



***PT Archi Indonesia***  
***Environmental, Social and Governance***  
***(ESG) Assessment***

Report

Submitted by:

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# **1. Introduction**

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The Toka Tindung Gold Mine, located near the City of Manado, North Sulawesi Province, is a jointly held gold mining operation by two Indonesian operating companies, PT Meares Soputan Mining (PT MSM) and PT Tambang Tondano Nusajaya (PT TTN), which hold the two Contracts of Work (CoW) that cover the mining and exploration areas. Both operating companies are wholly-owned by PT Archi Indonesia (PTAI).

PT Lorax Indonesia (Lorax) was commissioned by PTAI to conduct an independent assessment of the Environmental, Social and Governance (ESG) performance at the Toka Tindung Gold Mine operations and associated governance practices.

Lorax has conducted numerous ESG evaluations and due diligences for mining operations in Indonesia for mining companies and Equator Principles Financial Institutions (EPFIs) such as the International Finance Corporation (IFC), HSBC, Standard Chartered and Société Générale. Lorax's corporate profile and bibliography for the Lead Assessor of this evaluation (Dr. Ali Sahami) are provided in Chapter 2. The Lead Assessor is familiar with the Toka Tindung operations, having completed several independent ESG audits of the mining operations over the past 5 years.

Environmental protection, social equity and good governance are the 3 pillars of a social licence to operate. High performance in ESG is considered by all stakeholders to provide positive economic and social impacts for local communities, reduce business risks and assure business continuity for mining operations. In addition, the majority of EPFIs evaluate ESG performance as a condition for project financing.

This assessment adopted the framework of the Precious Metals Scorecard developed by Credit Suisse, with some modifications necessary for its application to PTAI. This approach is based on a combination of quantitative (specified metrics) and qualitative evaluations of the company's ESG performance. ESG scoring described in this report is based on a general assessment of the company's compliance with international best practice and direct comparison of metrics and ESG performance of PTAI against other International and Indonesian publicly-listed metal mining companies operating in Indonesia.

The following chapters describe the ESG assessment approach (Chapter 2), the assessment findings (Chapter 3) and a summary of the assessment results as well as high level recommendations to address assessment elements that were scored as "Improvement Opportunity" (Chapter 4).

## **2. Assessment Methodology & Assessor**

### **2.1. Assessment Methodology**

This assessment adopted the ESG evaluation metrics developed by Credit Suisse (2020 Precious Metal ESG Scorecard, 28 October 2020). The assessment utilized various metrics for evaluating ESG performance, which in some cases are quantitative, whereas for others, qualitative evaluations were conducted. The evaluation compares PTAI's ESG performance against mining industry 'best practice' as implemented by publicly-listed Indonesian mining companies as well as International mining companies operating in Indonesia.

The assessment categories for environmental, social and governance and associated metrics are based on those developed by Credit Suisse for their ESG scorecard publication, with some modifications, as specified below.

Environmental components assessed were:

- Environmental Management System (EMS) and Competency – this component has been added for the present assessment as development and implementation of an EMS and competency of environmental and social personnel is central to best international practice in ESG;
- Land Use and Biodiversity;
- Energy Use and GHG Emissions;
- Water Use;
- Tailings Dam and other Waste Management; and,
- Mine Closure and Disclosure.

Social components assessed were:

- Safety Management and Employee Education;
- Community Relations;
- Local Employment and Procurement; and,
- Employee Relations, Diversity and Inclusion.

Excluded from the present assessment is Credit's Suisse's social component relating to Country Risk Analyses and Political Environment, as all comparisons have been completed against other mining companies operating in Indonesia for the present assessment.

Governance components assessed were:

- Commitment to ESG Reporting;

- Board of Directors Composition;
- Management Compensation; and,
- Anti-corruption Policy.

The assessment for the above components was both quantitative and qualitative, depending on availability of data and ancillary information from the Toka Tindung operations as well as other mine sites in Indonesia. Qualitative evaluations are based on Lorax’s professional experience in providing ESG consulting services to virtually all International and publicly-listed Indonesian metal mining companies operating in Indonesia over the past 20 years.

Lorax specializes in ESG assessments for the metal mining industry. In the past, Lorax has conducted several independent ESG assessments for PT Archi Indonesia with Dr. Sahami, the Lead Assessor, having visited the Toka Tindung Mine on 3 occasions over the past 5 years and is therefore very familiar with environmental and social aspects of the operation.

The ESG evaluation was conducted to provide a rating of “Outperform”, “Exceed” or “Improvement Opportunity” to each of the above-listed ESG categories. Scoring criteria adopted for the present assessment are summarized in Table 2-1

**Table 2-1 ESG Scoring Criteria**

Score	Criteria
Outperform	Comply with Applicable Indonesian Laws and Regulations Comply with Best International Practice Top 20 Percentile of Mining Companies in Indonesia
Exceed	Comply with Applicable Indonesian Laws and Regulations Partially Comply with Best International Practice Top 50-80 Percentile of Mining Companies in Indonesia
Improvement Opportunity	Comply with Applicable Indonesian Laws and Regulations Bottom 50 Percentile of Mining Companies in Indonesia

For components that are rated as Improvement Opportunity, recommendations for corrective actions to bring those components into Exceed/Outperform status are provided in Chapter 4.

