



2021



Business Review and Sustainability Report

The processing plant at
the Ban Houayxai Gold-Silver
Operation at night





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Front cover image:
Ms Khunkeo Souvannalad, a TKPV
contractor, standing in front of a
777D haul truck at the at the Ban
Houayxai Gold-Silver Operation

Company profile

PanAust Limited (PanAust, the Company, and the Group) is an Australian-headquartered copper and gold mining company with two operating mines in Laos and additional pre-development and exploration opportunities in Laos, Papua New Guinea, Myanmar, and Chile.



Cat® 777D – 100 tonne rigid chassis dump trucks transporting ore to the crusher at the Phu Kham Copper-Gold Operation

PanAust's producing mines are the Phu Kham Copper-Gold Operation (Phu Kham) and the Ban Houayxai Gold-Silver Operation (Ban Houayxai), located in the Company's Contract Area under its Mineral Exploration and Production Agreement with the Government of Laos (the Contract Area).

In Papua New Guinea (PNG), PanAust is advancing the Frieda River Project. The Frieda River Project is one of the largest undeveloped copper and gold deposits in the world and offers PanAust excellent potential for the establishment of a world-class, long-life copper-gold mining operation.

In Chile, PanAust owns a 100 per cent interest in the Carmen copper-gold exploration project and a 66.15 per cent interest in the Inca de Oro Project, in which its joint venture partner, Codelco, owns the remaining 33.85 per cent. The Inca de Oro project is currently in care and maintenance.

In 2015 PanAust expanded its presence in Southeast Asia through a joint venture in Myanmar, which owns early-stage exploration permits. However, since February 2021 all mining-related Operations in the country, including exploration and community works, have ceased.

PanAust is focused on a sustainable business model associated with the safe production and sale of copper and gold, delivery of production goals and growth. While copper is the core product focus, gold and silver provide commodity diversity.

The strategic direction of the Company in 2021 and beyond is to extend the operating life of its existing Operations in Laos, proceed towards development of the Frieda River Project and evaluate acquisition opportunities – specifically in Southeast Asia.

PanAust is an Australian incorporated company that is owned by Guangdong Rising H. K. (Holding) Limited which is a wholly owned subsidiary of Guangdong Rising Holding Group Co. Ltd (GRHG).

GRHG is a Chinese state-owned company, regulated under the State-owned Assets Supervision and Administration Commission, and owned by the People's Government of Guangdong Province in China.

Company structure

Australia

PanAust's registered head office is in Brisbane, Australia, which provides leadership, specialist expertise and support across the Group in relation to strategy, financial management, commercial and technical services, risk management, sustainability, corporate communications, human resources, legal, information systems and technology, internal audit, internal control, governance, and reporting.

Chile

PanAust holds a 66.15 per cent interest in the Inca de Oro Copper-Gold Project through a Chilean incorporated joint venture company, Inca de Oro S. A. The Company also maintains 100 per cent interest in the nearby Carmen copper-gold deposit. This Project is in care and maintenance with no activities on the ground.

Laos

PanAust owns a 90 per cent interest in the Lao-registered company, Phu Bia Mining Limited (Phu Bia Mining, PBM). The Government of Laos owns the remaining 10 per cent.

Phu Bia Mining has a Mineral Exploration and Production Agreement (MEPA) with the Government of Laos. The MEPA regulates exploration, development and mining activities within the Contract Area and sets out the tax and royalty obligations.

The PBM Operations also include a small number of employees and contractors in Thailand and Vietnam that are associated with the transport and logistics of transporting consumables to site and transporting copper concentrate from the Phu Kham mine site to the export port facilities.

In 2021, PanAust established a wholly owned entity, Saisana Lao Resources Sole Co Limited (Saisana), for the purpose of pursuing opportunities outside the MEPA contract area, subject to obtaining the necessary licences.

Myanmar

PanAust holds a 90 per cent interest in Wuntho Resources Company Limited (WRCL) and has established a joint venture with Myanmar Energy Resources Group International Company Limited, a Myanmar-based company which holds the remaining 10 per cent of WRCL.

WRCL holds tenements covering approximately 1,500 square-kilometres in Myanmar's Sagaing region. Since February 2021, the Company has demobilised and ceased all mineral exploration activities in country. The safety, security and health and wellbeing of its people in Myanmar remain the priority for the Company.

The Company has and will continue to make financial payments in line with its statutory obligations and the conditions set out in its Exploration Licences. The payments that the Company has made and will continue to honour are as follows: maintaining tenement licences, statutory tax obligations, administrative fees, employee wages and the costs associated with contractual arrangements.

