooking oil and 400 kg of sugar donated to the victims of two major fires in Ampasimbe and Beforona; support also provided to the victims of a vehicle incident in Antanambao and donation of food kits, including over one ton of rice, to vulnerable persons such as elderly veterans and widows.



 Medical supplies and equipment donated to support Operation Smile in providing free surgeries for children with cleft palate needs. 42 Ambatovy employees also served as volunteers (to assist with translations, administration, postsurgery accompaniment to patients, etc.) contributing to 130 free surgeries carried out in 2022.

More information on our community investments (including a complete listing of all the projects supported through the SIF) can be found in the section on Communities and Social Relations and in Appendix 4. It should be noted that Ambatovy does not make any donations to political parties, politicians or related institutions.

At Ambatovy, we combine recycling, waste recovery and social integration with a commitment to support local businesses. To align our social and environmental objectives, we have established recycling partnerships with a growing number of local associations that promote community development.

Through one such partnership, we have been able to give new life to our used wood materials while supporting the vocational training of disadvantaged youths. Since 2015, we have delivered used pallets and crates from our Plant Site to the Toamasina Cultural and Social Center (CCS) where they are used by carpentry students in hands-on training. These young people are able to learn a trade and develop the skills needed to find a job or to create their own small businesses. Some of the furniture produced is then donated to equip classrooms, offices and hospitals in the local community.

Similarly, Ambatovy donates our used wood from the Mine Site to local farmers from the FIMIAM Association where it is used to build furniture and livestock breeding equipment (beehives, pigsties, etc.). We also locally recycle materials such as plastics, tires, metal drums, used motor oil, fly ash, and cooking oil. Each of these partnerships creates economic value-added in the communities where we operate, promoting small businesses while helping to reduce our environmental footprint.



#### Communities and Social Relations<sup>7</sup>

#### **Objectives**

- Develop a climate of mutual trust, transparency and open dialogue between Ambatovy and neighboring communities.
- Promote positive and sustainable impacts within communities and contribute to improved living conditions of the local population.
- Mitigate the potential negative impacts on affected populations and their surroundings.

#### **Approach**

Now more than ever, local stakeholders—from local communities to civil society organizations—expect to experience tangible benefits and improvements in their standard of living and quality of life from natural resource extraction and processing. This is particularly true in places where socio-economic development has been lagging, infrastructure is lacking and human development indices are low. Within the industry, there is recognition that mining and energy companies have a role that extends beyond the simple provision of returns to shareholders. For a company to be truly sustainable, it must build broad social license and demonstrate that it delivers a net-positive benefit to local communities and to society as a whole. It is for this reason that benefitting people and helping to catalyze the development of sustainable communities is so important to us.

Ambatovy's activities have significant potential to impact the communities where we operate. The process of how we handle these impacts and the end results, both positive and negative, affect our relationships with local communities. A planned, transparent and constructive approach to community engagement and development is therefore critical to maintaining our social license to operate and ensuring that communities benefit from our presence. We are also conscious of the need to balance government and community expectations against our ability to deliver benefits throughout the life of the Mine, and to ensure that we do not foster dependency or substitute for government services. Our goal is to leave communities no worse off, but ideally much better, than when we arrived.

Community engagement is critical for establishing mutual understanding of one another's needs, interests, aspirations and concerns; for making decisions to support business objectives related to growth, risk management and operational excellence; and for collaborating to address local priorities.

Constructive relationships with community stakeholders are essential to securing and maintaining our social license to operate, creating mutually beneficial outcomes and ensuring that being our neighbor is a globally positive experience. Our approach to community engagement continues to emphasize open, transparent communication with local communities concerning our activities. Since major extractive operations of Ambatovy's magnitude are still relatively new in Madagascar, we have seen a need to maintain community interactions and face-to-face consultations on a regular, ongoing basis, in order to counter wide-spread rumors, fears and misunderstandings.

An important aspect of engaging with our stakeholders and building social license is listening and responding to community concerns and incidents. Our ongoing community relations activities are designed to capture and resolve most of these issues before they escalate, but for those issues that do, it is important to have a credible community grievance mechanism in place. As described in the Governance and Human Rights section earlier in this report, Ambatovy has established a Grievance Management System.

Our Communities and Social Relations (CSR) program focuses primarily on livelihoods development, support for education, improvement of community infrastructure through donations and the Social Investment Fund (SIF), community health and safety, work with resettled families, community engagement and cultural heritage. Collaboration with local authorities and partnerships with NGOs and other civil society groups continue to play a key role in our approach to Communities and Social Relations.

Communities and Social Relations

<sup>&</sup>lt;sup>7</sup>In 2023, the Communities and Social Relations (CSR) Department was re-named as the Social Investment and Community Engagement (SICE) Department. In future reports, the department will henceforth be referred to as SICE.

#### Performance















#### Livelihoods Development

The Livelihoods Development component of our work reflects Ambatovy's commitment to improving the living conditions of people who reside in proximity to our sites. The Livelihoods Development program aims to enhance food security for these community members as well as to ensure and increase their sources of income, develop greater self-reliance and promote long-term development. Our Livelihoods Development activities include capacity building, organizational support, the provision of agricultural inputs, partnership development, and opportunities to network and gain access to markets.

Ambatovy remains committed to monitoring erosion and restoring impacted land along the Pipeline, and continues to work with farmers whose rice fields were affected during the construction phase or whose fields may be impacted during maintenance activities. Towards that end, we have invested in technical training, the provision of inputs and small agricultural tools, the dissemination of improved cultivation methodologies, the preparation of demonstration plots, the organization of exchange visits, and the establishment of partnerships with external NGOs and enterprises in order to develop new livelihoods and marketing opportunities for local villagers. In 2022, we continued to support farmers through the delivery of nearly 20 tons of seed and over two tons of fertilizer with a focus on supporting famers whose livelihoods were impacted by cyclone damage. We also worked with agricultural cooperatives, farmers' associations, NGOs and the private sector to support income generating activities (IGAs) and to facilitate new marketing opportunities for their products. Some examples of our livelihoods activities during the year include:

· Support for farmers' cooperatives near the Plant, Tailings and Mine Site, resulting in the sale of over 300 tons of seasonal fruits and vegetables to our catering contractor. This company provides catering services to approximately 10,000 people per day, representing a very important market for farmers near our facilities.

- Initiation of a micro-dam project that will support 280 people downstream of the Mine Site perimeter. The project involves the construction of a 20-hectare dam that will provide rice farmers with a reliable source of irrigation water for their plots.
- The launch of a new business incubation project that will match business opportunities at Ambatovy to local entrepreneurs with the potential to grow their businesses. The aim of the project is to target 50 youth start-ups to receive support through capacity building, training and formalization.
- Implementation of a sustainable fishing program, carried out in collaboration with the Regional Directorate of Fisheries and the Blue Economy in Atsinanana (DRPEB). This project aims to make fishing activities more sustainable, while improving fishermen's income and enhancing their resilience to climate change. The project will support 190 fishermen from five fishing cooperatives, through a program of training, administrative and technical support.
- Construction of an artisanal production workshop for the Kanto Farmers' Organization - a cooperative comprised uniquely of women that works in the small-scale production of artisanal jam, ginger and handicrafts. Ambatovy assisted the organization by constructing a new facility that will provide the women with an autonomous space to develop and market their products; we are now supporting the development of a bottle and jar recycling initiative for the packaging and marketing of their jams.
- A donation of 181 tons of ammonium sulphate was provided to the Ministry of Agriculture. The donation is being used to improve rice yields as part of the Japan International Cooperation Agency's (JICA) PAPRIZ Project. The donation is expected to help over 72,000 farmers and 3,600 farmer-trainers across 11 regions of Madagascar.

Ambatovy plays an active role in supporting Village Savings and Loan Associations (VSLAs) in our areas of operation. Since 2013, we have helped foster the creation of 54 selfmanaged VSLAs that are largely comprised of and run by women. VSLAs help to empower their members to overcome social and financial barriers. They have become a core activity in many local communities and have proven to be very successful in providing participants, and particularly women, with the opportunity to increase their capital and financial autonomy, to cover health and education expenses for their families, and to advocate for gender equality and decision-making power in their homes.

Ambatovy helps to establish VSLAs by providing financial, logistical and technical support. We train members on the principles of microfinance, the culture of saving and loans, and the fundamentals of association management. We also provide savings groups with the equipment, supplies and working capital needed to implement these approaches. Ambatovy also provides direct support to many members' income generating

activities. Participants often receive material assistance, in the form of equipment and inputs, and marketing support to help them grow their businesses. In 2022, we organized exchange visits, supported participation in rural development fairs and provided training to recently established VSLAs. We are proud to support these VSLAs with over 1,200 VSLA members.



#### Education

Providing educational opportunities to the children in local communities has been a priority of our social engagement activities since the construction period. Through these initiatives, Ambatovy hopes to advance the capacity of local schools and to improve the ability of families to send their children to school. Actions to support local education in 2022 included the following:

- Ambatovy provided school kits to 7,080 students from 28 public and four community schools in Toamasina I, Toamasina II, Brickaville and Moramanga. The school kits helped lessen the financial burden of school fees on families and helped maintain children's enrolment rates.
- Activities continued to support six school canteens in Toamasina as part of a school nutrition program run in collaboration with the Regional Office of Nutrition (ORN). This project aims to maintain the attendance rate of students and improve their academic performance by providing well-balanced, healthy meals to the children. Over 1,240 pupils received meals during the course of the year.
- Inauguration of a primary school built in Ambodibonara as part
  of post-cyclone infrastructure project financed through the
  SIF. A total of six school buildings have now been constructed,
  furnished and handed over to authorities in Toamasina II and
  Moramanga. Actions are underway to construct an additional
  two primary schools along the Pipeline.
- 142 young girls from vulnerable families in Toamasina and Brickaville were granted scholarships for the 2022-23 school year as part of a merit scholarship program developed in collaboration with regional educational authorities (DREN). The program aims not only to provide vulnerable girls with a better education, but also to alleviate parents' financial burdens by fully covering each student's registration fees, monthly tuition and other schooling expenses. These scholarships will be renewed every school year (providing that students meet the required criteria) until recipients obtain their middle school certificates.



#### Social Investment Fund (SIF)

In 2012, Ambatovy, in partnership with the Government of Madagascar, created the SIF, with a total value of US\$ 25 million to be used for social and infrastructure projects for the benefit of the local population. These projects have been identified in collaboration with local communities and Malagasy authorities and are managed in accordance with Ambatovy's procurement and purchasing policies. In 2022, Ambatovy continued delivering

on our commitments. Fifteen projects have been completed and/ or closed and two projects – the *Tsara Tantana* (Good Governance) project, and the construction of a laboratory for the ONE – are still ongoing. Progress on these two projects is summarized as follows. For a full listing of the 17 SIF projects, please see Appendix 4.

- Tsara Tantana (Good Governance) aims to support the transparent, equitable, and sustainable distribution and management of mining royalties paid by Ambatovy for the Decentralized Territorial Collectivities (CTDs) in Madagascar. The project is conducted in partnership with the local NGO SAHA and sponsors the preparation/update of Communal Development Plans (CDPs) key documents which enable the municipalities to plan their local development and good governance initiatives. In 2022, SAHA continued to work with Communes to build their capacity in local governance and elaborate their CDPs. Workshops on "inter-communal spatial planning" were carried out and several draft CDPs were completed.
- Ambatovy constructed a laboratory facility to support the
  performance of independent water testing and analysis by
  the National Office for the Environment (ONE). Construction
  of the laboratory was completed in December 2021 and the
  purchase of equipment and laboratory materials was carried
  out in 2022. Final acceptance of the laboratory has been
  completed, however the official handover will be planned at
  a later date.



#### Community Health and Safety

As good neighbors, it is critical that we ensure that our operations, transportation activities and other business practices avoid unintended or adverse effects on the public. We follow the regulations of our operating jurisdiction, strive to meet the expectations of nearby communities, and regularly engage and collaborate with local stakeholders on health and safety-related risk awareness and emergency preparedness.

#### Public Health and Safety

There are natural links between public health, safety and effective community engagement. Through engagement, we work to understand public concerns and safety risks, evaluate steps we can take to reduce those risks, help clarify misunderstandings and dispel misinformation, and, when appropriate, collaborate with communities on initiatives that make all of us healthier and safer. Through these efforts, we contribute to building a strong safety culture in the workplace and in the communities near our operating sites.

In 2022, our health initiatives focused on supporting communities where infrastructural deficiencies, limited access to medical care and a shortage of health workers continued to limit access to health care. We also worked with communities impacted by cyclone damage to rebuild basic social infrastructure and continued to support the fight against Covid-19. To this effect, we made donations of hygiene kits, major medical supplies and PPEs to various local hospitals. Donations included ten oxygen concentrators donated to regional health authorities at the Morafeno University Hospital Center (CHU), over 2,000 rapid antigen test kits donated to the *Moramanga Service Médical Inter-Entreprises* (SMIMO) and a donation of specialized equipment to the CHRD in Moramanga in Moramanga to support the operation of a GenXpert testing machine.

To address health care barriers experienced within the community, Ambatovy worked with the Regional Directorate of Public Health to provide free mobile medical consultations to villages near our sites. In 2022, over 1,200 people from three villages received free health care and medications.

Ambatovy also collaborated closely with Operation Smile to support their work of providing free surgeries for children with cleft palate needs. Ambatovy provided essential assistance to this effort through donations of medical supplies and equipment and through 42 employees who served as volunteers (to assist with translations, administration, post-surgery accompaniment to patients, etc.). With the support of Ambatovy and other partners, Operation Smile provided free surgeries to 130 patients in 2022.

To provide communities with a safe and reliable source of drinking water, Ambatovy installed ten new water points (wells and hand pumps) in six villages near the Mine Site that were impacted by cyclone damage in 2022. Their installation has provided 455 beneficiaries with a reliable source of drinking water and has helped to prevent exposure to countless water borne diseases.

To ensure the longevity of the project, Ambatovy worked closely with each community to establish Water User Committees and has trained each committee in the management and maintenance of their water and sanitation infrastructure. These new water points will contribute to reducing the long travel times previously required by villagers to fetch clean water, allowing communities to be more fruitful and productive in their day-to-day activities.



In line with IFC Performance Standard 4, addressing the obligation of a project to "prevent or minimize the risks and impacts on the communities' health, safety, and security" resulting from the project's activities, Ambatovy carried out an initial Health Impact Assessment (HIA) several years ago. The purpose of the HIA was to evaluate and understand the positive and negative impacts, if any, our operations may have on the local population's health and safety and to develop a corresponding action plan. Ambatovy continues to focus on assessing our impacts on the health and safety of our communities and identifying areas where we can assist in strategic community initiatives.

Some examples of safety-related actions carried out at the community level during 2022 include:

- Railway safety campaigns were carried out in collaboration with Madarail, reaching over 1,350 students and teachers from 24 schools. In recognition of International Level Crossing Awareness Day (ILCAD), Ambatovy also organized exhibitions and animations along the Toamasina esplanade and at highly frequented rail crossings. During the two-day celebration, another 3,800 people were sensitized.
- Within the ammonia pipeline corridor, awareness-raising sessions were held on the actions to take in case of a gas leak.
   This involved communications in the form of educational tools, posters and leaflets distributed to populations living near the ammonia plant.
- Six villages near the Mine Site were targeted to participate in awareness-raising campaigns on blasting safety. A contest was also organized, in collaboration with local environmental authorities in Moramanga, to raise community awareness about bushfire prevention.
- To sensitize communities to the risks associated with security issues (illegal trespassing, grazing and encroachment, etc.), Ambatovy organized community soccer tournaments and carried out 33 awareness sessions with over 3,400 participants. Ambatovy also continued to support a school nutrition program, with the local association *Arovy Ny Aina*, that cultivates school gardens on parcels of Ambatovy land previously threatened with encroachment.
- Ambatovy introduced a road safety project in the town of Moramanga. The project focuses on pedestrian awareness and road safety training for rickshaw (*Bajaj*) and bus drivers. As of December 2022, over 600 rickshaw drivers and 4,000 students had participated in training and awareness programs. Ambatovy also donated road signs, communication materials and equipment to support the National Police in their road safety efforts.

#### HIV/AIDS

Madagascar has a relatively low prevalence of AIDS (with an adult prevalence estimated at below 0.3%) and the country has fortunately thus far been able to escape the worst of the pandemic that has hit much of Sub-Saharan Africa. However, the limited access to health and social services, the high rates of other Sexually Transmitted Infections (STIs) plus risky behaviors and other vulnerability factors amongst the population suggest that if HIV/AIDS were ever to gain a foothold in Madagascar, it could spread rapidly, especially in urban areas. HIV/AIDS prevention and awareness therefore remain an integral part of Ambatovy's

social commitment in the field of health. Our objective is to avoid any undesirable social and cultural impacts that could result from our operations, specifically in regard to the spread of infectious diseases, and to contribute to the national goals of keeping the HIV/AIDS prevalence rate low in the general population and of "getting to three zeros": zero new HIV infections, zero discrimination and zero AIDS-related deaths.

To uphold this commitment, Ambatovy carries out awareness-raising campaigns and prevention programs on HIV/AIDS and STIs in the workplace and in surrounding communities. Our HIV/AIDS efforts target employees and communities using a participatory approach through collaboration with Government (particularly the Ministry of Public Health and the National Committee for the Fight against AIDS or CNLS), civil society, youth groups, international agencies and community members.

In 2022, Ambatovy continued to support a series of youth kiosks, renovated and constructed several years ago in partnership with the United Nations Children's Fund (UNICEF), that provide support and information to at-risk youth along the RN2. The kiosks are run by youth peer counsellors, who received refresher training, in order to continue educating their peers on HIV/AIDS prevention. Training was carried out in partnership with the Regional Service of Public Health.

Within the workplace, the Employee Peer Educator Program has been a key element in both our Zero-Tolerance and HIV/AIDS campaigns. Since 2011, Ambatovy has invited interested employees to serve as volunteers in the program, to receive training and then, in turn, to educate fellow employees and raise awareness of preventive measures. In 2022, workshops were held with 60 Employee Peer Educators and an exchange visit was organized with the Regional Services of Public Health in Morondava in order to share best practices in raising HIV/AIDS awareness in the workplace. World AIDS Day activities were also organized in local communities and at each of Ambatovy's sites. Over 3,000 people participated in HIV/AIDS awareness events and 400 people were voluntarily screened for HIV.

#### **Emergency Preparedness and Response**

One of the most important ways we protect both communities and our business is through effective emergency preparedness and response planning. At our sites, we develop plans, grounded in scenario/risk assessments, to protect the public, the environment and infrastructure in the event of a significant incident. We also implement actions to limit the severity of impacts, should an incident occur. We coordinate closely with emergency responders in both preparedness and response activities, and we regularly conduct joint training exercises with them. Our work in this area is informed by international practices, including the United Nations Awareness and Prevention of Emergencies at the Local Level (APELL) program.