Statements in this report regarding regulatory compliance are general and only applicable to specific metrics covered in this assessment. A detailed legal audit of environmental regulatory compliance and environmental-related permits was outside of the scope of the present assessment.

## **2.2. Corporate Profile and Lead Assessor Bibliography**

### **Corporate Profile**

Lorax provides environmental, social, geochemical, oceanographic and project management services to the mining industry. Our corporate goal is to provide the highest caliber environmental services in the most cost-effective and timely manner and, whenever possible, implement innovative techniques and approaches to addressing environmental issues faced by our clients. Lorax offers a team of highly qualified and experienced professionals capable of conducting and managing environmental programs during all phases of resource and infrastructure development projects. Lorax's expertise has been utilized on projects in Canada, U.S.A., Mexico, Perú, Chile, Bolivia, Colombia, Brazil, Argentina, Suriname, Guyana, Panama, Venezuela, Costa Rica, Honduras, Dominican Republic, Philippines, Indonesia, Pakistan, United Arab Emirates, Papua New Guinea, Mali, Tanzania, Eritrea, Sierra Leone, Kyrgyzstan, Turkey, Sweden, Russia and Australia.

Previous projects include prefeasibility and feasibility studies, environmental and social baseline studies in support of marine and terrestrial Environmental & Social Impact Assessments (ESIA) for project permitting; Ecological Risk Assessments (ERA); development of waste and water management strategies; HSE and risk assessments; environmental and social mitigation projects; operational and post-closure environmental and social monitoring for compliance; the design and implementation of innovative water treatment systems; due diligence social and environmental audits; stakeholder engagement programs; community development projects; and, the development of environmental and social closure plans. Due to involvement by international lending agencies, in addition to being compliant with all host country laws and regulations, several of Lorax's large resource development projects have been WBG/IFC compliant.

Lorax provides these services to some of the world's major mining companies including: Newmont Mining Corporation, Barrick Gold Corporation, Newcrest Mining, Noranda Minerals Inc., Vale, BHP-Billiton, Cameco, Iron Ore Company of Canada, IAMGold, Quadra Mining, Teck Cominco, Boliden, Thompson Creek Mining Company, Goldcorp, Rio Tinto, Pan American Silver, Silver Standard Resources, Freeport M<sup>c</sup>MoRan, SNC Lavalin, Tethyan Copper Company, Xstrata, Homestake Mining and Western Canadian Coal.

## Lead Assessor

Dr. Ali Sahami (President Director, PT Lorax Indonesia) was the lead author for the PTAI ESG assessment. Short biography for Dr. Sahami is provided below.

**Ali Sahami, B.Sc. Geology (Keele University); M.Sc. Geochemistry (Leeds University); Ph.D. Geochemistry (University College London)**

*Areas of Expertise:* Environmental & social baseline and impact assessment  
Mine closure & reclamation  
ESG auditing and due diligence  
Development of environmental & social management systems  
Environmental geochemistry  
Mine permitting

Dr. Sahami is the President Director of PT Lorax Indonesia and a senior environmental scientist, with over 30 years of consulting, industry and research experience in a wide range of terrestrial and aquatic environmental and social studies throughout Canada, USA, South America, Africa, Middle East and SE Asia, including over 25 years of experience on projects in Indonesia. His work on projects in Indonesia was both as Senior Environmental Advisor for Newmont Mining Corporation (2001-2007) and as an ESG consultant to numerous mining companies (1995-2000 and 2008-2021). He has conducted and managed several large scale environmental and social studies associated with mining projects, including baseline characterization, impact and risk assessments, mine closure and reclamation, permitting, ESG audits, waste and water management planning, environmental effects monitoring and zone of impact delineation projects. Dr. Sahami is thoroughly familiar with international environmental conventions, International best practice in mining, laws, regulations and standards including application of Equator Principles, World Bank Group's HSE Guidelines and the International Finance Corporation's Environmental and Social Performance Standards to resource development projects. The following are selected projects on which Dr. Sahami has been the lead environmental professional and advisor:

- Newmont Minahasa Raya – Minahasa Mine
- Newmont Nusa Tenggara – Batu Hijau Mine
- Newmont Horas Nauli – Martabe Mine
- Freeport McMoran – Grasberg Mine
- Newcrest Halmahera Minerals – Gosowong Mine
- Meares Soputan Mining – Toka Tindung Mine
- Vale Indonesia – Sorowako Mine
- Merdeka Copper Gold – Pani Project

- Sumbawa Timur Mining – Hu’u Project
- Bumi Suksesindo - Tujuh Bukit Mine
- Batutua – Wetar Mine
- J Resources – Doup Project
- Pani Bersama Emas – Pani Mine
- Masmindo Dwi Area – Awak Mas Mine
- Kalimantan Surya Kencana – BKM Project
- Sorikmas Mining – Sihayo Project
- Batu Tua Waykanan Minerals – Ojolali Project
- Emas Mineral Murni - Butong Mine

## 3. Assessment Results

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The environmental, social and governance assessment findings and associated scorecards for PTAI are presented in sections 3.1, 3.2 and 3.3, respectively.