In 2022, our activities focused on raising community awareness about industrial risks, strengthening public information and alert systems, and reinforcing the capacity of local responders. We continued to work closely with the Regional Committee for Disaster Risk Management (CRGRC) and the National Office of Disaster Risk Management (BNRGC) on the preparation of our Particular Plans of Intervention (PPIs); organized evacuation exercises with villages and schools downstream of the TMF dam;

and worked to align stakeholder knowledge with emergency procedures on topics including tailings dam ruptures, gas leak procedures, cyclone preparedness, blasting safety, overhead powerlines, bushfire prevention, security and encroachment.

In 2022, Madagascar was hit by a succession of cyclones that brought heavy rains, flooding and landslides to the country, with devastating impacts to communities and infrastructure. As a responsible member of the community, Ambatovy played an active role in emergency response efforts, mapping conditions near our sites, coordinating with national and regional authorities, and making significant contributions.

Our teams led considerable cleanup activities to make our communities safe again in the days and weeks following the storms. Our Emergency Response Team (ERT) played an important role in the search and rescue efforts for missing persons following severe flooding in Moramanga, with the use of a Zodiac boat. Ambatovy also made available to authorities our light aircraft to transport government officials and humanitarian workers to hard-hit areas in the southeast of the country. Ambatovy also donated mattresses, corrugated sheeting, potable water, hygiene kits, PPEs and over 34 tons of rice to support disaster victims and developed several post-cyclone initiatives to help communities recover and rebuild after the storms.



We also continued to work with a variety of partners to reinforce local capacity in emergency preparedness and response. To this effect, we co-facilitated workshops with the Private Sector Humanitarian Platform (PSHP) and the BNGRC to sensitize private companies in Toamasina and Moramanga on the importance of regional focal points in disaster risk prevention, and organized exchange visits between the CRGRC of Alaotra Mangoro and Rio Tinto/QIT Madagascar Minerals (QMM) in Fort Dauphin to share best practices and lessons learned in industrial risk management. At the national level, we consulted with the World Food Programme, the BNGRC and delegates from Malawi during a south-south exchange visit on emergency preparedness and response; and participated in a national photo exhibition organized to celebrate World Humanitarian Day in collaboration with the Ministry of Interior and Decentralization, the UN System in Madagascar, the PSHP and BNGRC. The exhibition highlighted the importance of

different actors' humanitarian and emergency response efforts in Madagascar and their collaborative work. We were also invited to serve as a Special Advisor to the Board and Executive Team of the PSHP.

In 2022, Ambatovy formalized and renewed our decadelong collaboration with the National Office of Disaster Risk Management (BNGRC), through the signing of a collaboration agreement on industrial emergency preparedness and response. This agreement defines the terms of collaboration agreed between the two parties in regard to developing and updating PPIs, executing simulation exercises, strengthening the capacity of local emergency response personnel and upgrading public information and alert systems to raise awareness about industrial risks. Ambatovy will provide both the technical and financial support needed for the success of these activities



Key accomplishments in 2022 with regards to emergency preparedness and response include the following:

- Evacuation exercises were carried out with six villages and one primary school near the TMF. The drills involved the evacuation of 550 villagers and students and included the participation of local response units. Evacuation exercises were reinforced by public safety campaigns within the three-km zone surrounding the Tailings area. Sensitization was carried out on topics including cyclone alerts, the risk of downed power lines, bushfires, and the safety procedures to follow in the event of a dam failure event.
- Ambatovy imports anhydrous ammonia as a liquid in refrigerated tank ships. It is pumped via an underground pipeline from the Port to a large storage facility four km north of the Plant Site, then is transferred as needed via an underground pipeline to the Plant Site's ammonia storage tanks. To maintain public safety within the ammonia pipeline corridor, Ambatovy carries out regular siren tests, monitors air during ammonia transfers, and performs systematic inspections of infrastructure. In 2022, field inspections and clean-ups were carried out to reduce encroachment within the pipeline corridor. A population census was also carried out and a perception survey on emergency measures was launched with the CRGRC in the framework of updating the PPI.

- Ambatovy uses a 220 km Pipeline to transport slurried ore from the Mine to the Plant Site. To secure infrastructure along the Pipeline, Ambatovy conducts regular monitoring in collaboration with disaster management authorities and Local Watch Associations (LWAs) which play an important role in raising awareness at the community level and curbing incidents of damage and theft along the Pipeline right-of-way. In 2022, Ambatovy renewed our contracts with 12 LWAs. 42 members of LWAs participated in capacity building sessions and received donations of surveillance kits. Ambatovy also carried out five community safety campaigns, in collaboration with the LWAs, on topics pertaining to cyclone preparedness, bushfire prevention, gold panning and sand extraction along the Pipeline.
- To improve community alert systems near the Mine Site, six new manual sirens were installed downstream of the Mine sediment dams. 208 people were sensitized to safety instructions in the case of a failure at the dam and six villages were targeted to participate in local awareness-raising campaigns on blasting safety

#### Resettlement Communities

#### Vohitrambato and Marovato

To facilitate construction, Ambatovy had to resettle villagers living in the vicinity of the Tailings Management Facility and Plant Site. From December 2007 to February 2008, Ambatovy relocated 261 households living at these sites to two resettlement villages, Vohitrambato and Marovato, where they received a range of services and benefits aimed at restoring their livelihoods and improving their quality of life. The construction of the physical infrastructure, such as homes, water points and a school, is long complete but has been only part of our commitment to the two resettlement villages. Our task over the past 14 years has been to carry out a resettlement program following the World Bank's principles on involuntary resettlement, the IFC's guidelines for resettlement action plans, and guidelines set by Madagascar's national regulatory body, the ONE. Our work aims to provide support to these communities while also promoting self-reliance, empowerment and long-term sustainable development. Our activities focus on livelihoods (vegetable gardening, handicrafts, small animal husbandry, etc.), health and hygiene, education and sustainable forestry. Communities have demonstrated an active desire to partake in these activities and to invest in their own development.

Collaboration with partners such as NGOs, civil society organizations, local technical schools and private sector groups is extremely important to help facilitate our work in the resettlement villages. These partners have the skills, knowledge and understanding of the local context to effectively respond to community needs without promoting dependency.

Microfinance provides another important means of supporting entrepreneurship and alleviating poverty in these developing communities. Towards that end and as noted earlier in this report and in previous Sustainability Reports, Ambatovy has played an active role in supporting the creation of self-managed Village Savings and Loan Associations (VSLAs) which have become a core activity of resettled communities and have proven to be very successful. The VSLAs provide members with the opportunity to

increase their capital and financial autonomy, and allow them to invest in income generating activities, to market their products, to cover health and education expenses for their families, and to meet certain social obligations. Members of the VSLAs have received training in the principles of microfinance, the culture of savings and credit, and organizational governance.

In addition, Ambatovy supports the management of 36 ha of forest and 69.5 ha of forest plantations near the resettlement villages. Known as the Analabe Forest and comprised of primary and degraded forest, this area is located near Vohitrambato. It not only provides habitat for flora and fauna, but it is also an essential source of natural resources for the local communities. The forest is managed in partnership with the local NGO Miarintsoa and village-level forest management committees (Fehizoro Federation). To further encourage forest conservation, Ambatovy and our partners have been working on an eco-tourism project within the Analabe Forest. In 2022, our activities focused on developing tourism trails and facilitating a partnership between the Madagascar Fauna and Flora Group (MFG) and the Fehizoro Federation to improve biosecurity at the site. Controls against Duttaphrynus melanostictus, an invasive species of Asian toad, are being carried out by the MFG and have already resulted in 4,700 toads being captured (prior to 2022) from surrounding forests. A fence will also be installed around the Analabe perimeter to provide additional protection. In 2023, Ambatovy will be evaluating our activities on this project and reassessing our strategy going forward.

As part of our commitment to resettled families and their hosts in Vohitrambato, Ambatovy has agreed to contribute 50% of the school fees for the children under the age of 13 in the village over a 15-year period. The 2021-22 school year marked the thirteenth successful year of the program, with over 200 students benefiting. In addition, Ambatovy continued to reimburse medications for vulnerable villagers and to support a nutrition project, implemented in partnership with the Regional Office of Nutrition (ORN), aimed at improving nutrition and school attendance rates at the Vohitrambato primary school through the provision of daily meals and support for a school garden managed by the Parent Teacher Association. In 2022, Ambatovy also worked to secure a more reliable water supply network for the village and supported 54 households who are still waiting for land titles due to a third-party land tenure conflict that is pending in court. Agricultural inputs were distributed to support these households in collaboration with the Toamasina Suburban Commune.

As Ambatovy nears the end of our 15-year commitment, we are working to develop a withdrawal strategy that will ensure a smooth transition and positive, lasting benefits for resettled populations. As part of this transition, a convention was signed with the Vohitrambato Resettlement Committee in October 2022 with the aim of re-dynamizing the committee and bringing it into full operation. 22 new board members were selected including local authorities, public commissioners, and representatives of technical services and community members that will play a crucial role in developing a more effective action plan going forward. The mandate of the board will be renewed every two years.

#### Communities near the TMF

There are still 159 households living within the vicinity of the TMF that have livelihoods affected by access restrictions to the site. Fourteen families continue to access the TMF area in order to collect wood and local materials to be used in charcoal production and other small income generating activities, and one family (comprised of four households) continues to live within the technical zone. Negotiations to resettle this family are progressing, and are being handled by the CSR team in collaboration with the local government. In 2022, traditional ceremonies were organized to engage the family on relocation and a verbal agreement on land relocation was reached with one household, with formal acceptance to follow. This process is being conducted with the same rigor and commitment to international best practice as the initial relocation program.

#### Ambolomaro

An "economic resettlement" of 29 families in Ambolomaro, near the Mine Site, was also initiated in 2008. The resettlement involved households that live outside the Mine lease boundary, but that had cultivated their rice fields within the Mine lease zone and therefore needed to relocate their fields. Alternative farming sites were provided to these households and, through ongoing technical support from Ambatovy, rice yields of the Ambolomaro farmers have progressively increased each year. In 2022, Ambatovy resumed our activities in Ambolomaro following interruptions caused at the peak of Covid-19. In collaboration with the Alaotra Mangoro Regional Directorate of Agriculture, Ambatovy assisted with soil preparation, distributed inputs (including 1.8 tons of rice seed and 2 tons of fertilizer) and trained farmers in SRI (System of Rice Intensification) and SRA (System of Improved Rice Cultivation) farming techniques. Technical teams also carried out inspections of irrigation systems, trained members of Water Users Associations and completed rice yield surveys. Average yields were calculated at approximately 3 tons/ha, well above Ambatovy's resettlement commitments and the national average (2 tons/ha) for the fourth consecutive year.

As per our commitments, Ambatovy is in the process of awarding individual land titles to the rice field owners in Ambolomaro. Topographic mapping of rice fields is complete, and files have been submitted to the Moramanga Topographic Services where they are currently being processed.

During the year, a collective complaint was filed through Ambatovy's grievance management system by a group of farmers from Ambolomaro raising their ongoing concerns about the restoration of their resettled land. The complaint motivated a visit from members of the ONE and the Technical Evaluation Committee (CTE) and prompted a mediation committee to be set up by the District of Moramanga. Ambatovy's External Grievance Oversight Committee (EGOC) is devoted to managing these concerns and has commenced mediation processes with the parties concerned. More information can be found in the section on Governance and Human Rights.

#### **Community Engagement**

A robust stakeholder engagement program takes place at the community level with dedicated CSR and Communications teams. Ongoing dialogue through several channels, in both formal and informal settings, with PAPs, community members, local authorities, traditional leaders, representatives of civil society groups and the general public has been, and continues to be, important for building mutual understanding, managing expectations, and earning and maintaining our social license.

In 2022, communications focused on sharing key news and regular updates about Ambatovy's operations, the mining sector in Madagascar, the Covid-19 situation within the country, fluctuations in the global nickel market, the use of nickel and cobalt in the energy transition, and about Ambatovy's various contributions to relief efforts, social investment, and ecological conservation. Internally, Ambatovy continued to engage our employees, contractors and subcontractors on a range of issues pertaining to a safe and healthy workplace. Externally, Ambatovy held over 3,200 formal or informal stakeholder interactions with communities where we operate on topics pertaining to child protection, community safety, natural resource management, land access, social investment and grievance management. Ambatovy also carried out a range of communication campaigns aimed at the general public. Throughout the year over 4,500 people attended public information sessions, 3,000 people interacted with Ambatovy's Information Van and over 4,100 visitors were welcomed to Ambatovy's sites.

#### **Cultural Heritage**

Ambatovy's commitment to communities includes our respect for local culture, history, and traditions. To preserve cultural heritage, Ambatovy implements an archeology program, which involves respecting and protecting cultural heritage sites, artifacts, and archeological remains found in Ambatovy's intervention areas between Moramanga and Toamasina. Ethnological surveys are carried out in parallel to our archaeological work in order to understand and preserve the cultural heritage of local communities. An archeological museum, opened in 2020, also preserves and showcases over 1,800 objects discovered by Ambatovy at our sites. In 2022, Ambatovy carried out archaeological surveys along the Pipeline and in areas that will be impacted during the Pipeline Replacement Project. Activities

consisted of site reconnaissance and prospecting as well as ethnographic surveys in the surrounding villages. In total 28 objects or artifacts and 55 sacred sites were identified. Clearing works will begin in 2023, accompanied by specific measures and mitigations at certain sites.

In 2022, Ambatovy signed a three-year collaboration agreement with the Regional Directorate of Fisheries and the Blue Economy (DRPEB) to support sustainable small-scale fishing and to promote the local blue economy. Through this collaboration, Ambatovy will support local fishermen from Toamasina and the Rural Commune of Amboditandroroho, where small-scale fishing remains an important economic activity but has suffered from the impacts of climate change and overfishing in recent years.

This initiative aims to make local fishing activities more sustainable, while improving fishermen's income and enhancing their resilience to climate change. The project will support five fishing cooperatives, with over 190 members, through a program of training, administrative and technical support. Fishermen will receive training on topics including responsible fishing practices, conservation techniques and safety at sea, and each organization will receive assistance in formalizing and professionalizing their group. Participants will also receive marketing support and material assistance, in the form of equipment and tools, that will enable them to sustainably enhance their livelihoods while respecting marine habitats.





#### **Environment**

#### **Objectives**

- Achieve no net loss in biodiversity, throughout our impacted sites.
- Support and empower local communities to reduce pressure on conservation areas.
- Manage waste, emissions and water to minimize Ambatovy's overall environmental impact and footprint.
- Reduce our carbon footprint.

#### Approach: Biodiversity

One of Ambatovy's key goals is to avoid environmental impacts wherever we reasonably can, and to minimize the impact of our mining operations on Madagascar's environment. With regards to biodiversity, the aim is to achieve no net loss (NNL). We plan to accomplish these goals with rigorous mitigation techniques such as avoidance, minimization of risks, timely restoration of a sustainable landscape and the offsetting of residual impacts.

The main impacts on biodiversity from our activities are related primarily to forest clearance at the Mine (1,614 ha) and around a two km strip of forest along the initial portion of the Pipeline. Prior to construction, the forests of the Mine area were threatened by human impacts such as agricultural clearing, illegal timber harvesting and hunting. The Plant and Tailings Sites were specifically located on modified degraded coastal scrubland habitat with low biodiversity. Nevertheless, impacts on all sites were taken into account in the development of Ambatovy's comprehensive biodiversity program, which applies to all sites. The program's strategy is founded on the following core objectives:

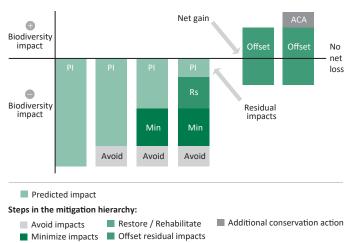
- No net loss of biodiversity.
- No species loss and no net reduction in the population of any endangered species.
- Minimization of impacts on flora, fauna and aquatic resources.
- An increase in conservation of critical habitats.
- Priority habitat viability ensured by maintaining or increasing ecosystem connectivity.
- Integration of biodiversity activities with other regional initiatives on biodiversity.

In order to achieve these objectives, Ambatovy applies the mitigation hierarchy, as required by the IFC Performance Standard 6, and adheres to the principles of the BBOP Standard on Biodiversity Offsets. This includes: avoid impacts where possible, minimize any unavoidable impacts, restore or repair any damage, and provide offsets for any residual impacts (e.g., through conservation and protection of ecologically comparable conservation areas). Additional conservation actions may further compensate for the impacts on biodiversity.

In line with the IFC Performance Standard 6 and with BBOP guidance, Ambatovy has developed a multi-faceted offset program comprising several conservation sites and associated activities. This was deemed necessary given the large scope of our operations, part of which fall within sensitive highbiodiversity areas. In addition to "like for like" habitat offsets, Ambatovy is evaluating the possible need to identify additional offset areas, particularly for the Golden Mantella and endemic fish species. Ambatovy's four offset sites currently include the Mine Conservation Forests, the Analamay-Mantadia Forest Corridor (CFAM), the Ankerana Forest, and the Torotorofotsy Wetlands Ramsar Site.8 Combined, the forested land to be conserved within these areas comes to a total of almost 14,000 ha, or roughly nine times the size of the area disturbed through our mining activities. More information about our offsets program, including descriptions of the sites, can be found in Appendix 6 and on our website.

<sup>&</sup>lt;sup>8</sup>Entered into force in 1975, Ramsar is the oldest modern global inter-governmental environmental agreement negotiated by countries and non-governmental organizations concerned about the increasing loss and degradation of wetland habitat for migratory water birds.

#### The Mitigation Hierarchy



Source: "Working towards NNL of Biodiversity and Beyond: Ambatovy, Madagascar – A Case Study (2014)", by Forest Trends and Ambatovy, p. 23.

Following these standards has resulted in a comprehensive approach to ensure that our impacts, as well as some that existed prior to our involvement, are controlled through cooperation with local communities, the Government of Madagascar and other conservation and development NGOs. The program has several focal areas including flora, fauna, aquatic and marine ecosystems. Each area has specific actions for the construction, operations and Mine closure phases. In addition, we have specific management plans for the Mine, Pipeline, Plant, Tailings and Port facilities that include biodiversity elements as well as a separate overall Biodiversity Management System that governs all our programs in this area.

Our biodiversity program is governed by the Ambatovy Environmental Management System (AEMS). This quality assurance – quality control (QAQC) style management system is aligned with ISO 14001 principles in order to comply with IFC requirements for good practice. As noted earlier in this report, we are now working towards certification against the ISO 14001 standard by December 2023. The AEMS provides for:

- Continuous improvement and an adaptive management process;
- · A monitoring and evaluation plan for all activities;
- Indicators against international, national, and internal compliance requirements, scientific conformance requirements and performance standards;
- Real-time updating and management of non-conformities.

The system includes 20 management plans covering the entirety of the Ambatovy environmental program, including plans for each category of fauna and flora identified in our areas. The goal of our biodiversity program is to ensure the continued viability of the fauna and flora populations in Ambatovy's areas of operations. For fauna, this includes pre-clearing inventories, rescuing and relocation from mining areas to our conservation zones. Our fauna programs are focused on five groups of animals: lemurs, micro-mammals, birds, fish, and amphibians

and reptiles. Each of these groups has its own set of management plans and SOPs (standard operating procedures) that are based on the principle of adaptive management. Species that are characterized on the IUCN Red List<sup>9</sup> as endangered or critically endangered are considered as Species of Concern (SOCs) and receive specific management actions.

For example, our Lemur Management Plan closely monitors and collects data on all lemur species found within our zones but we focus our long-term monitoring and biomedical surveys on five specific species of lemurs within our program areas—the Diademed sifaka, the Eastern woolly lemur, the Weasel sportive lemur, the Furry-eared dwarf lemur and the Indri — chosen for their status according to the International Union for Conservation of Nature (IUCN), for their ecological niche and for the number of individuals available for study. The same can be said for our resident birds, of which there are 111 species, which include six endangered species (Anas melleri, Ardea humbloti, Ardeola idae, Sarothrura watersi, Tachybaptus pelzelnii and Circus macrosceles).

Only the Golden Mantella frog differs in its treatment as it is also the recipient of a breeding program in addition to the salvaging and monitoring program activities. Once an animal has been relocated to one of our conservation zones, they are monitored for population viability and specific needs, the end objective being that of eventually being able to re-colonize the Mine area once mining activities and rehabilitation are complete.

The process is similar for our flora populations, which are salvaged and relocated, some to our plant nurseries for cataloging, identification and seed collection, before being used for rehabilitation or propagation. Ambatovy's flora management activities are framed within the Flora Management Plan, which addresses the three main topics: Species of Concern, Orchid Management and the Herbarium.



For our flora SOCs, Ambatovy's mitigation measures include inventories, identification and rescue. Missouri Botanical Garden (MBG) has, since the conception of the project, assisted in these activities. 109 SOCs are located within our conservation areas and four in our clearing area. Of these species, three have been identified as "Red SOCs", meaning that they are only found globally in one specific location, our Mine Site or our conservation zone. As a precautionary measure, Ambatovy's rescue program consists of whole plant rescuing (including trees), seed collection,

<sup>&</sup>lt;sup>9</sup>The IUCN Red List of Threatened Species is widely recognized as the most comprehensive, objective global approach for evaluating the conservation status of plant and animal species. The goal of the IUCN Red List is to provide information and analyses on the status, trends, and threats to species in order to inform and catalyze action for biodiversity conservation.

plant propagation, and the development of living collections suitable for use in progressive mine rehabilitation. Ambatovy has two orchid parks that house our rescued orchids as well as a herbarium where individual plants are identified, reproduced and samples are collected for taxonomic research.

In addition to our efforts to conserve and support population viability for key species, Ambatovy also works in removing invasive species, one of the most significant potential threats to areas of high biodiversity, from both our aquatic and terrestrial habitats, as well as in the surrounding communities. For fauna, this includes targeted campaigns to eradicate Louisiana crayfish, the Asian toad and three species of exotic rats. For flora, the invasive Lantana camara, Eucalyptus robusta and Rubus mollucanus are removed through targeted clearing and followed by restoration of the cleared area with indigenous plants. In 2022, Ambatovy also commenced campaigns to reduce populations of India myna birds that have established a roosting site at our Plant Site Refinery. This invasive, exotic species competes with local species of birds and carries diseases that can be transmitted to other species, including humans.

For all of our biodiversity impacts and interventions, specific biodiversity goals have been established to ensure we meet our vision of operating a sustainable and responsible business in Madagascar. These goals and associated key performance indicators (KPIs) are periodically assessed and adapted based on consultations and data gathered from monitoring programs. The KPIs are directly linked to the requirements of Madagascar's regulator, the ONE, and to international standards, including the IFC Performance Standards on Environmental and Social Sustainability (IFC 2012 version) and the BBOP standard.

In 2009, Ambatovy established a Scientific Consultative Committee (SCC) on biodiversity as part of our commitment to apply international conservation expertise and to bring transparency to our environment program. The Committee includes national and international independent scientists renowned for their expertise in biodiversity, conservation and environmental management. The SCC convenes every two years in order to review our environmental and social programs, to provide impartial advice and to make important recommendations. The SCC met in November 2021. The committee members were extremely satisfied and recognized that Ambatovy's activities have yielded outstanding results. The next meeting is scheduled for 2023.



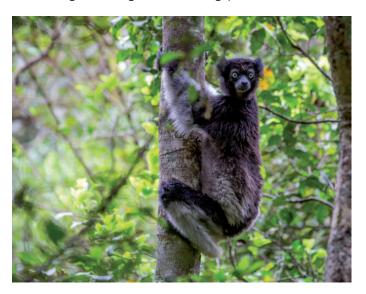
## Performance: Biodiversity





#### Lemur and Small Mammal Management

Ambatovy's Lemur Management Plan, within the overall AEMS program, includes a series of mitigation measures to protect lemur species within our sites. There are, in total, 11 species of lemur that frequent the Mine area, of which four are considered near-extinction based on the IUCN Red List (2012). A fundamental aspect of our biodiversity management is utilizing a paced directional clearing technique in order to allow mobile fauna to freely migrate away from clearing zones and into surrounding conservation areas via forest corridors. Manual rescue is conducted 48 hours later for those animals that are unable to move freely and for key flora species. To promote habitat connectivity, tree-top lemur bridges are also installed over trails and roads cut for mining activities, allowing lemurs to move safely between areas. In 2022, 891 lemur individuals were observed during periodic monitoring in our conservation zones and 90 lemurs were observed in forest corridors (using lemur bridges or along the forest's edge).



Throughout the year, 105 individuals were observed in clearing zones, a relatively low number, that can be attributed to the low-grade topography of the area being cleared. No individuals required manual rescue from clearing areas, however three lemurs were rescued from infrastructure within Ambatovy's operational site. Distribution studies, based on data gathered since 2007, demonstrate a favorable reduction in lemur populations within impacted and future-impacted areas and a gradual increase in the number of individuals naturally migrating to our conservation areas over time.

As part of our Lemur Management Plan, Ambatovy uses radiocollar surveillance to spatially monitor lemur groups and stateof-the-art biomedical monitoring systems to assess trends in animal health. In 2022, capture sessions were carried out with partners from the Columbus Zoo to renew radio collars and collect biomedical samples from two critically endangered lemur species. Since the implementation of the Lemur Management Program in 2007, over 1,160 lemur individuals belonging to 11 species have been captured or re-captured for biomedical monitoring.



Ambatovy also monitors and mitigates impacts on other species of mammals besides lemurs including endemic micro-mammals and carnivore species. The Ambatovy-Analamay forest complex is home to 38 species of small carnivores and mammals other than lemurs, of which 31 are endemic to Madagascar and seven are exotic (introduced species). Since 2007, Ambatovy has collaborated with the University of Antananarivo in the implementation of conservation strategies for these mammal species. During 2022, 101 individuals belonging to seven species were inventoried in the clearing areas and three small mammals were manually rescued. 26 individuals from 7 species were also inventoried in our conservation areas. More widespread monitoring is planned for 2023.

#### **Amphibians and Reptiles**

Ambatovy's areas are home to 92 species of amphibians and 69 species of reptiles. There are 12 species of amphibians and reptiles (nine and three species, respectively) within our Mine footprint that have been identified by Ambatovy as requiring specific mitigation efforts due to their IUCN status: one that is critically endangered (CR) and 11 that are endangered (EN). Please see Appendix 5 for a complete list of Priority Species.

Since 2007, the amphibian and reptile program has manually rescued 13,911 amphibians belonging to 74 amphibian species and 34,782 reptiles belonging to 64 reptile species from clearing areas. These rescue activities have enhanced scientific knowledge on the amphibian and reptile world in Madagascar and on the populations of endangered species. As Ambatovy continues to clear forests for the Mine footprint, rescue and translocation activities will continue. Ambatovy also undertakes ecological monitoring to monitor reptile population densities and trends within the conservation areas and in release areas. In 2022, 593 reptiles and 1,041 amphibians were identified.



The Golden Mantella frog is one of Ambatovy's flagship species. To ensure the conservation of this species, Ambatovy has adapted a three-pronged approach that includes:

- · manual rescue from clearing zones,
- · monitoring in conservation ponds, and
- · captive breeding for release into natural marshes.

The program is carried out in collaboration with the *Mitsinjo* Association, EcoFauna, the General Directorate of Sustainable Development (DGDD), the Regional Directorate of Environment and Sustainable Development (DREDD), and the IUCN's Amphibian Specialist Group. It includes breeding activities as well as monitoring, manual rescue and physical inventories. In 2022, Ambatovy recorded our fifth successful year of reintroducing first generation (F1) *Mantella aurantiaca* into the wild. To date, 3,754 *Mantella aurantiaca* have been released into marshes within Ambatovy's conservation area, including 1,904 reintroduced in 2022. 125 individuals were also transferred from marshes disturbed by clearing to the breeding center where subsequent generations of individual frogs continue to be recorded and prepared for release.

#### Fish

Sixteen species of fish belonging to nine families have been identified in the aquatic ecosystems of the Ambatovy-Analamay forest complex. These species are classified into three categories depending on their characteristics: seven exotic (introduced) species, three native species, and six local endemic species. Among the endemic species are five that are potentially unknown to science; they are considered and managed by Ambatovy as priority species. The population size of these priority species is very limited and, as local endemic species, they are vulnerable. Please see Appendix 5 for a list of Priority Species.

To ensure species viability within impacted water systems, Ambatovy has identified risks to each of our resident fish species and completes regular surveys to assess water quality and ecosystem health. In 2022, no major impacts occurred to water systems during clearing and mining activities and no rescues or relocations were required. Periodic monitoring at release sites, within our conservation zone, continued to confirm the presence of previously translocated fish.

Ambatovy is currently evaluating the possibility of offsetting two rare endemic fish species, *Ratsirakia sp.* and *Rheocles sp.* Feasibility studies are being carried out to analyze the technical, ecological, financial and socio-economic aspects of this potential project and to identify an appropriate offset site. In 2022, ecological evaluations were carried out to assess distribution, habitat and population trends within the Mangabe Conversation Area, a newly protected area located south of Ambatovy.



#### Flora Management

During 2022, we continued to practice manual salvaging and were able to codify over 14,400 plants and flowers in clearing zones. This included 6,672 Species of Concern, that were transplanted to rehabilitation sites, and 1,475 orchids that were transferred to Ambatovy's shade houses or herbarium. Orchids undergo a oneyear acclimatization period before being transferred to one of two orchid parks, designed specifically to protect and reproduce salvaged orchids. During this period, Ambatovy conducts phenological monitoring, carries out micro-propagation and collects seeds and flowers to be preserved in our growing seed bank. In 2022, 129 seed samples were collected from 49 different species of orchids and 128 orchids were successfully handpollinated. This brings the total number of orchids protected by Ambatovy to 12,497 individuals. We also continued an expansive survey of IUCN-listed flora within our conservation areas, identifying more than 5,134 individuals during the year.

Ambatovy collects seeds from within our clearing and conservation areas, community forests and the Ambatovy-Analamay complex that are used in Ambatovy's nurseries or distributed to local village nurseries. In 2022, Ambatovy collected 4,562 kg of raw seeds from 86 species. We continued to work with local village nurseries, distributing 59 kg of seeds during the year. 592 kg of seeds were also sown at the Ambatovy nurseries and over 274,000 seedlings were planted from native species collected from the Ambatovy-Analamay forest.

#### Offsets

As we cannot effectively accomplish the sustainable management of our offset areas without the support and participation of the local population, we work closely with local communities to implement a range of alternative income generating activities (IGAs). These are designed to reduce local dependence and pressure on neighboring forests through the development of other income generating activities such as poultry and livestock breeding (small animal husbandry), beekeeping, market gardening, spice and coffee cultivation, and improved rice-growing techniques. In 2022, over 1,280 beneficiaries from communities near our offset sites participated in IGAs. Participants received inputs (such as seeds, fertilizer, farming equipment and feed) and/or technical assistance, agricultural training, coaching and monitoring. Over 75,000 native seedlings were also produced at nine village nurseries that support activities at our offset sites. These nurseries bring a significant source of income to participating villages while supporting various reforestation efforts.

We have also been working with local authorities and grassroots community-based associations, or COBAs, to promote stewardship of forest segments by undertaking regular patrols to deter illegal wood cutting, hunting, trapping, artisanal mining and clearing associated with slash and burn agriculture. In 2022, we completed over 8,200 work-days of patrols, and effectively reduced anthropogenic pressures in most of our protected sites. Ambatovy, and the NGO partners that we work with, also conduct regular awareness-raising and education sessions in the local communities in order to reinforce their understanding of the law, of the need for the responsible use of local natural resources, and of the

importance of sustainable forest management. In 2022, community awareness sessions and informal door-to-door discussions reached more than 10,000 individuals. To further involve local communities in conservation, COBAs also participated in ecological monitoring and in a contest to determine the best fire management strategies, leading to a significant reduction in incidents. Environmental education programs were also carried out with four public schools near the Torotorofotsy wetlands. More information about our Offset Sites can be found in Appendix 6.

In 2022, an independent, scientific, peer-reviewed study, led by scientists from Bangor University in the United Kingdom, was published sharing the results of a robust evaluation of Ambatovy's offset interventions. <sup>10</sup> Using a range of methods, the study, which was published in the scientific journal *Nature Sustainability*, provides encouraging evidence that Ambatovy, located in one of the world's hottest biodiversity hotspots, is on track to achieve NNL of forest. In other words, Ambatovy is on course to avert as much forest loss in our offset sites as land that is cleared through our mining activities.

This achievement was also cited in the Guardian as one of the ten biggest science stories of 2022, and showcases our commitment to minimizing impacts through our rigorous mitigation techniques. Ambatovy is now developing new tools and methodologies to achieve the same results for our priority species.

#### Restoration to a Sustainable Landscape

Ambatovy plans to restore cleared land to a multi-functional forest through progressive reclamation and reforestation. Our objective is to reforest 100 ha (+/- 10%) over the next five years (2022-2027). Ambatovy currently has an Orchidarium, a research nursery and a production nursery that support our rehabilitation activities. To encourage the direct involvement of local populations in ecological restoration, we have also supported the creation of 13 community nurseries that produce seedlings for our restoration activities. These village nurseries are largely self-managed, however, to ensure quality control, Ambatovy supplies seeds and technical support and takes charge of seedling transportation to our industrial nursery where seedlings undergo phytosanitary treatment and acclimatization. In 2022, collaboration with communities was extended to four additional village associations. Combined, these nurseries produce over 100,000 seedlings that are purchased by Ambatovy each year. These plants are used in restoration, revegetation and rehabilitation trials at our various sites. They also support calls by local and national government agencies to support reforestation campaigns in-country.

In 2022, Ambatovy restored 8.44 ha of land over the Mine footprint and 4.2 ha at the Plant Site. Revegetation trials also continued at the TMF to determine the best techniques to revegetate the area in preparation for rehabilitation work that

<sup>10</sup> Devenish, K., Desbureaux, S., Willcock, S. et al. On track to achieve no net loss of forest at Madagascar's biggest mine. Nat Sustain 5, 498–508 (2022). https://doi.org/10.1038/s41893-022-00850-7.

<sup>11</sup> As published in the Guardian, December 18, 2022. https://www.theguardian.com/science/2022/dec/18/the-10-biggest-science-stories-of-2022-chosen-by-scientists?CM.

will take place as part of Ambatovy's long-term closure plan. To support our revegetation efforts, Ambatovy introduced measures to improve plant quality, boost growth and reduce mortality rates at our industrial nursery. We successfully cut plant mortality rates by over 70%, despite facing one of the most severe dry seasons in the region's history. We also nearly doubled the diversity of native species grown at our industrial nursery, producing over 500,000 plants from over 240 endemic

species during the year. To continue increasing genetic diversity at our nurseries, Ambatovy has also begun to encourage local participation in seed collection through new income generating activities. Six community-based organizations have been targeted to participate in seed collection and phenological monitoring within community forests. These activities will help to increase diversity at our nurseries and maximize the phylogenetic spread of species used in the progressive rehabilitation of the Mine.

Since 2011, Ambatovy has been working with grassroots community-based associations (COBAs) to create a green shield around our conservation forests and has been developing new ways of supporting COBAs in the protection and conservation of the environment near our Mine Site. At Ambatovy, we understand that local populations depend on the forest for their natural resources. To reduce the over-exploitation of these forests, we have been working to promote sustainable income generating activities and to develop alternative resources for community members' long-term use.

As part of these efforts, we have reforested over 150 hectares of community forest since 2015. We use fast-growing eucalyptus during these activities to create a more sustainable source of wood and timber that can be used by local populations while reducing pressure on more vulnerable, native species. The eucalyptus we plant provides communities with an important source of materials that are often used in home construction, as fuel for cooking, in charcoal production, and to support various livelihood activities. During our 2021-2022 campaign, we reforested over 30 hectares of forest in collaboration with

COBAs and plan to plant another 30 hectares in 2023. These joint efforts allow us to heighten awareness about forest management and the responsible use of natural resources while contributing to sustainable community development in the villages surrounding the Mine.



Ambatovy Net Impact of Mining Activities on Forested Areas							
Forest/Land Areas Land to be Impacted (ha) Land to be Reclaimed (ha) Land to be Conserved							
Mine Footprint* (disturbance area of 1,600 ha + buffer zone)	2,162	2,162	0				
Slurry Pipeline	600	600	0				
Roads/Infrastructure	100	0	0				
On-Site, Adjacent or Nearby Offsets	On-Site, Adjacent or Nearby Offsets						
Mine Conservation Forests	0	0	3,575				
Analamay-Mantadia Forest Corridor (CFAM)	0	0	3,490				
Ankerana Forest	0	0	4,879				
Torotorofotsy Wetlands Ramsar Site	0	0	1,597				
Totals (ha)	2,862	2,762	13,541				

<sup>\*</sup>The Mine footprint includes the Mine area plus a buffer zone.