### 3.1. Environmental

The environmental components and their relevance to mining operations are summarized below.

**Environmental Management System (EMS) and Competency** – A systematic EMS and competency of environmental personnel are central to good practice in mining as it provides a documented process for assessing impacts and risks and in implementing corrective action plans to eliminate, and where not possible, to mitigate identified environmental impacts and risks. This component was assessed qualitatively.

**Land Use and Biodiversity** – Mining results in disturbance of land and potential impacts on terrestrial and aquatic biodiversity. Biodiversity conservation is particularly important in Indonesia given the diversity of flora and fauna and pressure on habitats from development. This component was assessed qualitatively.

**Energy Use and GHG Emissions** – Energy efficiency and reduction of GHG emissions is a key consideration for mining operations in order to reduce potential impacts to human health and contribution to global warming. This component was assessed quantitatively and qualitatively.

**Water Use** – Mining utilizes large volumes of water and therefore its extraction from local aquatic systems (surface and groundwater) can result in both environmental and social impacts. Water use efficiency and water conservation is therefore an important component for any environmental assessment. This component was assessed quantitatively.

**Tailings Dam and other Waste Management** – Mining generates large amounts of waste in the form of mine tailings and overburden (waste rock). Recent failures of tailings dams have resulted in renewed focus on engineered facilities for the safe storage of tailings, which is now a focus for all mining operations. This component was assessed qualitatively and quantitatively (waste generated/oz produced).

**Mine Closure and Disclosure** – Designing for mine closure prior to start of mining operations is a recent paradigm in mining which focusses on building closure considerations through all phases of a mining project. This component was assessed both qualitatively and quantitatively (percentage of disturbed land reclaimed).

A summary of the assessment findings in the form of the environmental scorecard is provided in Table 3-1 and further elaboration is provided in the following sections.



**Table 3-1 Environmental Scorecard**

Category	Elements	Component Score	Overall Score
<b>Environmental</b>			
Environmental Management System (EMS) & Technical Competency	<ul style="list-style-type: none"> <li>- Developed and communicated Environmental Policy</li> <li>- EMS (ISO 14001:2015) developed and continuously implemented</li> <li>- EMS implementation documented through regular meetings, corrective action plans and follow up monitoring towards continual improvement of environmental performance</li> <li>- Regular internal (most recent: May 2020) and external (most recent: October 2020 by Lloyds Register) of EMS</li> <li>- Regular Environmental Risk Assessments conducted</li> <li>- Appropriate environmental department structure and reporting lines to Senior Management (Environmental Manager direct report to President Director, who is also an Environmental Engineer by profession)</li> <li>- Appropriate competency of environmental personnel for respective positions</li> <li>- Developed Cyanide Management Plan (referencing the International Cyanide Code) implemented and regular inspections/audits conducted</li> <li>- Recent awards recognizing sound environmental management include: AMITAMA Gold Award (2013-2017); UTAMA (2017 &amp; 2019); PRATAMA Bronze Award; and Blue PROPER rating from the Ministry of Environment &amp; Forestry (2012-2020)</li> </ul>	<b>OUTPERFORM</b>	<b>EXCEED</b>
Land Use & Biodiversity	<ul style="list-style-type: none"> <li>- Progressive reclamation (best practice) being implemented on waste rock dumps and tailings storage facility (TSF) embankment</li> <li>- Senior Biodiversity and Reclamation Supervisor Position in Environmental Department</li> <li>- Biodiversity Policy developed and communicated</li> <li>- Biodiversity Action Plan developed and implemented</li> <li>- Regular terrestrial and aquatic biodiversity monitoring</li> <li>- Focussed monitoring and management of endangered (IUCN Red List &amp; Indonesian Conservation Regulations) species</li> <li>- Environmental incidents documented, reported (7 in the period 2015-2020), but not classified as 'Reportable' by the Regulator, and corrective actions/clean up implemented (Residual Risk Category: 3 insignificant and 4 minor)</li> </ul>	<b>OUTPERFORM</b>	<b>EXCEED</b>

Category	Elements	Component Score	Overall Score
Energy Use & Green House Gases (GHG) Emissions	<ul style="list-style-type: none"> <li>- Electricity generated by diesel generators and purchased from the national grid (PLN)</li> <li>- Total electricity used (2016-2020): 519,884 MWh, consisting of 396,510 MWh (76%) from diesel gensets and 123,374 MWh (24%) from PLN</li> <li>- Total electricity used/oz produced (2016-2020): 0.54 MWh/oz gold produced</li> <li>- Only minor energy from renewable sources, e.g., remote lighting, pumping etc.</li> <li>- Partial (gensets only) GHG emissions inventory</li> <li>- For the emissions (CO<sub>2</sub>, CH<sub>4</sub> &amp; N<sub>2</sub>O) recorded, there have been reductions over the past 4 years consisting of an 11% reduction in 2017, 61% reduction in 2018, 119% reduction in 2019 and 8% reduction in 2020, however there are no documented GHG emissions reduction plan or numerical targets</li> </ul>	<b>IMPROVEMENT OPPORTUNITY</b>	
Water Use	<ul style="list-style-type: none"> <li>- Total water used for processing operations (2016-2020): 17.3 Mm<sup>3</sup></li> <li>- Water extracted (Toka Pit and river): 4.75 Mm<sup>3</sup></li> <li>- Water recycled: 12.55 Mm<sup>3</sup></li> <li>- 73% of total water used was recycled (from TSF) for the period 2016-2020</li> <li>- Total water use/oz: 94 m<sup>3</sup>/oz gold produced</li> </ul>	<b>EXCEED</b>	
Tailings and Waste Management	<ul style="list-style-type: none"> <li>- TSF dam is downstream construction which is the most physically stable dam design</li> <li>- TSF dam design based on ANCOLD guidelines and permitted by Dam Safety Committee at Ministry of Public Works</li> <li>- Life of mine (2011-2020) total tailings generated (t)/oz produced: 11.6</li> <li>- Water quality of tailings liquid fraction discharged to TSF compliant with Tailings Permit</li> <li>- Annual external inspection/audit (most recent 2019) by Design Engineer</li> <li>- Engineered waste rock dumps with management (encapsulation) of potential acid generating waste considered</li> <li>- Life of mine (2011-2020) total overburden excavated (t)/oz produced: 43</li> </ul>	<b>EXCEED</b>	
Mine Closure Plan	<ul style="list-style-type: none"> <li>- Stakeholder consultation conducted in support of mine closure</li> <li>- Post-mine land use and closure success criteria developed</li> <li>- Of the 799 ha disturbed land area, 731 ha representing all available land (91% of disturbed land) at closure will be reclaimed with the remaining 68 ha (9% of disturbed land) representing open pits, that will form pit lakes post-closure</li> <li>- Government of Indonesia approved Mine Closure Plan and 5-Year Reclamation Plan</li> <li>- Mine closure and reclamation bonds/guarantees posted with government agencies</li> </ul>	<b>EXCEED</b>	

### *EMS and Competency*

PTAI has developed and communicated an Environmental Policy and has adopted the ISO14001 EMS system with additional INX software support for regulatory and risk compliance, representing best practice. The management system is supported by regular internal and external audits and highly competent environmental professionals and an environmental department organization structure, the manager for which reports to top management (President Director, who is also an Environmental Engineer). The efficacy of the environmental management system is highlighted by several environmental and conservation awards (full list provided in Attachment A) being bestowed on PTAI by government agencies (i.e., Ministry of Energy and Mineral resources and Ministry of Environment and Forestry) responsible for environmental supervision of the Toka Tindung Mine and hence this component has been scored as Outperform.

### *Land Use and Biodiversity*

PTAI has developed and communicated a Biodiversity Policy and Action Plan supported by regular monitoring and reporting of biodiversity with a focus on endangered species (as specified by the International Union for Conservation of Nature's Red List and Indonesian Conservation Regulations). Progressive reclamation of land is being conducted to restore the terrestrial and aquatic biodiversity at the earliest opportunity consistent with best practice. There is also strong institutional support as demonstrated by a Senior Supervisor for Biodiversity and Reclamation position and regular reporting of environmental accidents and associated mitigation measures. The impacts associated with biodiversity are limited to the planned and permitted footprint of the Toka Tindung site, with no impacts on the surrounding high value forest ecosystems outside of the mining area arising from the mine's operations. This component has been scored as Outperform.

### *Energy Use and GHG Emissions*

During the period 2016-2020, of the 519,884 MWh electricity consumed, 76% was generated by diesel generators and 24% was purchased from the national grid (PT PLN). In North Sulawesi, PLN power generation is from a mix fossil fuels and renewables (i.e., hydro- and geothermal power) sources. All diesel purchased on site is the 'national mix' using 30% Biodiesel additions and PTAI have a program in place to electrify all of the major diesel pumps over the 2019-2021 period. PTAI has entered a JV contract with Ormat to investigate the feasibility of harnessing geothermal waters on its property to generate electricity, however, the project is in the early exploration phase.