#### Approach: Emissions, Effluents and Waste

Our environment program has defined objectives for air, noise, and water that stem from the Environmental Impact Assessment and the approved Environmental Management Plans and that are built into our environmental monitoring activities. For each component, objectives have been established taking into account existing background levels, Malagasy regulations, and published international standards. A rigorous monitoring program continuously reads information from instruments throughout our facilities that provide real-time data and gives us the ability to analyze and mitigate issues as soon as they occur. The program is reviewed and updated in response to observations, project development, consultations, and experiences gained.

The goal of our air quality monitoring is to ensure that changes in ambient air quality resulting from Ambatovy's activities are both well understood and compliant with air quality standards, which are based on international and local criteria for air emissions. Ambatovy monitors air quality around the Plant, Mine, and ancillary structures through fixed continuous air monitoring stations as well as mobile perimeter multi-gas detectors which continuously collect live meteorological and air quality data.

The release of greenhouse gases (GHGs) related to our operations and the transportation of our personnel and freight are, unfortunately, unavoidable in a project the scale of Ambatovy. However, for those GHG emissions which we can control, as is the case in the transport of our personnel and our commodities, we have put in place multiple initiatives to reduce them wherever possible. This includes the location of our sites, the design of our Pipeline to maximize gravitational pull and to minimize equipment needs, and a fleet of electrical vehicles to transport our workers around our Plant Site.

Another aspect of air quality, ambient noise, is monitored on the periphery of our operations as well as in our neighbouring communities. The purpose of our noise monitoring is to ensure that the ambient noise created by our operations stays within the IFC's guidelines for community noise and that there is no effect on the behaviour of the local biodiversity.

Water is central to our metallurgical process for producing nickel and cobalt, and we manage it carefully. At both the Mine and Plant Sites, we conducted baseline studies, continue to assess risks, and have ongoing engagement with stakeholders to inform them of our water management planning. Our comprehensive Water Management Plans are therefore designed to:

- Ensure that all phases of our operations do not adversely affect surface and groundwater quality and that any wastewater complies with environmental standards.
- Monitor the flow rate and quality of surface and groundwater downstream of mining activities to detect any abnormalities.
- Ensure that Torotorofotsy Wetlands and sensitive aquatic ecosystems are not adversely affected by the activities at the Plant, Mine or along the Pipeline.
- Communicate with downstream users to ensure their water needs are met and propose solutions if problems arise.
- Ensure that domestic water supply and sewage treatment meet the criteria of applicable water quality regulations and guidelines.

To handle the waste created by our facilities, process and employees, Waste Management Plans have been developed. These plans include measures and procedures for correct collection, transportation, storage and disposal of waste. They also emphasize minimizing waste production and continuously improving our recycling efforts. Waste material ranges from industrial waste, such as scrap metal and wood, to domestic waste, such as food or office scraps. All waste is sorted, processed and treated at the waste management facilities in order to reduce its volume and minimize disposal needs.

Ambatovy also operates an integrated reporting system for all environmental, health and safety, and security incidents (the Ambatovy Incident Management System, AIMS). Spills and incidents are tracked and documented as part of the internal compliance reporting process using the guidelines below.

Level	Consequence
Minor	On-site: Near-source confined and promptly reversible impact (typically a shift).
Medium	<ul> <li>On-site: Near-source confined and short-term reversible impact (typically a week).</li> <li>Off-site: Near-source confined and promptly reversible impact (typically a shift).</li> </ul>
Serious	<ul> <li>On-site: Near-source confined and medium-term recovery impact (typically a month).</li> <li>Off-site: Near-source confined and short-term reversible impact (typically a week).</li> </ul>
Major	<ul> <li>On-site: Impact that is unconfined and requiring long-term recovery, leaving residual damage (typically years).</li> <li>Off-site: Near-source confined and medium-term recovery impact (typically a month).</li> </ul>
Catastrophic	<ul> <li>On-site: Impact that is widespread-unconfined and requiring long-term recovery, leaving major residual damage (typically years).</li> <li>Off-site: Impact that is unconfined and requiring long-term recovery, leaving residual damage (typically years).</li> </ul>

### Performance: Emissions, Effluents and Waste







Ambatovy's Waste Management Plan prioritizes the proper handling, storage and disposal of waste. Since 2017, waste management has been managed under a contracting company responsible for supplying equipment and manpower as required during waste collection, transport, sorting and disposal. Advances in waste management achieved in 2022 included upgrades to our waste sorting and storage facilities and improvements in the way that we treat and store chemical waste. Ambatovy also introduced onsite composting at our Plant Site for the first time this year and is continuously working to identify new recycling opportunities that enable reductions in landfilled waste.

In 2022, our overall waste generation increased marginally as a result of increased production and a large quantity of industrial waste produced during the Total Plant Shutdown (TPSD). Ambatovy's recycling and reuse programs grew in parallel. Approximately 77% of our waste was valorized (recycled, reused or composted) compared to approximately 23% that was sent to the landfill or incinerated. Marginal amounts of waste were also spread at the land farm or stored for future consideration. In the case of scrap metal, we took the decision to store and reuse the majority on site rather than send it to landfill. 3,289 m<sup>3</sup> of scrap metal were salvaged and over 13,866 tons were recovered by an external service provider. As part of a pledge to help promote food self-sufficiency in Madagascar, Ambatovy is also working on a new initiative to recycle our stored scrap metal into trade tools and farming equipment (such as rakes, ploughs, weeders, etc.). This will be carried out in collaboration with the Ministry of Handicrafts and Trade starting in 2023.

Waste Treatment 2020-2022							
2020 2021 2022							
Disposal to Landfills	61,522	52,892	55,581				
• General Waste (m³)	25,803	18,514	18,159				
Industrial Waste (m³)	34,471	33,393	35,505				
• Ash (m³)	611	600	1642				
Scrap metal (m³)	637	385	275				
Incineration (m³)	3,755	4,539	4,856				

#### Recycling and composting

Ambatovy strives to minimize our waste production through reuse and recycling programs. We integrate our recycling efforts with a commitment to support local businesses and to promote community development. In 2022, Ambatovy continued to expand partnerships with local recycling companies. Approximately 495 m<sup>3</sup> of our used wood were distributed to the Cultural and Social Center (CCS) in Toamasina and to local farmers' associations near our Mine Site where it was used to build furniture and livestock equipment and to support education programs for disadvantaged youth. 4,000 liters of used cooking oil were also recycled by the local Innowa company to produce artisanal soap and 563 m<sup>3</sup> of fruit and vegetable waste were delivered to the local NGO, Arovy ny Aina, to be used at a community garden established on a vacant plot of Ambatovy land. This project supports school feeding programs for vulnerable children at several public primary schools in the Toamasina area.

To continue minimizing waste production, Ambatovy also introduced internal composting at the Plant Site in 2022. Across our sites, we composted over 9,680 m³ of food, sludge and vegetative waste, and produced over 8,280 m<sup>3</sup> of mature compost. Through these activities, we have been able to meet and surpass the needs of the environmental rehabilitation program, supporting nursery production, revegetation and restoration trials across our various sites.

Recycling, Composting and Reuse 2020-2022							
	2022						
Recycling	24,358	54,336	94,137				
• Fly ash (m³)	24,163	52,545	91,373				
• Wood (m³)	0	752	495				
• Plastics (m³)	172	755	2,025				
• Other (m³)	23	284	244				
Composting (m³)	4,413	14,066	9,681				
Reuse (m³)	143	139	474				

Ambatovy is always looking for new and innovative ways to reduce waste and emissions at our sites. One way in which do this, is by using electric vehicles to transport employees around our Plant Site and a fleet of buses to transport employees to-and-from work each day. This choice is both low-cost and ecological. Our electric vehicles are less expensive to operate and do not consume any diesel or lubricants. Instead, they run completely off electricity produced at our Plant and use solar panels to extend their charge. These vehicles do not release any adverse emissions, contributing to our carbon abatement goals. By providing shared bus transport to all of our national employees, we are also helping to reduce carbon emissions, air pollution and road congestion in the communities where we operate. Currently our fleet consists of almost 150 electric vehicles (including carts and buses) and approximately 90 buses that transport approximately 4,000 employees to-and-from work every day.



#### Hazardous Waste

Ambatovy does not ship any waste out of the country. Chemical waste is neutralized on site. Paints, lubricants, used oil filters and hydrocarbon waste are recycled and treated by local companies. The waste management facilities at the Plant Site handle dismantling and neutralization of hazardous waste. This includes internal processing of batteries to neutralize acid, the dismantling of printer cartridges and used gas detectors, and the treatment of fluorescent bulbs containing mercury, drums containing hydrocarbon, and aerosol cans containing hazardous gases. In 2022, major improvements were carried out at our waste sorting, treatment, and storage areas. The waste sorting area was sealed with concrete and an oil separator was installed to treat wastewater. The hazardous waste storage area was also upgraded to reflect the guidelines of the 5S Standards.<sup>12</sup> As part of our waste treatment activities, 1,200 batteries were dismantled, neutralized and stored, and over 780 kg of hazardous chemicals were encapsulated in concrete before being safely disposed at the landfill.

#### Overburden

Overburden is composed of waste rock and soil with uneconomic concentrations of nickel and cobalt. At Ambatovy, ore is delivered from open pits to the Ore Preparation Plant (OPP). This is designed to separate waste material from the ore and to produce a concentrated metal-containing slurry. In 2022, approximately 11 million tons of dry ore, waste and sheeting were mined from the Ambatovy and Analamay deposits of which approximately 1.3 million tons were waste.

Material Extracted in 2022				
Material	Amount (in thousands of tons)			
Ore	7,203			
Waste	1,325			
Sheeting (quarry)	2,441			
Total	10,969			

#### **Materials**

In addition to ore, the operation of the process plant in Toamasina requires four key raw input commodities: limestone, coal, sulphur and ammonia. The amounts of these commodities, plus naphtha, consumed during 2022 are as follows:

Bulk Commodities Consumed in 2022				
Material Total (tons)				
Limestone	1,290,180			
Coal	469,482			
Sulphur	528,159			
Ammonia	34,608			
Naphtha	24,078			

Accidental spills, noise and dust resulting from bulk handling operations are the greatest potential contributors to pollution at the Port. Any accidental spills are cleaned up immediately and sent to the landfill to prevent contamination at the Port.

#### **Tailings**

The Tailings Management Facility (TMF) was designed to meet international good practice standards including the guidelines of the Canadian Dam Association. It is managed and monitored 24/7 by a multidisciplinary team led by the TMF Manager appointed since October 2021 as Responsible Tailings Facility Engineer. Our team has continuous access to independent consulting engineering advice to comply with international good practice standards, local regulations and permits throughout the facility life cycle. An external Engineer of Record carries out quarterly audits of the TMF, and produces a reports for Management. In addition, the facility is inspected annually by the Malagasy government regulator, the ONE, and by an independent Tailings Review Board to provide an independent technical review of the design, construction, operation, closure and management of the TMF. As noted earlier in this report, Ambatovy is also working to assess our activities against the new Global Industry Standard on Tailings Management (GISTM) and to ensure that they continue to align with international best practices.

The TMF is a long-term construction project involving the continuous raising of the perimeter dams to meet Ambatovy's tailings containment needs. In 2022, tailings deposition and Phase 3 construction were carried out as planned and a sixmeter dam lift was completed at TMF1.

Our Facility is designed to receive the neutralized waste materials following the extraction of nickel and cobalt. Once the solids settle to the bottom of the tailings area, the clarified supernatant liquid is monitored in a daily basis to ensure its compliance with the environmental permit before to be pumped and discharged into the ocean through a diffuser.

The largest potential impact at the TMF is related to surface water seepage from the tailings impoundment and/or overflow from the Sediment Control Dams. To mitigate these impacts, Ambatovy regularly monitors surface water, groundwater and sea water at a network of compliance points and has installed a system of interception wells, nested wells and automated pumps used in the early detection and interception of contaminants. In 2022, there were some instances when manganese levels in seepage from the dam exceeded water quality standards. Incidents of non-compliance were attributed to seepage aggravated by low precipitation and high evaporation rates during the dry season, and to high water levels in the TMF pond that required the temporary shutdown of pump-back operations.

Work continued on a number of initiatives aiming to control the source of elevated manganese levels and to identify potential alternatives for long-term remediation. To increase the accuracy of our groundwater predictions so that we can further understand and manage impacts, Ambatovy is upgrading our hydrogeological groundwater model at the Plant and the TMF.

Aerial geophysical surveys were completed in 2022 to confirm the depths of weathering, bedrock and geological structures

<sup>&</sup>lt;sup>12</sup>5S is a lean methodology that aims to improve workplace efficiency, eliminate waste and optimize productivity: Sort, Straighten, Shine, Standardize and Sustain.

which may contribute to the groundwater flow path. These activities resulted in the drilling of 16 additional wells that will be used to increase monitoring, to collect relevant information about connections between surface water and groundwater, and to calibrate our groundwater model. A project to remove manganese from surface water using chemical oxidation and nano-filtration is also underway. Trials are due to start in 2023 following installation of a pilot unit received this year.

#### Water

Ambatovy's Water Quality Monitoring Program covers the analysis of surface water, ground water and seawater. We conduct semi-annual monitoring programs throughout the Plant and monitor key areas weekly. Monitoring of effluent water at the South Ditch and downstream from the TMF is performed daily. All of our water quality standards are established through reference to Malagasy regulations, IFC environmental health and safety guidelines for mining, and the World Bank's Pollution Abatement Manual.

The Mine's Operational Plan is designed to ensure that runoff from mining excavations flows into sediment retention basins, lowering potential impacts on the sensitive watersheds around the Mine. Water run-off collection ponds and flow allowances are designed to meet the World Bank and Malagasy regulations on water quality. Indicators monitored at 19 sites around the Mine include such measurements as total suspended solids, pH, heavy metals, and coliform bacteria.

Annual water requirements for ore preparation at the Mine represent about 0.5% of the mean annual flow of the Mangoro River; during the dry season, Ambatovy's water withdrawal does not exceed 2% of the water flow. Water is mixed with ore to create slurry for transport down the Pipeline. At the Plant Site, water is recovered from the ore slurry and it is augmented with withdrawals from the Ivondro River. The use of processed water at the Plant is primarily for cooling water and boiler-feed water. All process water is discharged to the TMF and treated through neutralization.

Our total water consumption in 2022 – around 27 million  $m^3$  – was comparable to previous years. Water for our processes is withdrawn from a variety of sources at the Mine, Plant and Port facilities, including the Ivondro River, the Mangoro River, and groundwater wells; all withdrawals are monitored quarterly by our regulator, the ONE. At the Mine Site, water withdrawals were also done from the Antsahalava Creek as a mitigation measure for increased chromium levels, especially prevalent during the wet season when there is heavy rainfall; and from the Sahaviara, Ankaja and Vondronina Rivers, for dust control purposes.

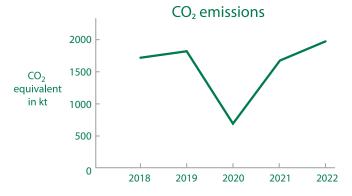
Water Withdrawals 2020-2022 (m³)						
Source	2021	2022				
Ivondro River	7,343,058	13,621,234	15,330,762			
Mangoro River	3,931,760	8,572,946	8,276,589			
Antsahalava Creek	560,839	1,485,153	2,559,709			
Sahaviara River	8,190	78,282	29,696			
Ankaja River	_	4,928	6,736			
Vondronina River	_	13,870	84,866			
Groundwater	674,467	668,199	680,063			

#### Air Quality

We have selected the following five major inputs used in our operations that are sources of GHGs for monitoring: diesel, coal, naphtha, liquid petroleum gas (LPG) and limestone. These are contributors of carbon dioxide, methane and nitrous oxide emissions. Based on consumption data, GHG estimates are calculated using conversion factors and specific coefficients of the reactions. In 2022, Ambatovy's overall GHG emissions for the Mine, Plant and Port facilities were estimated at a combined total of 1,931 kilotons (kt) of CO<sub>2</sub> equivalent. At the Plant Site, coal, used for electrical power and steam generation, remained the primary source of GHGs. At the Mine Site, the main source of GHG emissions was diesel fuel.

Material Consumption 2022						
Material	Consumption	Unit	CO <sub>2</sub> emitted (in kt)			
Diesel Fuel	81,539,266	liters	224.8			
Coal	469,481	tons	1,072.3			
Naphtha	24,078	tons	76.8			
LPG	5,457	tons	16.4			
Limestone	1,229,800	tons	540.8			
Total CO <sub>2</sub> Emission		kt	1,931.1			

Ambatovy Yearly Total GHG emissions					
CO <sub>2</sub> Equivalent (in kt) 2018 2019 2020 2021 2022					
	1,715	1,795	635	1,621	1,931





Air quality data is collected from a fixed continuous air monitoring station and static perimeter multi-gas detectors located along the Plant Site boundary.

In 2022, no emission incidents or daily criteria exceedances were captured throughout the year. To continuously improve monitoring capacities, the air analyzer was successfully replaced and  $PM_{2.5}$  was introduced as a parameter that is now being monitored continuously. Third-party stack testing was also carried out at the power plant stacks, lime plant stack and waste incinerator to better understand end-of-pipe emissions. The power plant and the lime plant stacks will be equipped with a Continuous Particulate Monitoring System in 2023. Data

collected from these stacks will be used as a reference during improvement planning for process efficiency.

Noise monitoring campaigns are carried out at the Mine, Port and Plant Sites, and in surrounding communities. The majority of noise pollution at the Mine comes from the heavy vehicle traffic and the power plant. At the Plant, there are a variety of sources of noise pollution, from vehicle traffic and operational activities to the facilities themselves. Although Ambatovy has no regulatory commitments to monitor noise, basic measurements are taken to ensure noise levels remain within reasonable limits. In 2022, there were no significant changes in noise pollution detected during the year.

In 2022, Ambatovy launched a "decarbonization journey" to lower carbon and reduce our emissions footprint. The first phase of this program focused on updating our Greenhouse Gas (GHG) emissions calculation and reporting tools, in alignment with the Intergovernmental Panel on Climate Change (IPCC), and on identifying new decarbonization strategies and abatement measures.

Ongoing climate change studies were carried out with international specialists to outline efficiency improvements, identify potential emission reductions, and develop new offsetting opportunities in our conservation and offset areas. This will contribute to the development of an Ambatovy-wide roadmap towards carbon reduction and a progressive move away from hydrocarbons (notably coal, diesel, LPG, naphtha, kerosene and fluorinated gases) in favor of renewable energy options such as hydro, solar energy, wind energy, biomass pellets and biofuels.

In addition, Ambatovy will be looking at offsetting residual emissions through carbon offsets on the voluntary market and by sequestering carbon through the upcoming GHG Protocol Land Sector and Removals Guidance. In the longer term, we also plan to evaluate the use of technologies such as carbon capture, green hydrogen and green ammonia to ensure that we are conducting our business in a manner that progressively reduces our energy requirements, carbon emissions and environmental impacts.