The company records emissions from the gensets but does not have a complete GHG inventory as emissions from movable sources (e.g., mining fleet, light vehicles, etc.) are not documented. Electricity used 0.54 MWh/oz gold is higher than the average from

other mines in Indonesia (i.e., is in the lower 50 percentile) and there is an incomplete GHG inventory and no documented GHG reduction plan. This component has been scored as Improvement Opportunity.

#### *Water Use*

Total water use for the Toka Tindung mining operations was 17.3 Mm<sup>3</sup> for the years 2016-2020, equating to 94 m<sup>3</sup>/oz of gold produced. Over 70% of this water was recycled from within the mine water management system (TSF), with less than 30% being extracted from surface waters (rainwater captured in Toka Pit and river water), demonstrating sound water conservation strategies and minimizing impacts on the quantity of water resources in the local environment. This component has been scored as Exceed.

#### *Tailings Dam and other Waste Management*

The Toka Tindung TSF is a downstream construction, representing the most physically stable type of tailings dam and overburden is stored in engineered waste rock dumps. The dam design is based on ANCOLD guidelines and permitted by Dam Safety Committee at Ministry of Public Works. The TSF dam undergoes regular inspections by the Design Engineer and its operations are compliant with the PTAI's Tailings Permit, issued by the Ministry of Environment and Forestry. Life of mine (2011-2020) total tailings generated (t)/oz gold produced is 11.6, typical for this scale of mining operations. This component has been scored as Exceed.

#### *Mine Closure and Disclosure*

Of the total land disturbed during mining operations (799 ha), 731 ha will be left at closure and will be rehabilitated (representing 91% of the disturbed land), as 68 ha (9%) will represent the open pits (which cannot be reclaimed to their initial landform) and will be managed as pit lakes in the post-closure period. This component has been scored as Exceed.

### **3.2. Social**

The social components and their relevance to mining operations are summarized below.

**Safety Management and Employee Education** – The use of large and potentially dangerous equipment at remote locations makes health and safety of mine employees and contractors a key focus for the mining industry. A poor health and safety record results in an undesirable work environment, jeopardizes the social licence to operate and in extreme cases may result in shutdown of mining operations. The current paradigm in the mining industry is that all accidents are preventable with many miners setting a goal of zero harm associated with their operations. Health and safety management systems and appropriate employee and contractor education are central to

best practice in mining. This component was assessed both qualitatively and quantitatively (total recordable injury frequency rate).

**Community Relations** – Good relations with local communities are a key component of successful and sustainable mining operations. Good relations are developed through regular consultations, transparency, documented community grievance mechanisms and focussed Community Development and Enhancement (CDE) programs that have been developed in close consultation with local communities in order to ensure the programs address their needs and aspirations. Poor community relations can result in loss of social licence to operate and can lead to disruption to the mining operations. This component was assessed both qualitatively and quantitatively (CDE expenditure as percentage of revenue).

**Local Employment and Procurement** – An important aspect of community relations is direct benefits to local communities as prioritization of benefits to local communities will result in economic and human capacity growth in rural communities which are typically underdeveloped and therefore need it the most. Fair and transparent recruitment as well as procurement processes prioritizing local communities ensure an inclusive approach that directly benefits those who have been most impacted by mining operations and is perhaps the most important pillar supporting the social licence to operate. This component was assessed both qualitatively and quantitatively (percentage of local employment and procurement).

**Employee Relations, Diversity and Inclusion** – This assessment component is focussed on a fair and non-discriminatory human resources policy which encourages diversity and freedom of association in regards to labour unions and collective bargaining. Key metrics used in this assessment are number of women employed in management positions, employee turnover and unionization. This component was assessed both qualitatively and quantitatively (percentage of females, employee turnover and unionization).

A summary of the assessment findings in the form of the social scorecard is provided in Table 3-2 and further elaboration is provided in the following sections.

**Table 3-2 Social Scorecard**

Category	Elements	Component Score	Overall Score
<i>Social</i>			
Safety Management and Employee Education	<ul style="list-style-type: none"> <li>- Total Recordable Injury Frequency Rate (fatality, lost time injury &amp; any other injury requiring treatment by medical professional)/1,000,000 hours worked is 2.93</li> <li>- Health and safety policy developed and communicated</li> <li>- Occupational Health and Safety Management System (OHSMS): “<b>Toka Safe</b>” complies with the Indonesian Health and Safety Management System for Mining and ISO 45001</li> <li>- Pro-active Covid-19 management protocols implemented</li> <li>- Positive Attitude Safety System (“<b>PASS</b>”) is adopted</li> <li>- Incident Causal Analysis Method (“<b>ICAM</b>”) for safety incident management is used</li> <li>- Health Safety Environment Security (“<b>HSES</b>”) general induction for all employees, contractors and visitors is conducted</li> <li>- Emergency Response System on site has been developed</li> <li>- Extensive health and safety training programs and contractor and visitor inductions implemented with approximately 1,600 training events and 9,600 trainees/inductees in 2020</li> </ul>	<b>EXCEED</b>	<b>OUTPERFORM</b>
Community Relations	<ul style="list-style-type: none"> <li>- Total Community Development &amp; Enhancement (CDE) investment (2018-2020) of \$5.4 million</li> <li>- Annual CDE investment as % of revenue (2018-2020) was at 0.48%</li> <li>- Community social study completed to focus CDE programs based on the needs of the local communities</li> <li>- Extensive CDE programs implemented in infrastructure (buildings, roads, clean water, household electricity etc.), education (scholarships and teachers training), healthcare (including COVID-19 control), and economic development (e.g., apprenticeships, animal husbandry, agriculture, small enterprises, etc.) with total number of local beneficiaries of approximately 35,000</li> <li>- Community grievance mechanism standard operating procedure developed and implemented</li> </ul>	<b>OUTPERFORM</b>	<b>OUTPERFORM</b>
Local Employment & Procurement	<ul style="list-style-type: none"> <li>- As of December 2020, of the 689 total number of employees, 323 (47%) are from local communities in North Minahasa Regency, 259 (37.5%) are from other areas of the Province of North Sulawesi, 95 (14%) are from other parts of Indonesia and 12 (1.5%) are foreign workers/expatriate employees.</li> <li>- 15 of the mine’s major contractors/suppliers are from the project area, which represented 40% of contractor/supplier costs in 2020 demonstrating a strong priority for local suppliers/contractors</li> </ul>	<b>OUTPERFORM</b>	<b>OUTPERFORM</b>
Employee Relations and Diversity	<ul style="list-style-type: none"> <li>- Of all persons in management positions, 4% are women</li> <li>- HR policy referencing fair treatment and non-discrimination developed and communicated</li> <li>- 69% of employees are unionized</li> <li>- Employee turnover rate of 6% in 2020</li> </ul>	<b>OUTPERFORM</b>	<b>OUTPERFORM</b>

### *Safety Management and Employee Education*

PTAI has developed and communicated a Health and Safety Policy and in its support has adopted the ISO 45001 safety management system as well as an Occupational Health and Safety Management System (OHSMS), entitled “**Toka Safe**” for full compliance with the Indonesian Health and Safety Management System requirements. Additional procedures adopted to improve health and safety performance are the Positive Attitude Safety System (“**PASS**”) and the Incident Causal Analysis Method (“**ICAM**”) for safety incident management. Extensive health and safety training programs and contractor and visitor inductions implemented with approximately 1,600 training events and 9,600 trainees/inductees in 2020. Total recordable injury frequency rate for the full duration of operations (2011-2020) is 2.9 for 1,000,000 hours worked. This component has been scored as Exceed.

### *Community Relations*

Total Community Development & Enhancement (CDE) investment (2018-2020) of \$5.4 million, which represents 0.48% of revenue for the same period. An extensive social study was completed in 2016 covering all local villages to further develop CDE programs based on the needs of the local communities. Extensive CDE programs have been implemented in supporting local infrastructure (buildings, roads, clean water, etc.), education (scholarships and teachers training), healthcare (including COVID-19 control), and economic development (e.g., apprenticeships, animal husbandry, agriculture, small enterprises, etc.). Approximately 1,800 local residents directly benefit from economic development programs with total number of local beneficiaries from all CDE programs numbering approximately 35,000. A community grievance mechanism standard operating procedure is utilized by the Company to register and resolve complaints from local communities. This component has been scored as Outperform.

### *Local Employment and Procurement*

Of the total number of people employed by the Toka Tindung mining operations (689), 323 (47%) are from local communities of North Minahasa Regency, 259 (37.5%) are from other areas of the Province of North Sulawesi, 95 (14%) are from other parts of Indonesia and 12 (1.5%) are expatriates; this demonstrates a high level of commitment to the hiring and training of local residents. Some 15 of the mine’s major contractors/suppliers are from the project area, which represented 40% of contractor/supplier costs in 2020 demonstrating a strong priority placed on sourcing supplies and services from local sources. This Component has been scored as Outperform.

### *Employee Relations, Diversity and Inclusion*

Women occupy 4% of management positions at PTAI. An HR policy referencing fair treatment and non-discrimination has been developed and communicated to all employees. Some 69% of employees are unionized, demonstrating the Company's support for free association and collective bargaining. Employee turnover rate of 6% in 2020 is relatively low for mining operations in Indonesia. This Component has been scored as Outperform.

### **3.3. Governance**

The governance components and their relevance to mining operations are summarized below.

**Commitment to ESG Reporting** – Consistent annual ESG public reporting demonstrates the priority placed on ESG performance by a company and its transparency in reporting these issues (both positive and negative).

**Board of Directors Composition** - The Board of Directors and Board of Commissionaires are responsible for directing financial, corporate governance, corporate social responsibility, and corporate ethics to meet the expectation of all stakeholders. Diverse, independent, and experienced Directors and Commissionaires are therefore desirable by all stakeholders to navigate the company through these critical issues.