#### A Safe and Rewarding Workplace

#### **Objectives**

- Maximize local workforce composition in order to have 85% of positions held by nationals.
- Develop a highly skilled and committed Malagasy workforce.
- Provide a rewarding, safe and satisfying work environment for our employees.

#### **Approach**

Our business cannot operate nor thrive without a dedicated, experienced, competent and engaged work force. Indeed, we recognize that our employees are our most valuable asset and that our performance depends on a skilled and committed work force, respect for our employees, effective teamwork and a culture of safety. For our operations, we need a team that can meet the engineering, maintenance, technical, administrative and program aspects of our business. We believe that we can create this team by ensuring that our workforce benefits from more than just a paycheck, by providing a rewarding and satisfying work environment. We have a number of policies and strategies for several core areas to ensure that Ambatovy is an employer of choice in Madagascar. These areas include local recruitment, training, progression ladders, localization and succession planning, capacity-building, internal communications, knowledge transfer, labor-management relations, performance management, health and safety, human rights, workplace discrimination and harassment, and diversity in the workplace. We also promote fairness and equity in the workplace through our company values, ensuring that our employees are represented through their employee representatives (Worker Delegates and the employee Works Council), as well as voluntary participation in four employee unions active within the company.

One of our core values is teamwork. We believe that in order for us to be a successful enterprise, all employees must work in a spirit of mutual respect, trust, and constructive relationships. In no other relationship is this as important as it is for labor-management relations. Four principles ensure that this relationship is indeed respectful and constructive:

- Treating every employee fairly and with respect.
- Exhibiting integrity in our work and amongst all employees.
- Respecting employees' privacy and confidentiality.
- Nurturing Malagasy talent.

Ambatovy aims to be an employer of choice. Towards that end, we offer a number of attractive benefits in order to promote a positive working environment and the well-being of our employees. Permanent employees<sup>13</sup> are eligible for:

- A social benefits program, which includes health, death, accident, housing, and disability insurance.
- A retirement program for employees.
- A Performance Incentive Program.
- The Daily Production Incentive Program: certain national employees are eligible to receive a variable monthly bonus based on achieving our daily production and safety goals.
- Training and development: employees are given an individual training plan to reinforce their skills and to develop new skills valuable to the organization.

All employees and their families are eligible for medical coverage. In addition, the company provides accident insurance for all employees. The company will also cover expenses and repatriation services for funerals in the event of the death of an employee or their dependents, and will provide a traditional payment in the event of the death of a close relative.

We recognize that our company's impact on local human resources can be immense and can bring multiple positive improvements to the national economy through employment, capacity building, industrial experience, and payment of taxes and wages. Ensuring the right programs are in place to support employee development at all levels is crucial for Ambatovy's long-term success and succession planning. Continued investment in skills development and learning, therefore, remains a priority for Ambatovy. We offer training programs in safety, mining and processing operations, maintenance trades, mobile equipment, management, leadership

 $<sup>^{13}\</sup>mbox{All}$  Ambatovy direct employees are full-time employees.

and other general areas in order to ensure Malagasy employees have the skills needed to carry out their current work and to take on positions with increasing technical and leadership responsibility. We utilize a range of methodologies including computer-based learning, classroom training, overseas exposure, coaching and onthe-job instruction. Whenever possible, we leverage opportunities to bring different teams and groups together in order to strengthen our shared values and culture. In addition, expatriate team members are expected to transfer specialist knowledge and skills to Malagasy team members to build their capacity and enable ongoing career progression.

The impact of the presence of Ambatovy's workforce on local communities is inevitable. Overall, these impacts are positive, such as through contributions to the growth in the housing and construction markets and through increased expenditures in the local economy with more wage earners living in the areas. The impacts can potentially be negative as well, such as through an increased strain on local resources and municipal services that can occur with an influx of new inhabitants. However, to the extent possible, our recruitment process prioritizes local candidates who have the skills required for a position first, before extending to candidates from other regions, in order to promote local job creation and to try to lessen the inflow of people looking for work in our host communities.

The impact of Ambatovy's labor practices and hiring needs will contribute to uplifting the standards and skill sets of Madagascar's labor force and will provide incoming industrial entities with individuals that are trained and experienced, with up-to-standard qualifications and skills in industrial and technical trades. As noted in the section on Governance and Human Rights, we also hold all of our contractors responsible to maintain their legal right to work as a business in the country and to follow the same codes of conduct and policies as our employees and our company. These policies address Health and Safety, Code of Conduct, Zero-Tolerance, Anti-Corruption and Human Rights. Regular audits of our active suppliers ensure their compliance with these contractual obligations.



### Performance 💆 💆







#### Local Recruitment

We have two employment commitments: to optimize national employment and to develop a highly-skilled workforce in Madagascar. By locating our processing and refining facilities in Madagascar, we have chosen to invest in the long-term recruitment, employment, and development of human capital in the country. Our recruitment policy aims to attract and retain Madagascar's top talent through competitive compensation and benefits. Our success will depend on recruiting a cohort of employees that are committed to our vision, values, and longterm operation.

In 2022, Human Resources Management continued to focus on optimizing national employment while enhancing our people. Activities focused on developing a more structured way of localizing positions through:

- · Knowledge and skills transfer from expatriates to national employees.
- Career and Succession Planning completion of psychometric tests to identify potential and preparation of integrated Development Plans.
- Competency assessments over 15,000 person/role competencies assessed.
- · Access to new technologies introduction of immersive mining simulators for CAT training and the Dover testing system to improve the preselection of operators, interns and technicians across the business.
- Continuation of the talent review process to assess performance, identify individuals with demonstrated potential, and facilitate their development within the organization.
- Progress on the Internship Program training of young nationals as highly skilled technicians in order to integrate them into Ambatovy's core operation and fast track the localization of positions held by expatriate employees.
- Salary benchmarking completion of benchmarking surveys and reward adjustments to ensure competitivity on the local job market, improve retention and attract new employees.

Ambatovy is creating direct and indirect jobs as a result of our presence in Madagascar as well as our decision to extract, process and refine in country. As of the end of December 2022, Ambatovy directly employed 3,761 employees, of whom approximately 88% are Malagasy Nationals.

Approximate Project Wide Employee Headcount, December 2022						
National Expatriate Total						
Direct Employees*	3,283	478	3,761			

\*All direct employees are full-time employees reported in head count. Ambatovy does not employ temporary, part-time or non-guaranteed hours employees.

Ambatovy also has many contractor companies that work at our sites for various projects and assignments, with various responsibilities, and for various durations. We are currently revising and updating our system for tracking our full-time equivalent (FTE) contractor headcount. In December 2022, for example, at DMSA alone, approximately 5,000 FTE contractor employees worked on site.

In 2022, we continued to employ a proactive recruitment approach, with a particular focus on the recruitment of Malagasy repatriates, when possible. 266 positions were filled

externally by Malagasy nationals and 80 positions were filled by expatriate employees. Recruitment was mainly driven by the initiation of the Pipeline Replacement Project and demand for operationally qualified resources as well as by standard recruitment requirements. 91 young Malagasy students were also hired through Ambatovy's Internship Program (47 at the end of 2021 and 44 in the beginning of 2022). This two-year advanced program provides students with the specific professional training required to become certified technicians and offers the possibility of permanent employment following completion. As part of this initiative, HR is now recruiting a second wave of interns through targeted road shows at Malagasy schools. Projections are to hire an additional 196 students to commence in 2023.

Diversity in the Workplace

Diversity has become a pertinent issue across society and is particularly relevant to the natural resources sector because of the historically low proportion of women and people of differing backgrounds and abilities in our industry. We know that we will become a stronger, more innovative and resilient company as we continue to attract a spectrum of people of different cultural backgrounds, genders, ages and life experience to our company.

At Ambatovy, our policy is to find the right person for every job, regardless of gender, race, ethnicity, or religion. While we do emphasize local employment as a priority in our hiring practices, positions are filled by the candidate that best suits the required experience and necessary skills. Salary remuneration is directly tied to the position's responsibilities and accountability, and is not determined by gender or age. Although typically a maledominated environment, Ambatovy has, over the years, seen a steady increase of women in traditionally male positions, including electrical technicians, geologists, forestry engineers, millwrights, truck drivers and electrical motor repair technicians. By the end of 2022, approximately 13% of our direct employee workforce was female.

Breakdown of Direct Employees by Age and Gender, December 2022						
	Under 30 30-50				Over 50	
	Male	Female	Male	Female	Male	Female
National	194	57	2,327	391	293	22
Expatriate	5	2	296	25	144	5

## Training, Capacity Building and Skills Transfer

Ensuring the right programs are in place to support employee development at all levels is crucial for Ambatovy's long-term success and succession planning. Continued investment in skills development therefore remains a priority for Ambatovy.

In line with our Strategic Plan, Ambatovy prioritizes skills development in order to ensure that employees are equipped with the skills required to carry out their duties and to take on positions with increasing technical and leadership

responsibilities. In 2022, Ambatovy continued to advance our training and development activities in order to better meet the business's needs. 277,083 training work-hours were carried out during the year, an increase of 64% compared to the previous year (2021).

Development activities focused on coordinating regulatory training, revalidating competencies, accelerating trade skills and developing leadership essentials. Training in these areas achieved the following results:

- Health and Safety and critical training: Regulatory training
  is crucial for operations to run safely and smoothly and is
  required for both employees and contractors. In 2022,
  Ambatovy deployed Safety Critical Element courses,
  implemented the Human and Organizational Performance
  (HOP) Training Program, and worked to coordinate regulatory
  training and Verification of Competency training during
  the Total Plant Shutdown. A total of 89,198 work-hours of
  training were completed during year.
- Trades training program for current employees: This program, launched in 2019, aims to accelerate the development of national technicians. Among the 323 technicians (electricians, instrumentation and mechanical technicians) initially enrolled in the program, 305 are still active in the program of which: 286 (94%) have successfully completed Stage 3 and 220 (72%) have successfully completed Stage 4. 54 trainees from Ambatovy's Internship Program are also enrolled in the program and have successfully completed Stages 1 and 2.
- Trainer training program: As part of Ambatovy's Trainer Progression Pathway, six trainers achieved Trainer II certification and one trainer achieved Trainer III certification in 2022. Three new trainers were also hired to reinforce the Process Training Team and a new PAL Process Training Supervisor position was created to ensure focused supervision of training activities in the PAL and Refinery areas. Ensuring the continued investment in our trainer's program sets the foundation for developing a skilled and capable workforce.
- Process Operations training program: Competency revalidations continued to be carried out for Plant Process Operations staff. 648 operators were trained and certified in operational skills relating to their respective progression ladder and over 1,763 formal assessments were carried out over the course of the year. 105 Operators successfully completed certification as Control Room Operators, Permit Coordinators, Field Operators II and Lead Operators with a 100% certification completion rate. 36 interns from Ambatovy's Internship Program were also hired to partake in the Operations Training Program in 2022.



• Leadership development: The Ambatovy Leadership Program, which focusses on the development and reinforcement of employees in leadership roles, was completely remodeled in 2022 to more closely align its content with Ambatovy's framework and context. The new Foundations of Supervision (FOS) Program will be launched in 2023. It is expected to reach close to 500 front line leaders by the end of 2023.

#### **Labor-Management Relations**

Across our company, Ambatovy has both unionized and non-unionized employees. Ambatovy recognizes and encourages the right of employees to engage in free association and collective bargaining. All national employees contracted under DMSA and AMSA (88% of our direct employee workforce) are covered by the Collective Bargaining Agreement. For expatriate employees, their terms of employment and working conditions are defined within their individual employment contracts.

Ambatovy continues to maintain a cordial relationship and regular, constructive dialogue with our employee representatives (Worker Delegates and Works Council). A review of the Collective Bargaining Agreement, signed in 2018, was initiated in late 2022. Discussions took place in a spirit of mutual respect and a final agreement is expected to be signed by the first quarter of 2023.

As with all of our relationships, we strive for productive and mutually beneficial outcomes in our discussions with employees and their organized labor representatives. When labor grievances do occur, we investigate and work to reach an acceptable solution for all parties concerned. Once grievances have been resolved, the Management team evaluates all of the issues that were raised and determines what process improvements, if any, can be made to ensure we can learn from each one. In 2022, 49 grievances related to working conditions were reported, all of which were resolved.

#### **Employee Engagement**

Ambatovy recognizes our employees as our most valuable asset and relies on their capacity to represent the company to their friends, families, neighbors and the general public. In 2022, employee engagement focused on broadening employees' understanding of Ambatovy's operations, activities, and objectives in order to build a greater sense of solidarity and pride across the workforce.

Information sharing was carried out through a range of mediums including weekly newsletters, mini open-door events, photo exhibitions, and companywide celebrations (such as Sustainability Month and the  $10^{\rm th}$  Anniversary of Ambatovy's Production) organized to celebrate – with all employees – the results of their hard work, engagement and dedication.

To give employees the opportunity to engage directly with their leaders, face-to-face Chat Sessions were organized with our President and Directors. An employee exchange initiative was also launched in order to reinforce solidarity across the business. Ten exchange visits, involving 190 employees from the Mine, Plant and Antananarivo office, were organized, providing participants with a more comprehensive view of operations at other sites. Civic engagement, family outings and community events were also organized, emphasizing employees' role as "ambassadors" for the company. Activities included family hikes, tree-planting and municipal clean-ups as well as events organized by the employee group, We Are Ambatovy. This year the group participated in ecological revegetation and organized three waves of donations to orphanages in Toamasina, Moramanga, and to the SOS *Village d'Enfants* in Antananarivo.

As always, Health and Safety remained central to our employee engagement and was the focus of various targeted awareness campaigns. Campaigns included ongoing Covid-19 and vaccination awareness, a two-week campaign against smoking organized in line with World No Tobacco Day, multiple HIV / AIDS awareness events, and several mini health campaigns organized to mark events such as World Blood Pressure Day and World Day for Safety and Health at Work. Communications also addressed cyclone preparedness, injury prevention, heat stress, fatigue, and occupational health as well as broader topics including security, cybersecurity, fraud, bribery, and corruption. To enhance messaging, new telecommunications boards were installed at the Plant Site entrance turnstiles and a project was launched to revamp our company's Intranet to further enhance the employee experience.

"We are Ambatovy" is a social group formed by employees that consider themselves "ambassadors" for the company. Every year, they work to build solidarity across the workforce and within the local community through civic engagement and social events. The club currently has approximately 2,300 employee members across our sites that meet routinely to organize and carry out various activities. In 2022, the group participated in municipal clean-ups and reforestation activities, and raised donations to support orphanages in Toamasina, Moramanga, and Antananarivo. The group also continued to promote employee engagement and peer support through a range of social events.



#### Approach: Health and Safety

Ambatovy is committed to maintaining a healthy and safe workplace for all employees, contractors, visitors and neighboring communities, and health and safety is our top priority. We believe that all injuries are preventable. Our operations are built on a zero harm health and safety culture. We work hard to minimize operational risks to our workforce and nearby communities, and engage with these important stakeholders regularly on matters of safety, security and emergency response. For more information about our work to support health and safety at the community level, please see the section on Communities and Social Relations, earlier in this report.

Our Health and Safety (HS) team identifies hazards, assesses risks, implements controls, monitors performance, and assigns appropriate accountabilities. It also oversees training, work authorizations and reporting. We report health and safety performance on a regular, ongoing basis to Management in order to ensure continuous improvement. Our recording and reporting system is compliant with the International Labor Organization's (ILO) Code of Practice on Recording and Notification of Occupational Accidents and Diseases.



#### Performance: Health and Safety





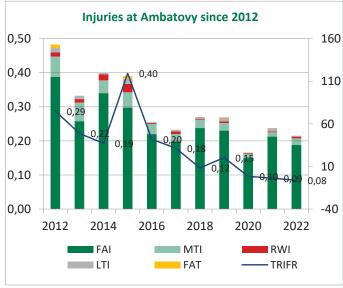
Ambatovy's zero harm and Health and Safety culture includes Leadership in the Field, training, three-in-a-row, awarenessraising, standards development and inspection, and a business assurance program that validates conformance to Fatality Prevention Standards. Ambatovy carefully monitors our health and safety performance against International Council on Mining and Metals (ICMM) standards and ensures continuous improvement and safe production through comprehensive auditing and reporting procedures. Any safety observation, near-miss, or safety incident is seen as a chance to continuously improve the company's processes in order to prevent the potential for future incidents. Ambatovy is currently working towards ISO 45001 certification for our safety management system: the highest international standard for occupational health and safety, with an objective of being certified by 2023.

In 2022, Ambatovy achieved our best safety performance to date, with a Total Recordable Injury Frequency Rate (TRIFR) of 0.08, an All Injury Frequency Rate (AIFR) of 0.35, and a Lost Time Injury Frequency Rate (LTIFR) of 0.01. The 2022 TRIFR and AIFR are the best results achieved since 2012 when we commenced our operations. This performance reflects Ambatovy's commitment to strong investigative processes and our continuous investment in corrective and preventive action.

Ambatovy Health and Safety Performance 2020-2022						
2020 2021 2022						
AIFR	.42	.47	.35			
TRIFR	.10	.09	.08			
LTIFR	.00	.04	.01			

<sup>\*</sup>Rates are calculated based on 200,000 hours worked and include hours worked by both direct employees and operational contractors.

In 2022, 11 recordable injuries (medical treatment, restricted work, or lost time injuries) and no work-related fatalities were recorded at Ambatovy. Of the 11 recordable injuries, four involved employees and seven involved contractors (a TRIFR rate of 0.087 and 0.083, respectively, based on a total of 26,056,487 hours worked). Hand injuries represented the most prevalent type of work-related injury recorded in 2022. Injuries were mainly attributed to the use of wrong or unsafe working methods, the inadequate use of tools, and an oversight of the "line of fire" concept.



As an industrial enterprise, risk management is required on a daily basis in order to ensure an injury-free workplace and is one of Ambatovy's greatest challenges. Work-related hazards that pose a risk of recordable injury are determined by Ambatovy's Operational Control and are identified in our Fatality Prevention Standards. All activities, both specific and

routine, are required to undergo a thorough risk assessment prior to commencement. This includes hazard identification and the implementation of control measures, based on the Ambatovy Risk Management Procedure's hierarchy of control.

To instill a safety culture that emphasizes prevention, Ambatovy has developed a Health and Safety Road Map based on three pillars (Fatality Prevention, Injury Prevention and Catastrophic Event Prevention). In 2022, the following key actions were achieved as part of this Road Map:

- Fatality Prevention: Fatality Prevention Committees, established for each of the 12 Fatality Prevention Standards, reviewed and updated prevention standards to ensure their consistency with international best practices. Each committee developed an action plan to ensure their effective application and met on a monthly basis to review progress against these plans. To further enhance controls within specific work areas, Fatality Prevention sub-committees will be established in 2023.
- Injury Prevention: Injury Prevention focused on promoting the right work methods, the right tools and the "line of fire" concept while in the field. New training technologies, such as immersive simulators, were introduced to reduce risk exposures and enable equipment training in a safe and controlled environment. A new Human and Organizational

- Performance (HOP) training program was also piloted in two areas. This program will help to ensure that systems are in place to reduce injuries and increase Ambatovy's capacity as a learning organization.
- Catastrophic Event Prevention: The process safety team collaborated with operational and engineering teams in each process area to evaluate and enhance management, performance assurance, and the effectiveness of safety critical controls. The development and delivery of training continued to elevate workforce awareness and participation in ongoing assurance activities. Systems to identify remedial action for events that could potentially lead to a more significant incident are well established and have seen encouraging results. Major incident scenarios were also identified by the process safety team who are working with emergency response services to develop emergency response plans (ERPs) for each of the incident scenarios. Evacuation drills will be scheduled according to these plans.

These three pillars were reinforced through daily routine "Leadership in the Field". These interactions play an important role in maintaining safety awareness and ensuring that employees consistently have access to all the necessary resources to perform their jobs safely and effectively.

The health and safety of our employees is a top priority for Ambatovy. We are continuously working to ensure their well-being and to improve safety within the communities where we operate. To improve road safety and reduce traffic-related incidents in the municipalities near our Mine Site, Ambatovy supported a multi-faceted road users training and awareness program in the town of Moramanga that commenced in 2022.

This initiative aims to improve safety for all road users through a program of pedestrian awareness, training for rickshaw (bajaj) and bus drivers, and road safety education in schools. It is a collaboration that involves the District of Moramanga, the Urban Commune of Moramanga, the Regional Directorate of Technical Education and Vocational Training (DRETFP), the National Police of Moramanga and the Matsara Association. Ambatovy's contributions include logistical, financial and didactic support for the training and awareness campaigns as well as the donation of road signs, equipment and communications material to support the National Police. As of December 2022, over 600 rickshaw drivers and 4,000 students had participated in the program, helping to make our roads and communities a safer place.







#### **Responsible Production**

#### **Objectives**

- Provide and promote products that are produced and consumed in a socially, ethically and environmentally responsible manner.
- Remain committed to implementing policies and management systems that are aligned with OECD requirements and with good
  industry practice and to ensuring supply chain due diligence for the responsible production of our minerals.
- Maintain ISO 9001-2015 certification to demonstrate our commitment to quality and to meet our customers' needs.
- Aim to achieve ISO 14001 and ISO 45001 certifications.

#### **Approach**

Society and markets are increasingly demanding responsibly and ethically produced goods. Downstream customers of Ambatovy are, in turn, increasingly requesting evidence of policies, management systems, and supply chain due diligence to ensure responsible mineral production and supply. Ambatovy is committed to extracting and producing minerals that meet our stakeholders' social, ethical, environmental and human rights expectations and to advancing that commitment with our partners, suppliers and customers.

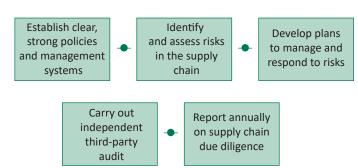
The adoption of responsible sourcing obligations builds on a global shift in the extractives industry. Over the past several years, organizations and institutions, such as the International Council on Mining and Metals (ICMM), the Extractive Industries Transparency Initiative (EITI) and the Organization for Economic Cooperation and Development (OECD), have developed and refined various standards to encourage more sustainable and ethical practices. These initiatives have largely been driven by market participants' desire to reduce supply chain and operational risks; consumer demand for ethically sourced goods; and encouragement from the international community and investors to better align business practices with human rights and sustainable development principles.

In October 2019, the London Metal Exchange (LME) unveiled a new policy to promote the responsible sourcing of metals. The LME Policy on Responsible Sourcing sets out mandatory labor, environmental and supply chain due diligence requirements, and preventing conflict minerals from being sold on the exchange is

a core tenant. The LME Policy requires that producers ensure that their brands are compliant with ISO 14001 (environmental management system) and ISO 45001 (occupational health and safety management system)<sup>14</sup>, and are compliant with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (CAHRAs). With our two LME-listed products, nickel and cobalt, Ambatovy has been working towards meeting these responsible sourcing and due diligence requirements by the LME's December 2023 deadline. We have established an internal Responsible Sourcing working group consisting of staff from our Marketing, ESG, Legal, and Government and External Relations teams to guide these efforts.

Ambatovy has a robust management system in place to manage environmental and social risks and to meet or exceed performance targets.

#### **Ambatovy's Due Diligence Approach**



 $<sup>^{14}\</sup>mbox{Producers}$  must be compliant with the ISO standards or with Equivalent Certification Programs.

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The Ambatovy Quality Policy is our formal commitment to supplying defect-free products to all our customers. In order to deliver on this commitment, we must:

- Understand the requirements as agreed with our customers;
- Communicate effectively with our customers and suppliers;
- Do our work correctly the first time;
- Supply products at standards that meet our customers' needs;
- Practice effective communications about safety and quality;
- Involve all personnel;
- · Continuously improve everything we do;
- Comply with applicable government laws and regulations.

A practical way to implement these strategies is to have a formal Quality Management System (QMS) in place. Our QMS was certified in 2014 as compliant with International Standard ISO 9001-2008. This was a great milestone for the company and paved the way for us to achieve registration of our nickel and cobalt briquettes on the LME. Since our original certification, Ambatovy has had yearly audits conducted to confirm the compliance of our QMS with ISO 9001 requirements. In 2017, our certification was renewed under the new and more stringent 2015 version of the ISO 9001 standard. Since receiving our ISO 9001 renewal certification in 2020, annual audits have been completed every year to confirm compliance of our QMS with ISO 9001 requirements. In March 2022, an audit was completed on the scope of refining, analytical services and shipping activities. This maintenance of our certification demonstrates Ambatovy's commitment to quality and to our customers. Another re-certification audit is scheduled in 2023.

### Performance w





#### **Responsible Sourcing**

Ambatovy is currently pursuing a plan towards alignment with the LME's Track A that will require compliance with the Joint Due Diligence Standard for Copper, Lead, Nickel and Zinc and with the Cobalt Refiner Supply Chain Due Diligence Standard. As described in last year's report, in 2021, Ambatovy became engaged with the Responsible Minerals Initiative's Responsible Minerals Assurance Process (RMI RMAP). The RMAP offers companies and their suppliers an independent, third-party audit that determines which smelters and refiners can be verified as having systems in place to responsibly source minerals in line with current global standards, including the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (CAHRA).

In late 2021 and early 2022, we commissioned a robust, thorough, credible CAHRA assessment to determine whether Madagascar should be considered a conflict-affected and high-risk area as per the OECD definition. The CAHRA assessment was carried out by an independent third party with expertise in ESG risks in Madagascar's mining sector areas; their report concluded that Ambatovy does not source from, produce in or transit through any CAHRAs. The methodology developed and adopted for the assessment will allow us to do regular updates on the status of Madagascar.

In April 2022, we had our first RMAP audit. We were assessed against the Joint Due Diligence Standard for Copper Lead, Nickel and Zinc and the Cobalt Refiner Supply Chain Due Diligence Standard, both of which are assured by RMI and recognized by the LME. We plan to finalize our Responsible Sourcing policy in the first guarter of 2023 and to make it publicly available on our website, thereby bringing us in full conformity with the RMAP Standard. A renewal audit will take place in 2023. More information about the RMI RMAP can be found in Appendix 3.

#### Material Stewardship

Ambatovy's nickel and cobalt are stable unreactive metals, widely used in the production of stainless steel, other metal alloys, specialty chemicals, and in a variety of other applications. However, Ambatovy's production process involves industrial and hazardous materials, such as chemicals and compressed gas. Ambatovy has developed detailed policies and procedures on handling, transporting, storing, recycling, and disposing of such items. We also maintain Safety Data Sheets (SDSs) from suppliers on all hazardous materials and commodities that we use, and produce SDSs for Ambatovy products and byproducts. These data sheets are electronically accessible to employees and we provide our product SDSs to customers in a variety of languages. Training is provided on proper handling procedures and, where relevant, on appropriate Personal Protective Equipment requirements for safe handling and use. Our procurement and transportation handling procedures are based on regulations from the International Marine Organization, the International Air Transport Association, and the European Agreement Concerning International Carriage of Dangerous Goods by Road.

When possible, we try to procure goods and services that have a positive social or environmental return. ALBI continues to work with local businesses to procure a range of items for our operations. Examples of procurement initiatives can be found in the Economic Performance section.

#### Customer Relations, Health and Safety

Ambatovy nickel products are marketed and sold through our shareholder companies (Sumitomo and KOMIR) and onward to the end customer. Ambatovy cobalt products are marketed directly by Ambatovy, with exclusive distribution arrangements in Europe and the USA. In certain geographical areas including Asia and Africa, cobalt is marketed and sold by Ambatovy directly to the end customer. Ammonium sulphate, used mainly as a fertilizer for soils in the agricultural sector, is also marketed and sold through an exclusive distribution arrangement to local and global markets. Ambatovy and our partner companies are committed to ensuring that customers have relevant and reliable science-based information on hand regarding the health and environmental effects of Ambatovy products.

Ambatovy assesses the health and safety aspects of our products via membership in and participation in international industrial organizations established to provide science-based knowledge on the human health and environmental effects of the products and on product qualities. These organizations include the Nickel Institute (NI), the Cobalt Institute (CI) as well as consortia established for the purposes of complying with the

**Responsible Production** 

requirements of the European Union's Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH) and Classification, Labeling, and Packaging (CLP) regulations. All Ambatovy products have comprehensive SDSs which provide the hazard classification as well as guidelines and recommendations for safe handling and use procedures. These SDSs provide information that adheres to regulatory standards according to the geographic area of sales.

Customers in the European Union have cooperated in the development of specific Generic Exposure Scenarios to assist with compliance with the REACH regulations. These scenarios provide guidance on the operating conditions that must be met in order to ensure the safe use of both nickel and cobalt with respect to potential impacts on workers handling Ambatovy products as well as guidance on the avoidance of any negative impacts on local populations in the vicinity of facilities producing or using these substances.

Ambatovy products comply with relevant rules and regulations, such as the REACH and CLP regulations, in countries of product destination. Careful attention is given to handling hazardous substances, and warning labels identify important instructions

as guidance. Carriers of these substances use these labels as indication of the nature of the products they ship and ensure compliance with international standards such as the International Marine Dangerous Goods Code.

Both nickel and cobalt are sold directly to industrial end-use consumers; however, domestic customers who use the final consumer products rarely come in direct contact with these refined substances. Industrial end-users are generally aware of the health and safety aspects that must be considered.

The international industrial organizations to which Ambatovy belongs promote appropriate and safe uses of nickel and cobalt, and advocate for appropriate science-based regulations. Environmental impacts of our products are considered and communicated in a variety of ways, including via SDSs, product labeling and guidance on safe use, environmental quality standards, and, under REACH, through a variety of exposure scenarios for industrial uses.

There have been no incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety of our products.

Product Information Required	
Information required for product labeling	Yes
Content, particularly with regard to substances that might produce an environmental or social impact	Yes
Safe use of the product of service	Available on SDSs and on the NI and CI websites
Disposal of the product and environmental/social impacts	A caution to dispose of materials and containers in accordance with the applicable national, regional and/or local environmental regulations is included on SDSs; due to the high value of nickel and cobalt, global recycling rates are significant

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## Appendices

#### Appendix 1: The Sustainable Development Goals

The United Nations' Sustainable Development Goals (SDGs), a follow up to the Millennium Development Goals, consist of 17 ambitious targets to address global issues and to ensure a sustainable and resilient future for the world by 2030. The success of the SDGs depends on the participation of a range of actors – governments, communities, non-governmental organizations and corporations.

The nature of the work of the natural resources sector has social, economic and environmental impacts on the jurisdictions where projects and operations are located. As a responsible company working in both a low-income country and a biological hotspot, we aim to ensure that the potential negative impacts of our activities are minimized and mitigated to the greatest extent possible, while also focusing on actions that positively impact local communities and Madagascar. To this end, the SDGs serve as a reference for us to gauge how and to what extent we are contributing to Madagascar's development and to its achievement of these globally recognized sustainability targets.

Below is a summary of ways in which Ambatovy has been contributing to the achievement of the 17 SDGs. More information about our work can be found in the text of the report.



## End poverty in all its forms everywhere

- One of the biggest private sector employers in Madagascar
- At the end of 2022, 3,761 direct employees, of whom 88% are Malagasy
- Hiring practices that emphasize the recruitment of national employees, local to our sites of operations
- Support for skills development, both for our employees and local communities
- Development and promotion of income generating activities and VSLAs
- Policy of "Buy locally, hire locally"



# End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

- Training in improved agricultural and small animal husbandry techniques as well as new income generating activities (IGAs) for former construction employees and local community members
- School nutrition program at the resettlement village of Vohitrambato
- Support for community nutrition activities through school feeding programs, community gardens and Food for Work projects
- Donation to UNICEF to contribute to the life-saving treatment of severely acutely malnourished children affected by the drought and food insecurity situation in the *Grand Sud* of Madagascar
- Donation of ammonium sulphate and promotion of its use as an affordable and appropriate fertilizer for smallholder farmers as a means of achieving greater food security and increasing families' incomes



## Ensure healthy lives and promote well-being for all, at all ages

- Support for youth kiosks along the RN2 to promote HIV/AIDS awareness and reproductive health
- Support for HIV/AIDS awareness-raising and testing with Ambatovy employees and communities
- Development of communities' medical facilities through donations of equipment and rehabilitation/construction of infrastructure
- Support for the responses to the plague and measles epidemics in previous years
- Donations of medical equipment, tests and supplies to support the fight against Covid-19
- Free mobile medical consultations in villages with limited access to health care
- Donation of seeds and inputs to help farmers rebuild their livelihoods following cyclone damage



# Ensure inclusive and equitable education and promote lifelong learning opportunities for all

- Construction of schools and classrooms in the resettlement villages and in other communities
- Scholarship support to help further the education of youth from Vohitrambato and of vulnerable girls from our zones
- Collaboration with UNICEF on the construction of eco-friendly schools
- Training and capacity building for school administrators in our zones
- Training and leadership development for our employees
- Support to local technical and vocational schools
- Support for school nutrition and feeding programs
- Support for the national campaign against child exploitation and the Moramanga Child Protection Network
- Donation of school kits to children at primary schools in our zones of operation



# Achieve gender equality and empower all women and girls

- Equal opportunity employer, even for traditionally male mining roles
- Development and promotion of income generating activities and VSLAs with predominantly female-headed households
- Promotion of Zero Tolerance policy for sexual exploitation of young girls
- Scholarship program for vulnerable girls in our zones of operation



## Ensure viability and sustainable management of water and sanitation for all

- Support of Water Users Associations (WUA) in our communities
- Construction of water pumps and water points in villages and on school grounds
- Support for the treatment of municipal water supplies and the development of water distribution networks
- Extensive water monitoring system through all Ambatovy sites



## Ensure access to affordable, reliable, sustainable, and modern energy for all

- · Creation of electric vehicle fleet at Plant Site
- Provision and installation of solar panels at Vohitrambato resettlement village
- Donation of generators to support local Covid-19 treatment centers and emergency response to cyclones
- Commitment to rural electrification project and donation of solar home kits



#### Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all

- Employment program with comprehensive employment benefits
- Works Council to strengthen employee relations and employeemanagement interactions
- Requirements for our contractors including respect for health and safety standards and procedures and for human rights
- Active contracts with more than 400 local suppliers and support for local business creation
- Development and promotion of income generating activities and VSLAs
- Produce for Ambatovy's canteens sourced from farmers' groups near the Mine and Plant Sites



#### Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- Extensive rehabilitation and construction of roads
- Rehabilitation and extension of railroad track in Toamasina
- Expansion of Pier B in Toamasina
- Investment in infrastructure through the Social Investment Fund
- Support for the rehabilitation of 11 refuge shelters in the Maroantsetra District after Cyclone Enawo to help strengthen communities' resilience
- Construction of schools and classrooms



## Reduce inequalities within and among countries

- With nickel as one of Madagascar's top export products, supporting the local currency and narrowing the trade deficit
- Bringing in significant foreign exchange earnings through investment, expatriate salaries and product sales
- Support for anti-corruption measures and firm stance against corruption in all forms
- Support for the good governance of mining royalties to ensure their transparent, equitable and sustainable use



## Make cities and human settlements inclusive, safe, resilient and sustainable

- Installation of railroad safety fences and rail-road crossings
- Work with regions on industrial risks and disaster preparedness
- Support for the responses to the plague and measles epidemics as well as significant contributions to cyclone relief efforts and to the fight against the Covid-19 pandemic
- Road safety training and pedestrian awareness in the communities near our Mine Site



## Ensure sustainable consumption and production patterns

- Mitigation of inflation in local markets by purchasing produce through centers working directly with local farmers
- Development of local businesses to support industrial sector and to recycle our waste products



## Take urgent action to combat climate change and its impacts

- Extensive reforestation work and conservation actions with local community involvement
- Minimization of emissions by utilizing gravity-fed system to transport slurry along the Pipeline from the Mine to the Plant and by importing low emission coal for Plant processes
- Coordinated bus transport for employees and installation of electric vehicule fleet
- Launch of a "decarbonization journey" to lower carbon emissions



# Conserve and sustainably use the oceans, seas, and marine resources for sustainable development

- Recycling of process water rather than relying entirely on river water withdrawals
- Conservation activities for rivers in our areas and the native fish species, including control of invasive species
- Waste treatment through the Tailings Management Facility to ensure that water discharged into the sea has the composition of marine water
- Support for the Blue Economy through sustainable, smallscale fishing initiatives



Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

- Extensive biodiversity monitoring, mitigation and restoration program in place
- BBOP pilot project from 2009 to 2018, promoting avoidance, minimization, restoration and offsets to achieve no net loss in biodiversity
- Work with village organizations on monitoring and enforcing the sustainable use of ecosystem services
- Protection of conservation offset sites
- Protection, monitoring, evaluation, and study of flora and fauna in our conservation areas
- Environmental awareness-raising at schools and at community level for communities surrounding our conservation zones
- Awareness-raising on the damage caused by slash-andburn agriculture, poaching, bush meat consumption, and endangered species trade



# Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels

- Support for the EITI process and participation in the Voluntary Principles on Security and Human Rights
- Collaboration with Government and local authorities to develop a mechanism for the safe, transparent, equitable and sustainable management of mining royalties
- Partnership with the local NGO SAHA for capacity building, guidance and accompaniment of Communes receiving our royalties
- Firm stance on business ethics and anti-corruption, which all employees and contractors must adhere to
- Work with the international NGO Search for Common Ground to foster constructive company-community dialogue, to promote mutual understanding and to build trust



# Strengthen the means of implementation and revitalize the global partnership for sustainable development

- Extensive partnerships supporting our activities in health, education, livelihoods, social development, the environment and good governance
- Partnerships and close collaborations with the public, private, NGO, and business communities in Madagascar and around the world



#### **Appendix 2: Partnerships and Associations**

Ambatovy is a member of several industry associations and initiatives. We are a member of the Multi-Stakeholder Group (National Committee) for the EITI in Madagascar, the Chamber of Mines of Madagascar, the Madagascar Industries Union (*Syndicat des Industries de Madagascar*, SIM) and the Madagascar Business Association (*Groupement des Enterprises de Madagascar*, GEM). We also engage with international industry bodies, such as the Nickel Institute and the Cobalt Institute.