**Management Compensation** – Appropriate levels of compensation for Directors and Commissionaires of a company will ensure high quality senior professions overseeing the governance of a company. The metric used in this assessment is the base remuneration (excluding pension and benefits) of PTAI Directors and Commissionaires.

**Anti-corruption Policy** – Clear policies to prevent corruption and bribery is evidence of good governance, specifically in jurisdictions where corruption is a major obstacle to businesses.

A summary of the assessment findings in the form of the governance scorecard is provided in Table 3-3 and further elaboration is provided in the following sections.



**Table 3-3 Governance Scorecard**

Category	Elements	Component Score	Overall Score
<b>Governance</b>			
ESG Reporting	- No regular public ESG reporting	<b>IMPROVEMENT OPPORTUNITY</b>	<b>EXCEED</b>
Board of Directors	- Total of 5 Directors and 4 Commissionaires - Board members are highly senior and competent professionals from diverse financial, technical, environmental and management backgrounds - Several Board sub-committees (expenditure, investment, human capital, audit and ethics) have been established to support the Boards on key governance issues - Within the organisation structure Internal Auditors are employed reporting directly to the Board of Directors - External Auditors are also utilised reporting into the Board of Commissionaires	<b>EXCEED</b>	
Management Compensation	- Total annual compensation for all Directors and Commissionaires in 2020 was US\$2,957,529 - Average (not actual) annual compensation for the 9 board members is approximately US\$329,000 - Total compensation of Directors and Commissionaires is approximately 15% of total annual G&A costs	<b>OVERPERFORM</b>	
Anti-Corruption Policy	- Anti-corruption & Anti-bribery Policy developed and communicated - Anti-corruption & Anti-bribery training programs conducted - No Anti-corruption audits conducted to date	<b>EXCEED</b>	

*Commitment to ESG Reporting*

PTAI does not report on ESG metrics and performance on a regular basis to the public and therefore this element has been scored as Improvement Opportunity.

*Board of Directors Composition*

The Directors and Commissionaires of PTAI are highly respected professionals from a diverse range of backgrounds covering technical, financial, environmental and management competencies. Several independent Board sub-committees, which include an Expenditure Committee, Investment Committee, Human Capital Committee, Audit Committee and Ethics Committee have been established to support the Boards. This component has been scored as Exceed.

*Management Compensation*

Remuneration for board members is in the top 20 percentile of mining companies operating in Indonesia, is approximately 15% of the General and Administrative (G&A) costs and therefore this component has been scored as Overperform.

*Anti-corruption Policy*

An anti-corruption & anti-bribery policy had been developed, communicated and supported by anti-corruption & anti-bribery training programs. There have been no anti-corruption & anti-bribery audits to date. This component has been scored as Exceed.

## 4. Summary and Recommendations

A summary of the ESG assessment and high-level recommendations to address components that scored as Improvement Opportunity are provided in Sections 4.1 and 4.2, respectively.

### 4.1. Summary

The ESG scorecard summary is provided in Table 4-1.

**Table 4-1 ESG Summary Scorecard**

Category	Component Score	Overall Score
<b>Environmental</b>		
Environmental Management System (EMS) & Technical Competency	OUTPERFORM	EXCEED
Land Use & Biodiversity	OUTPERFORM	
Energy Use & Green House Gases (GHG) Emissions	IMPROVEMENT OPPORTUNITY	
Water Use	EXCEED	
Tailings and Waste Management	EXCEED	
Mine Closure Plan	EXCEED	
<b>Social</b>		
Safety Management and Employee Education	EXCEED	OUTPERFORM
Community Relations	OUTPERFORM	
Local Employment & Procurement	OUTPERFORM	
Employee Relations and Diversity	OUTPERFORM	
<b>Governance</b>		
ESG Reporting	IMPROVEMENT OPPORTUNITY	EXCEED
Board of Directors	EXCEED	
Management Compensation	OVERPERFORM	
Anti-Corruption Policy	EXCEED	

The environmental components of EMS and competency and land use and biodiversity were scored Outperform, water use, tailings and waste management and mine closure scored Exceed and energy use and GHG emissions scored Improvement Opportunity. **The Environment category scored Exceed.**

The social components of community relations, local employment & procurement and employee relations & diversity scored Outperform and safety management & employee education scored Exceed. **The Social category scored Outperform.**

The Governance component of management compensation scored Outperform, board of Directors and anti-corruption/anti-bribery policy scored Exceed and ESG reporting scored Improvement Opportunity. **The Governance category scored Exceed.**

## **4.2. Recommendations**

High level recommendations are provided in this section to address 2 components which were score as Improvement Opportunity. These were the Environmental component of Energy Use and GHG Emissions and the Governance component of ESG Reporting.