Ambatovy is also a member of several regional coordination committees with civil society and local government. Ambatovy has worked in recent years with a number of local, national and international organizations to ensure transparency, to create opportunities, to broaden networks and perspectives, and to develop sustainable operations. These partners and associations include:

#### International

- Cobalt Institute
- Columbus Zoo
- Conservation International
- Duke Lemur Center of Duke University
- Extractive Industries Transparency Initiative (EITI)
- Forest Trends
- Henry Doorly Zoo
- International Raw Materials (IRM)
- Japanese International Cooperation Agency (JICA)
- Joint United Nations Programme on HIV/AIDS (UNAIDS)
- Madagascar Fauna and Flora Group (MFG)
- Missouri Botanical Garden (MBG)
- Nickel Institute
- Office for the Coordination of Humanitarian Affairs (OCHA)
- Office of the High Commissioner for Human Rights (OHCHR)
- · South African Institute for Aquatic Biodiversity
- The Peregrine Fund
- United Nations Children's Fund (UNICEF)

#### **National**

- · Action et Développement
- American Chamber of Commerce (AmCham)
- Asity Madagascar (an affiliate of BirdLife International)
- Association Nationale d'Actions Environnementales (ANAE)
- Association Handicaps Esperance Tamatave
- Brickaville Miara-Mitraka (BRIMIMI)
- Bureau National de Gestion des Risques et des Catastrophes (BNGRC)
- Canadian Chamber of Commerce and Cooperation (CanCham)
- Centre d'Études et de Recherches Ethnologiques et Linguistiques (CEREL)
- Centre National de Recherches Océanographique (CNRO)
- Centre National de Recherche sur l'Environnement (CNRE)
- Centre Technique Horticole de Tamatave (CTHT)
- Chamber of Mines of Madagascar

- Circonscription de l'Environnement et du Développement Durable (CIREDD)
- Cultural and Social Center (CCS)
- Department of Animal Biology at the University of Antananarivo
- Diocesan Development Office of Toamasina (ODDIT)
- Direction Générale du Développement Durable (DGDD)
- Direction Régionale de l'Agriculture et de l'Elevage (DRAE)
- Direction Régionale de l'Environnement et du Développement Durable (DREDD)
- Direction Régionale de la Pêche et de l'Economie Bleue
- Direction Régionale de Tourisme
- EcoFauna
- Ezaka ho Fampandrosoana any Ambanivohitra (EFA)
- Fzaka Vaovao
- Fehizoro Federation
- Fianakaviana Sambatra (FISA)
- Fifanampiana Kristiana ho an'ny Fampandrosoana eto Madagasikara (FIKRIFAMA)
- Fikambanambe Mivondrona Ampitambe Mahatsara (FIMIAM)
- Groupe d'Etude et de Recherche sur les Primates (GERP)
- Groupe Mavitrika, University of Tamatave
- Groupement des Entreprises de Madagascar (GEM)
- Kopakelatra Project
- La Fabrique
- Love and Care Organization
- Madagascar Consulting Ingredients (MCI)
- Maison des Jeunes Moramanga
- Malagasy Red Cross Society
- Mamizo
- Man and the Environment (MATE)
- Miarintsoa
- MIDEM (Independent Mission for Development and Education in Madagascar)
- Ministry of Agriculture
- Ministry of Education
- · Ministry of Handicrafts and Trade
- Mitsinjo Association
- Museum of Art and Archeology of the University of Antananarivo (ICMAA)
- Ny Sahy
- Ombona Tahiry Ifampisamborana Vola (OTIV)
- Private Sector Humanitarian Platform of Madagascar (PSHP)
- Regional Office of Nutrition (ORN)
- Regional Tourism Office of Alaotra Mangoro (ORTALMA)
- SAF/FJKM
- SAHA (Sahan'Asa Hampandrosoana ny eny Ambanivohitra)
- St. Gabriel
- Syndicat des Industries de Madagascar (SIM)
- University of Antananarivo
- Vahatra
- Voahary Voakajy
- Vohimanana
- Zararano Project

#### Appendix 3: Compliance to External Initiatives

Ambatovy strives to maintain the highest standards, to respect local culture and traditions, and to comply with the laws and regulations of Madagascar. We endeavor to meet and, when possible, exceed the mandatory compliance requirements of our agreements with the Government of Madagascar, our lenders and other stakeholders. We are also committed to several voluntary measures that go beyond our legal obligations.

#### **Mandatory Compliance**

Law on Large Scale Mining Investments (Loi sur les Grands Investissements Miniers, LGIM) — Madagascar's LGIM establishes the legal framework for developing and operating large-scale mining projects in the country. Ambatovy was certified under the LGIM in 2007. Under the LGIM, we are required to report annually to the Government on a range of sustainability issues, such as local employment, local content, environment measures and community activities.

Decree on Rendering Investments Compatible with the Environment (*Décret sur la Mise en Compatibilité des Investissements avec l'Environnement*, MECIE) — The MECIE is a national decree that regulates environmental compliance for investment projects in Madagascar. Ambatovy received our environmental permit from the Malagasy authorities in December 2006, six months after filing our Environmental and Social Impact Assessment (ESIA). Following the ESIA, Ambatovy developed an Environmental and Social Development Management Plan (PGEDS), which provides the framework to ensure that all issues identified during the ESIA are addressed through appropriate mitigation and follow-up actions. We submit annual reports to the ONE on our progress against the PGEDS, and ONE officials conduct regular site visits to review our work.

International Finance Corporation (IFC) Performance Standards – The IFC Performance Standards are an international benchmark for identifying and managing environmental and social risks; they have been adopted by many companies and organizations as a key component of their environmental and social risk management. Our agreement for US\$ 2.1 billion in project financing requires that we adhere to IFC Performance Standards on environment, labor, and social aspects for a major investment project. Our work is closely monitored and regularly reviewed by Independent Engineers sent by our lenders to ensure compliance with these standards.

Equator Principles – The Equator Principles are voluntary standards for banking institutions; they have greatly increased the attention and focus on environmental and social/community standards, accountability and responsibility. Since some of Ambatovy's lending institutions are Equator Principles Financial Institutions (EPFIs), our financing agreements require that we uphold these principles. EPFIs pledge to take into account social and environmental criteria in the large-scale projects they finance and to abstain from financing loans where the borrowers are not willing or able to comply with these criteria.

#### **Voluntary Commitments**

Voluntary Principles on Security and Human Rights (VPSHR) - Established in 2000, the VPSHR are a set of principles designed to guide companies in the extractive sector in maintaining the safety and security of their operations within an operating framework that ensures respect for human rights and fundamental freedoms. The duty to protect human rights rests with governments, but other actors in society, including businesses, have a responsibility to respect human rights. Extractive industry companies, such as Ambatovy, have a unique opportunity to have a positive impact on peace and stability, and we are continuously engaging with local, national and international entities to educate and raise awareness for the promotion of human rights. The VPSHR are embedded in Ambatovy's Security Policy and, in order to reinforce shared commitments to the Principles, Ambatovy has developed relationships and agreements with national ministries responsible for security that establish clear expectations for public security forces and Ambatovy under the VPSHR.

Extractive Industries Transparency Initiative (EITI) – The EITI is a global standard for the good governance of oil, gas and mineral resources. It seeks to address the key governance issues in the extractive sector and to foster transparency along the extractive industry value chain – from the point of extraction, to payments to the government, to production levels, to contributions to the economy and community investments. Since Madagascar became an EITI candidate country in February 2008, Ambatovy has been a strong supporter of the EITI process and an active member of the Multi-Stakeholder Group (known as the National Committee in Madagascar), comprised of representatives from government, extractive industry companies, and civil society. Each year, Ambatovy participates in Madagascar's EITI reconciliation report.

International Standard ISO 9001 - ISO 9001 certification is based on quality management principles, including strong customer focus, motivation and commitment of Senior Management, the use of a process and risk-based approach to managing the business, and continous improvement. It confirms the ability of Ambatovy to provide goods and services meeting the needs of our clients, and the conformity of our products with international market requirements. For example, it is needed to meet the requirements of the London Metal Exchange (LME). In 2014, we received our ISO certification for Refining, Analytical Services and Shipping of Nickel, Cobalt, and Ammonium Sulphate products by AFNOR (the Association Française de Normalisation), the certification and standardization body. In February 2017, our certification was renewed, under the new and more stringent 2015 version of the ISO 9001 standard; we were re-certified in 2020. Our next recertification audit is scheduled for 2023.

International Standards ISO 14001 and ISO 45001 – Ambatovy is working towards certification against the ISO standards for Environmental Management System (ISO 14001) and Occupational

Health and Safety (ISO 45001). These management systems establish an internationally recognized level of compliance in terms of quality, efficiency and safety based on the principle of cyclic, continuous improvement. Both management systems are in the implementation phase with certification expected during 2023. The scope of implementation has been defined to include the Plant, Tailings and Port facilities.

International Council on Mining and Metals (ICMM) – The ICMM is an organization established in 2001 to act as a catalyst for performance improvement in the mining and metals industry. The ICMM brings together mining and metals companies with national and regional mining associations and global commodity associations. Ambatovy endeavors to apply

relevant ICMM principles and has integrated them, where

applicable, into internal planning and strategies.

Global Industry Standard on Tailings Management (GISTM) – Established in 2020 by the International Council on Mining and Metals (ICMM), the United Nations Environment Programme (UNEP) and the Principles for Responsible Investment (PRI), the GISTM sets a precedent for the safer management of tailings facilities, towards the goal of zero harm to people and the environment. To be compliant, companies

must adopt specified measures to prevent the catastrophic failure of tailings facilities and implement best practices in planning, design, construction, operation, maintenance, monitoring, closure and post closure activities. Ambatovy is in the process of assessing our activities against the new GISTM, with the objective of gaining substantial compliance in 2023.

Responsible Minerals Initiative (RMI) – Founded in 2008 by members of the Responsible Business Alliance and the Global e-Sustainability Initiative, the Responsible Minerals Initiative (RMI) is one of the most utilized and respected resources for companies from a range of industries addressing responsible mineral sourcing issues in their supply chains. The RMI's flagship Responsible Minerals Assurance Process (RMAP) offers companies and their suppliers an independent, third-party audit that determines which smelters and refiners can be verified as having systems in place to responsibly source minerals in line with current global standards, including the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas and the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act. More than 400 companies and associations from over ten industries participate in the RMI today. Ambatovy was pleased to begin our engagement with the RMI in 2021.

### Appendix 4: Social Investment Fund (SIF)

In 2012, Ambatovy, in partnership with the Government of Madagascar, created the SIF, with a total value of US\$ 25 million to be used for social and infrastructure projects for the benefit of the local population. These projects have been identified in collaboration with our local communities and Malagasy authorities, and are managed in accordance with Ambatovy's procurement and purchasing policies.

At the end of 2022, there were 17 projects that fell under this commitment, with 13 of them completed, two ongoing and two suspended. These projects are:

- the rehabilitation of the century-old Bazary Be market in Toamasina (completed in 2014)
- the destruction of the Zeren ammonia stock stored in two old and deteriorating pressure vessels which represented a serious safety hazard for neighboring communities in Toamasina (completed in 2014)
- the establishment of a social business, an integrated poultry farm known as the Harenasoa Poultry Project (completed in 2016)
- support for JIRAMA in Toamasina, the national water and energy provider, through the donation of two generators producing 12.6 megawatts of power to support electricity supply in Toamasina (completed in 2016)
- provision of equipment and the donation of two fire trucks for the fire brigade in Toamasina (completed in 2016)
- the rehabilitation of the Technical and Vocational High School in Toamasina (completed in 2016)
- the rehabilitation of a portion of road in Ambatondrazaka to improve the road infrastructure quality in the capital of the Alaotra Mangoro Region (completed in 2016)

- the creation of a Civil Protection Unit in Toamasina to strengthen the city's emergency response capacities (completed in 2016; as part of a sub-project, security forces were provided with radios to strengthen their capacity and to improve coordination between the services)
- the construction of a new market facility in Moramanga (completed in 2017)
- the rehabilitation of the market in Brickaville (construction completed in 2017; final handover to local authorities in 2019)
- the rehabilitation of the trial court building in Moramanga (completed; final handover to local authorities in 2019)
- the provision of two ambulances for Moramanga (completed; handover in 2020)
- the rehabilitation/construction of some small-scale infrastructure in Toamasina (completed in 2021)
- support for the establishment of a mechanism for the good governance of royalties, *Tsara Tantana*, and for the accompaniment and capacity building of communes impacted by our operations (ongoing)
- the construction of a laboratory for the ONE in Toamasina so that it can independently perform analyses (ongoing)
- support for the collection and recycling of domestic waste in Moramanga through the "Moramadio" waste management project (suspended)<sup>15</sup>
- support for the collection and recycling of domestic waste in Toamasina through the "Tamadio" waste management project (suspended)

<sup>15&</sup>quot;Moramadio" is the combination of two words "Moramanga" and "madio" which is Malagasy for "clean"; similarly for "Tamadio" in the case of the waste management project in Toamasina (Tamatave).

## Appendix 5: Priority Species

These priority species are listed by the International Union for Conservation of Nature (IUCN) as endangered (EN), critically endangered (CR), evolutionary significant units (ESU) or Species of Concern (SOC), and are nationally, regionally or locally endemic to our conservation and intervention areas.

LEMURS		
NAME	STATUS	LOCATIONS
Daubentonia madagascariensis	EN	Mine footprint, Mine conservation zone, Pipeline, Ankerana, CFAM, Torotorofotsy
Indri indri	CR	Mine footprint, Mine conservation zone, Pipeline, Ankerana, CFAM, Torotorofotsy
Propithecus diadema	CR	Mine footprint, Mine conservation zone, Pipeline, Ankerana, CFAM, Torotorofotsy
Prolemur simus	CR	CFAM, Torotorofotsy
Varecia variegata	CR	Ankerana, CFAM

OTHER MAMMALS		
NAME	STATUS	LOCATIONS
Microgale jobihely	EN	Mine footprint, Mine conservation zone, CFAM

BIRDS		
NAME	STATUS	LOCATIONS
Anas melleri	EN	Mine footprint, Torotorofotsy
Ardea humbloti	EN	Mine footprint, Torotorofotsy
Ardeola idae	EN	Torotorofotsy
Sarothrura watersi	EN	Torotorofotsy
Tachybaptus pelzelnii	EN	Mine footprint
Circus macrosceles	EN	Torotorofotsy

AMPHIBIANS		
NAME	STATUS	LOCATIONS
Mantella aurantiaca	CR	Mine footprint, Mine conservation zone, Pipeline, CFAM, Torotorofotsy
Boophis boehmei	EN	Mine footprint, Mine conservation zone, Pipeline, Ankerana, CFAM, Torotofotsy
Boophis feonnyala	EN	Mine footprint
Gephyromantis eiselti	EN	Mine footprint, Mine conservation zone
Gephyromantis thelenae	EN	Mine footprint, Mine conservation zone, Ankerana
Mantidactylus albofrenatus	EN	Mine conservation zone, Ankerana
Plethodontohyla guentheri	EN	Mine conservation zone
Rhombophryne kibomena	EN	Mine footprint, Mine conservation zone, Ankerana, CFAM, Torotorofotsy
Cophyla mavomavo	EN	Mine footprint, Mine conservation zone

REPTILES		
NAME	STATUS	LOCATIONS
Brookesia ramanantsoai	EN	Mine footprint, Mine conservation zone, CFAM
Calumma furcifer	EN	Pipeline, Ankerana
Calumma gallus	EN	Pipeline, Ankerana
Phelsuma flavigularis	EN	Pipeline
Phelsuma pronki	CR	Mine footprint, Mine conservation zone
Uroplatus pietschmanni	EN	Mine footprint, Mine conservation zone
Brookesia minima	EN	Pipeline

FISH		
NAME	STATUS	LOCATIONS
Ratsirakia Mangoro	ESU	Mine footprint, Mine conservation zone
Ratsirakia Sakalava	ESU	Mine footprint, Mine conservation zone
Ratsirakia Vondronina/Rianila	ESU	Mine footprint, Mine conservation zone
Rheocles Mangoro	ESU	Mine footprint, Mine conservation zone
Rheocles Vondronina	ESU	Mine footprint, Mine conservation zone

PLANTS		
NAME	STATUS	LOCATIONS
Dicoryphe sp.nov (Non Orchid)	SOC	Mine footprint
Helichrysum sp. nov. aff. Ambondrombeense (Non Orchid)	SOC	Mine footprint
Hyperacanthus sp. nov. A ('mangoroensis' ined.) (Non Orchid)	SOC	Mine footprint
Aloe leandrii (Non Orchid)	CR	Mine footprint, Mine conservation zone
Ellipanthus razanatsimae (Non Orchid)	CR	Mine foot print
Seringia macrantha (Non Orchid)	CR	Mine footprint
Bulbophyllum uroplatoides (Orchid)	CR	Mine footprint
Macaranga racemosa (Non Orchid)	CR	Mine footprint, Mine conservation zone, Ankerana, CFAM
Angraecum letouzeyi (Orchid)	EN	Mine footprint
Aerangis monantha (Orchid)	EN	Mine footprint
Aeranthes polyanthemus (Orchid)	EN	Mine footprint
Angraecum alleizettei (Orchid)	EN	Mine footprint