**Energy Use and GHG Emissions** – Best practice in management of GHG emissions includes keeping a complete inventory of all GHG emissions and having documented targets to reduce GHG emissions with associated management plans to achieve the targets set. Although PTAI has demonstrated significant reductions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O over the past 5 years, the GHG emissions inventory is incomplete (only emissions from diesel generator are recorded) and there are no written commitments to target reductions and associated documented plans to achieve the targets. It is recommended to develop a comprehensive inventory of all GHG emissions from all sources (specifically, mining fleet and light vehicles as well as any other sources) at the Toka Tinding Mine and to set numerical targets with specified timelines for emissions reductions in the future. These targets will need detailed associated management plans to ensure tracking and documentation of the level of achievement in respect to the set targets over a period of time specified.

**ESG Reporting** – Regular (annual) public reporting of ESG performance demonstrates transparency and accountability by a company regarding these matters to all its stakeholders, which include investors, employees, suppliers, governments regulatory agencies, non-governmental organizations and local communities. ESG reporting demonstrates accountability to all stakeholders by providing relevant disclosure on subjects of importance to stakeholders in a standardized and concise format that is focussed on key ESG issues of interest to them. The content of ESG reports is a combination of qualitative and quantitative (numerical metrics) information. Although there are various formats for ESG reporting, the Global Reporting Initiative (GRI) standards have become the most-commonly applied by industry. It is recommended for PTAI to initiate the process of generating annual ESG reports based on a format and associated standards that best suits its stakeholders' interests.

## ***Disclosure and Reliance***

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PT Archi Indonesia commissioned PT Lorax Indonesia to conduct an ESG assessment relating to the Toka Tindung mining operations in North Sulawesi, Indonesia. Lorax was compensated for the work at its standard ESG consulting rate for completing the ESG assessment.

The data presented and the resultant assessment findings are specific to the metrics/components assessed and for the period of data record specified in the report. ESG reports and data supporting the assessment were provided by PT Archi Indonesia, with no independent verification of the data conducted by PT Lorax Indonesia.

This Lorax Assessment Report, and all statements made herein, are for the sole benefit and use of PT Archi Indonesia. Any use a third party makes of this Lorax Assessment Report, or any reliance on, or decisions made based on it, is the responsibility of such third parties. Lorax accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this Lorax Assessment Report.

The Lead Assessor for this assessment has no direct or indirect interest, current or expected, in PT Archi Indonesia, including any direct or indirect beneficial ownership in the securities of the Company or any of its affiliates.



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**President Director**  
**PT Lorax Indonesia**

## **Attachment A – PTAI ESG Awards**

<b>Awards and Recognition</b>	<b>Periods</b>	<b>Awarded by</b>
PROPER (Blue Rating) in recognition of Environmental Management.	2012-2020	Ministry of Environment of Indonesia
ADITAMA (Gold Award) in recognition of Mining Environmental Management.....	2013-2017	MEMR
PRATAMA in Mining Safety Management.....	2013	MEMR
UTAMA in Mining Safety Management.....	2014	MEMR
UTAMA in recognition of Mining Environmental Management (presented every two years).....	2017, 2019	MEMR
ISDA Award (Gold) in Clean Water for Community.....	2017	Corporate Forum for Community Development
CSR Best Practice (Platinum).....	2017	Coordinating Ministry for Human Development and Culture
IMA Award (First Place) in Mining Safety Management.....	2019	Indonesian Mining Association
IMA Award (Second Place) in Community Empowerment.....	2019	Indonesian Mining Association
IMA Award (Third Place) in Environmental Management.....	2019	Indonesian Mining Association
IMA Award (Third Place) in Largest Domestic Spending.....	2019	Indonesian Mining Association
UTAMA and PRATAMA in recognition of Mining Safety Management.....	2019	MEMR
ADITAMA and UTAMA in recognition of Mining Environmental Management.....	2019	MEMR
PRATAMA (Bronze Award) in recognition of Conservation Mineral Management.....	2019	MEMR
CSR Best Practice (Platinum Award).....	2019	Corporate Forum for Community Development
Indonesian CSR Award (Platinum) in Accessibility of Clean Water in Supporting the Development of Special Economic Zones based on the Tourism Sector.....	2019	Corporate Forum for Community Development
Indonesian CSR Award (Platinum) in Contractor-based Local Workforce Empowerment.....	2019	Corporate Forum for Community Development
Indonesian CSR Award (Platinum) in Reduction in Mortality and Malnutrition at Integrated Posyandu in Achieving Indonesia's Golden Generation.....	2019	Corporate Forum for Community Development
Indonesian CSR Award (Platinum) in STEM-based School Capacity Building and International Scholarships towards the Creation of Superior Indonesian Human Resources.....	2019	Corporate Forum for Community Development
Indonesian CSR Award (Platinum) in Capacity Development in the Food Estate 4.0 Area based on Toka Tindung Reference of Integrated Eco Farming Development.....	2019	Corporate Forum for Community Development