Appendix 5: Priority Species

PLANTS		
NAME	STATUS	LOCATIONS
Angraecum ankeranense (Orchid)	EN	Mine footprint, Mine conservation zone
Angraecum bicallosum (Orchid)	EN	Mine footprint
Angraecum obesum (Orchid)	EN	Mine footprint
Angraecum pseudodidieri (Orchid)	EN	Mine footprint
Angraecum triangulifolium (Orchid)	EN	Mine footprint
Angraecum scroticalcar (Orchid)	EN	Mine footprint
Benthamia nigrescens (Orchid)	EN	Mine footprint
Bulbophyllum briophyllum (Orchid)	EN	Mine footprint
Bulbophyllum callosum (Orchid)	EN	Mine footprint
Bulbophyllum cardiobulbum (Orchid)	EN	Mine footprint
Bulbophyllum debile (Orchid)	EN	Mine footprint
Bulbophyllum horizontale (Orchid)	EN	Mine footprint
Bulbophyllum petrae (Orchid)	EN	Mine footprint
Bulbophyllum sulfureum (Orchid)	EN	Mine footprint, Mine conservation zone
Cryptocarya fulva (Non Orchid)	EN	Mine footprint, Mine conservation zone
Cryptocarya myristicoides/ multiflora (Non Orchid)	EN	Mine footprint, Mine conservation zone
Cryptopus paniculatus (Orchid)	EN	Mine footprint, Mine conservation zone
Cymbidiella pardalina (Orchid)	EN	Mine footprint
Cynorkis aurantiaca (Orchid)	EN	Mine footprint
Dombeya biumbellata (Non Orchid)	EN	Mine footprint, Mine conservation zone, CFAM
Gastrorchis tuberculosa (Orchid)	EN	Mine footprint
Lemurella papillosa (Orchid)	EN	Mine footprint
Liparis ambohimangana (Orchid)	EN	Mine footprint
Liparis warpuri (Orchid)	EN	Mine footprint, Mine conservation zone

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PLANTS		
NAME	STATUS	LOCATIONS
Aspidostemon conoideus (Non Orchid)	EN	Mine footprint, Mine conservation zone
Coffea liaudii (Non Orchid)	EN	Mine footprint
Cynanchum moramangense (Non Orchid)	EN	Mine footprint, Mine conservation zone
Eugenia urschiana (Non Orchid)	EN	Mine footprint, Mine conservation zone
Eugenia wilsoniana (Non Orchid)	EN	Mine footprint, Mine conservation zone
Melicope discolor (Non Orchid)	EN	Mine footprint, Mine conservation zone
Melittacanthus divaricatus (Non Orchid)	EN	Mine footprint
Pandanus analamazaotrensis (Non Orchid)	EN	Mine footprint, Mine conservation zone
Phyllanthus ambatovolana (Non Orchid)	EN	Mine footprint
Psorospermum nervosum (Non Orchid)	EN	Mine footprint, Mine conservation zone
Baroniella acuminata (Non Orchid)	EN	Mine footprint
<i>Breonia louvelii</i> (Non Orchid)	EN	Mine footprint
Canarium moramangae (Non Orchid)	EN	Mine footprint, Mine conservation zone
Croton enigmaticus (Non Orchid)	EN	Mine footprint
Croton ferricretus (Non Orchid)	EN	Mine footprint, Mine conservation zone
Croton humbertii (Non Orchid)	EN	Mine footprint, Mine conservation zone
Croton radiatus (Non Orchid)	EN	Mine footprint
Decaryochloa diadelpha (Non Orchid)	EN	Mine footprint
Gravesia tanalensis (Non Orchid)	EN	Mine footprint
Ivodea antilahimenae (Non Orchid)	EN	Mine footprint, Mine conservation zone
Korthalsella taenioides (Non Orchid)	EN	Mine footprint, Mine conservation zone
Medinilla mandrakensis (Non Orchid)	EN	Mine footprint, Mine conservation zone
Noronhia cuspidata (Non Orchid)	EN	Mine footprint
Ochna thouvenotii (Non Orchid)	EN	Mine footprint, Mine conservation zone
Tina urschii (Non Orchid)	EN	Mine footprint, Mine conservation zone

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PLANTS		
NAME	STATUS	LOCATIONS
Exacum bulbilliferum (Non Orchid)	EN	Mine footprint, Mine conservation zone
Psychotria moramangensis (Non Orchid)	EN	Mine footprint, Mine conservation zone
Psychotria trichantha (Non Orchid)	EN	Mine footprint, Mine conservation zone
Aeranthes antennophora (Orchid)	EN	Mine footprint, Mine conservation zone
Aeranthes neoperrieri (Orchid)	EN	Mine footprint, Mine conservation zone
Angraecum pinifolium (Orchid)	EN	Mine footprint
Beclardia grandiflora (Orchid)	EN	Mine footprint
Bulbophyllum amoenum (Orchid)	EN	Mine footprint
Bulbophyllum auriflorum (Orchid)	EN	Mine footprint
Bulbophyllum ciliatilabrum (Orchid)	EN	Mine footprint
Bulbophyllum discilabium (Orchid)	EN	Mine footprint, Torotorofotsy
Bulbophyllum hapalanthos (Orchid)	EN	Mine footprint
Bulbophyllum imerinense (Orchid)	EN	Mine footprint
Bulbophyllum lakatoense (Orchid)	EN	Mine footprint
Bulbophyllum obtusatum (Orchid)	EN	Mine footprint
Bulbophyllum rubiginosum (Orchid)	EN	Mine footprint
Bulbophyllum septatum (Orchid)	EN	Mine footprint
Bulbophyllum teretibulbum (Orchid)	EN	Mine footprint
Bulbophyllum toilliezae (Orchid)	EN	Mine footprint
Cynorkis henrici (Orchid)	EN	Mine footprint
Goodyera perrieri (Orchid)	EN	Mine footprint, CAZ
Goodyera rosea (Orchid)	EN	Mine footprint
Jumellea brachycentra (Orchid)	EN	Mine footprint
Jumellea peyrotii (Orchid)	EN	Mine footprint
Pyrostria analamazaotrensis (Non Orchid)	EN	Mine footprint, Mine conservation zone

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PLANTS		
NAME	STATUS	LOCATIONS
Stenandrium amoenum (Non Orchid)	EN	Mine footprint, Mine conservation zone
Syzygium lugubre (Non Orchid)	EN	Mine footprint
Syzygium onivense (Non Orchid)	EN	Mine footprint, Mine conservation zone
Scleria madagascariensis (Non Orchid)	EN	Mine footprint, Mine conservation zone
Pectineriella edmundi (Orchid)	EN	Mine footprint
Pectineriella scroticalcar (Orchid)	EN	Mine footprint
Pentopetia longipetala (Non Orchid)	EN	Mine footprint
Polystachya tsinjoarivensis (Orchid)	EN	Mine footprint
Vepris sclerophylla (Non Orchid)	EN	Mine footprint
Xylopia flexuosa (Non Orchid)	EN	Mine footprint

### **Appendix 6: Ambatovy Offset Sites**

Offsets are the final step in the mitigation hierarchy, designed to compensate for any residual impacts on biodiversity that cannot be avoided, mitigated, minimized or restored. Given the large scope of our operations and in line with BBOP guidance and IFC Performance Standard 6, Ambatovy has developed a multifaceted offset program comprising several sites and associated activities. Ambatovy's offsets include the Mine Conservation Forests, the Analamay-Mantadia Forest Corridor (CFAM), the Ankerana Forest and the Torotorofotsy Wetlands Ramsar Site. Combined, the forest land to be conserved within these areas comes to a total of almost 14,000 ha, or roughly nine times the size of the area disturbed through our mining activities.

Incorporated into the offset program is an awareness that sustainable forest management cannot be successful without the support and participation of local populations who depend on forests for their natural resources. Ambatovy promotes community wardenship and has designated peripheral forest segments specific to this use. Through awareness campaigns and livelihood development initiatives, Ambatovy seeks to decrease economic reliance on forest resources and reorient local communities towards alternative income generating activities.

#### Mine Conservation Forests

Two parcels of azonal forest overlapping the ore body have been set aside and will not be mined, despite the valuable nickel lying beneath them. The combined area of these two parcels is approximately 300 ha. During the Environmental and Social Impact Assessment, these azonal forest habitats were considered to be a rare habitat type compared to the more typical zonal forests of the Eastern Forest Corridor. In addition, we have 3,575 ha on-site of transitional and zonal forests dedicated to conservation. The conservation zone provides a buffer for receiving the fauna leaving the Mine footprint and serves as a seed bank to facilitate ecological restoration of the Mine footprint. These forests are directly managed by Ambatovy.

# Analamay-Mantadia Forest Corridor

The Analamay-Mantadia Forest Corridor (CFAM) will be part of a proposed new protected area that will ensure habitat connectivity between existing conservation areas in the region including forests around the Mine managed by Ambatovy, the Ankeniheny-Zahamena Corridor (CAZ), the Mantadia National

Park and the wetlands of Torotorofotsy. Formal protection of this corridor, spanning approximately 9,540 ha in size (of which 3,490 ha is forested land), will result in the creation of one of the largest continuous expanses of protected habitats in Madagascar (over 450,000 ha) that includes several endangered species such as the critically endangered Diademed sifaka (Propithecus diadema). Ambatovy continues to support the establishment of this larger, new protected area, which is still awaiting governmental approval. We also support patrolling activities carried out by our agents and local communities, in order to maintain threats at the minimum level, pending the Government appointment of a site manager. Of particular importance, the creation of this larger, new protected area will ensure protection of a surviving population of the critically endangered Greater bamboo lemur (Prolemur simus), one of the rarest lemurs in Madagascar and on the list of the top 25 most endangered primates of the world. Three COBAs participate in the management of the CFAM and are supported by regional DREDD offices and local NGOs in their duties.

#### **Ankerana Forest**

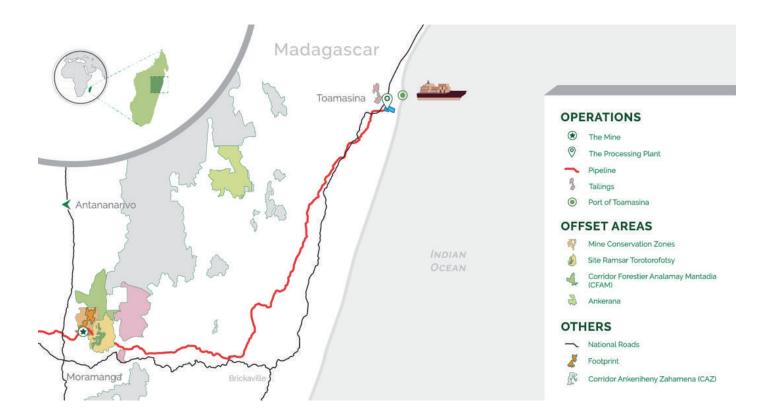
Ankerana was the first offset site identified by Ambatovy and remains the centerpiece of our Business and Biodiversity Offsets Program. It is an intact area of low-to-medium altitude forest lying 70 km to the northeast of the Mine and is linked to the Ankeniheny-Zahamena Corridor (CAZ). The area is continuously threatened by local activities, such as slash-and-burn agriculture and poaching. However, since we began our work in Ankerana in 2011, the number of documented threats has significantly declined. The site has a total surface area of approximately 8,000 ha, of which 4,879 is forested surface. Conservation International and the local NGO Vohimanana work with Ambatovy in managing the protection of the Ankerana Forest, bringing valuable expertise to our biodiversity management. Recently, conservation activities were expanded to include the forest corridor linking the Ankerana Massif to the CAZ, extending the total surface area managed by Ambatovy and our partners to over 14,740 ha. We work closely with the communities on the outskirts of this offset site through education programs and through support for the COBA organizations to ensure that our efforts to protect and maintain the delicate ecosystem continue beyond our operations. Several COBAs have been created to continue to strengthen the protection of the Ankerana Forest's resources. Income generating activities (IGAs) practiced by the surrounding communities continue to improve. These include fish farming, the cultivation of spices, coffee, and vegetable crops as well as native seedlings produced at village nurseries.

# Torotorofotsy Wetlands Ramsar Site

The Torotorofotsy Wetlands lie immediately to the east of the Mine and cover 10,064 ha of wetlands, forest and other habitats. Protected forests form 1,597 ha of this area. In 2006, Torotorofotsy was classified as a wetland of international importance under the Ramsar Convention on Wetlands. We support local community associations by reinforcing management capacity and sharing activities that help stop marsh transformation and degradation. The day-to-day management of the Torotorofotsy Wetlands is managed by Asity Madagascar (an affiliate of BirdLife International, the world leader in bird

conservation) and supported by Ambatovy. Patrols conducted by Asity enable Ambatovy to gain an understanding of the range of biodiversity within the wetlands.

The success of Torotorofotsy as an offset site and the sustainability of its protection status will only happen with the participation of the communities surrounding it. Awareness campaigns are carried out and alternative income generating activities, to alleviate the community members' pressure on forest resources, continued throughout the year.



## Appendix 7: GRI Content Index

Statement of Use	Ambatovy has reported the information cited in this GRI content index for the period from January 1, 2022 through December 31, 2022 with reference to the GRI Standards.
GRI 1 USED	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	NA

GRI Standard	Disclosure	Location	Omission
GRI 2: General Disclosures 2021	2-1 Organizational details	10, 12, 13, 16	
	2-2 Entities included in the organization's sustainability reporting	10	
	2-3 Reporting period, frequency and contact point	10	
	2-4 Restatements of information	10	
	2-5 External assurance	10	
	2-6 Activities, value chain and other business relationships	13, 14, 24, 34	
	2-7 Employees	12, 25, 57-60	
	2-8 Workers who are not employees	12, 25, 57-60	
	2-9 Governance structure and composition	16	
	2-10 Nomination and selection of the highest governance body	16	
	2-11 Chair of the highest governance body	16	
	2-12 Role of the highest governance body in overseeing the management of impacts	16	
	2-13 Delegation of responsibility for managing impacts	16	
	2-14 Role of the highest governance body in sustainability reporting	10, 16	
	2-15 Conflicts of interest	16, 20, 27, 29, 31	
	2-16 Communication of critical concerns	21-22	
	2-17 Collective knowledge of the highest governance body	16	
	2-18 Evaluation of the performance of the highest governance body	16	
	2-19 Remuneration policies		
	2-20 Process to determine remuneration		Confidentiality Constraints
	2-21 Annual total compensation ratio		Constraints
	2-22 Statement on sustainable development strategy	8, 12, 17	
	2-23 Policy commitments	16, 17, 18-20, 27-31, 63-64	
	2-24 Embedding policy commitments	16, 17, 18-20, 27-31, 63-64	
	2-25 Processes to remediate negative impacts	27, 30, 31	
	2-26 Mechanisms for seeking advice and raising concerns	27, 30, 31	
	2-27 Compliance with laws and regulations	34	
	2-28 Membership associations	70, 71-72	
	2-29 Approach to stakeholder engagement	21-25	
	2-30 Collective bargaining agreements	60	

GRI Standard	Disclosure	Location	Omission
GRI 3: Material Topics 2021	3-1 Process to determine material topics	10, 22	
	3-2 List of material topics	82	
	3-3 Management of material topics	See topic-specific disclosures	
GRI 201: Economic Performance	3-3 Management of material topics	33	
2016	201-1 Direct economic value generated and distributed	33-36	
	201-4 Financial assistance received from government		Not Applicable
GRI 203: Indirect Economic	3-3 Management of material topics	33	
Impacts 2016	203-1 Infrastructure investments and services supported	34-36	
	203-2 Significant indirect economic impacts	33, 34	
GRI 204: Procurement Practices	3-3 Management of material topics	33, 34	
2016	204-1 Proportion of spending on local suppliers	34	
GRI 205: Anti-corruption 2016	3-3 Management of material topics	27, 29	
	205-1 Operations assessed for risks related to corruption	29, 35	
	205-2 Communication and training about anti- corruption policies and procedures	29	
GRI 303: Water and Effluents	3-3 Management of material topics	54	
2018	303-3 Water withdrawal	54	
	303-4 Water discharge	53, 54	
	303-5 Water consumption	54	
GRI 304: Biodiversity 2016	3-3 Management of material topics	45-47	
	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	49-50	
	304-2 Significant impacts of activities, products and services on biodiversity	45-55	
	304-3 Habitats protected or restored	49-50	
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	74-79	
GRI 305: Emissions 2016	3-3 Management of material topics	51	
	305-1 Direct (Scope 1) GHG emissions	54	
GRI 306: Waste 2020	3-3 Management of material topics	51	
	306-4 Waste diverted from disposal	52-54	
	306-5 Waste directed to disposal	52-54	
GRI 401: Employment 2016	3-3 Management of material topics	57-58	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	57	
GRI 403: Occupational Health	3-3 Management of material topics	61	
and Safety 2018	403-5 Worker training on occupational health and safety	59, 61-62	
	403-9 Work-related injuries	61	
GRI 404: Training and Education	3-3 Management of material topics	57-58, 59	
2016	404-2 Programs for upgrading employee skills and transition assistance programs	59-60	
	404-3 Percentage of employees receiving regular performance and career development reviews	57-60	

GRI Standard	Disclosure	Location	Omission
GRI 408: Child Labor 2016	3-3 Management of material topics	27, 29-30	
	408-1 Operations and suppliers at significant risk for incidents of child labor	29	
GRI 409: Forced or Compulsory	3-3 Management of material topics	27	
Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	29	
GRI 413: Local Communities 2016	3-3 Management of material topics	37	
	413-1 Operations with local community engagement, impact assessments, and development programs	37-44	
	413-2 Operations with significant actual and potential negative impacts on local communities	37	
GRI 416: Customer Health and Safety 2016	3-3 Management of material topics	63-64	
	416-1 Assessment of the health and safety impacts of product and service categories	64-65	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	65	

## Appendix 8: Additional References

Please consult the following websites as additional references for information included in this report.			
Ambatovy	www.ambatovy.com		
Business and Biodiversity Offsets Program	bbop.forest-trends.org		
Children's Rights and Business Principles	unicef.org/csr/		
Cobalt Institute	www.cobaltinstitute.org		
Equator Principles	http://equator-principles.com		
Extractive Industries Transparency Initiative Madagascar	https://eiti.org/Madagascar		
Global Industry Standard on Tailings Management	https://globaltailingsreview.org/global-industry-standard/		
Global Reporting Initiative	https://www.globalreporting.org		
International Council on Mining and Metals	www.icmm.com		
International Finance Corporation's Performance Standards	www.ifc.org/performancestandards		
International Organization for Standardization (ISO)	https://www.iso.org		
IUCN Red List of Threatened Species	http://www.iucnredlist.org/		
London Metal Exchange, Responsible Sourcing	https://www.lme.com/en/company/responsibility/responsible-sourcing		
Madagascar's National Office for the Environment (ONE)	https://www.pnae.mg/		
Nickel Institute	www.nickelinstitute.org		
OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (CAHRAs)	https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance- Minerals-Edition3.pdf		
Responsible Minerals Initiative, Responsible Minerals Assurance Process	https://www.responsiblemineralsinitiative.org/responsibleminerals-assurance-process/		
Sustainable Development Goals	https://www.un.org/sustainabledevelopment/sustainabledevelopment-goals/undp.org/publications/mapping-mining-sdgs-atlas		
Voluntary Principles on Security and Human Rights	www.voluntaryprinciples.org		

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