Papua New Guinea

PanAust, through its wholly owned subsidiary Frieda River Limited, owns the Frieda River Project in Papua New Guinea. The Independent State of Papua New Guinea has a right, prior to the grant of a Special Mining Lease (SML), to purchase up to a 30 per cent equity interest in the Project at a price prorated to the accumulated historical expenditure of the Project.

Auditors

KPMG
71 Eagle Street
Brisbane, Qld 4000
Australia

Bankers

ANZ Banking Group Limited
324 Queen Street
Brisbane, Qld 4000
Australia

Board of Directors (as at 13 December 2022)

Mr Shu Yao, Chairman

Mr Daling Zheng, Managing Director and Chief Executive Officer

Mr Paul Arndt, Non-Executive Director

Mr Wenhao Pan, Non-Executive Director


Mr Lei Feng, Non-Executive Director

Mr Mengliang Dai, Non-Executive Director

See PanAust's website for the profiles of PanAust's Directors, panaust.com.au/our-people/#boardofdirectors.

Company Secretary

Mr Chengjie Li



Looking towards the Ban Houayxai
Gold-Silver Operation cyclone tower
from the processing plant

Materiality and scope of this report

This 2021 Business Review and Sustainability Report has been prepared in accordance with the Global Reporting Initiative (GRI) Universal Standards: Core option and the G4 Sector: Disclosure for Mining and Metals. The scope of the Report, as per GRI Core option requirements covers “topics that reflect the reporting organisation’s significant economic, environmental and social impacts or topics that could substantively influence the assessments and decisions of stakeholders”.

Materiality Counts, an independent assurance provider, has provided assurance of a selection of material issues within this Report. A copy of the assurance statement is on page 109.

PanAust's 2021 Business Review and Sustainability Report focuses on issues that matter most to the Company and its stakeholders. PanAust applies a consistent approach to identifying, assessing, and verifying material sustainability issues which is outlined in the following five steps:

1. Stakeholders and their issues are identified

PanAust's stakeholders are identified based on their potential to impact or be impacted by the Company's business activities. Primary stakeholders and interested parties are listed on pages 51 to 53 of this Report. Regular engagement with primary stakeholders, together with the review of independent external and industry reports, enables issues of importance to stakeholders to be identified and understood.

2. PanAust's issues are identified

PanAust identifies issues of importance by reviewing and considering business strategies and policies, external commitments, risk registers, external audit reports, internal reviews and incident reports, issues highlighted through internal reporting processes, regular visits to the Operations and conducting workshops across the Group.

3. Issues are assessed and ranked

Each issue is ranked on its level of importance to stakeholders and to PanAust. The criteria for ranking are largely based on how PanAust defines issues of significance (on a 1 to 3 scale, 3 being the most significant) and benchmarking activities. Issues are considered by level of interest and commonality through requests for information from stakeholder groups and media coverage. For the 2021 Business Review and Sustainability Report, PanAust sought feedback on issue identification and ranking through meetings with the PanAust management team, departmental managers, internal subject matter experts and stakeholder contacts across the Group.

4. Material issues are verified

Material issues are presented to the PanAust management team for review and feedback and are endorsed for inclusion in the 2021 Business Review and Sustainability Report.

Materiality Counts provides independent limited assurance that verifies a selection of material issues in the Report. The rolling assurance program covers material issues over a three to five-year period. The assurance scope is revisited annually to ensure relevance to those material issues of most significance are addressed in the reporting period.

5. Material issues inform Company activities

PanAust's approach to managing material risks provides a continuous improvement feedback mechanism, which informs Company strategy, budgets and business and engagement activities. At the executive level, material risks define the sustainability and business improvement focus areas for the Company. These outcomes cascade to the broader sustainability governance structure and are incorporated into business and annual plans, and key performance indicators.

The figure on pages 8 and 9 of this Report outlines the outcomes of PanAust's 2021 materiality process within the areas of economic performance, governance, social performance, environmental performance, health and safety performance and its people. Each material issue – including the boundary of impact – is addressed in this Report.



PanAust material issues 2021



Economic performance

- > Safeguarding the Operations from the impacts of COVID-19
- > Operational performance
- > Financial performance



Social performance

- > Safeguarding communities health, safety, and wellbeing from COVID-19 impacts
- > Social licence to operate and stakeholder engagement
- > Economic value generated
- > Community development
- > Closure preparedness and messaging
- > Artisanal and small-scale mining
- > Closure messaging and changes to project schedule



Health and safety performance

- > Health and safety response to COVID-19
- > Safety performance
- > Contractor management
- > Fitness for work
- > Security management



Governance

- > Sustainability structure
- > Business conduct
- > Anti-bribery and corruption
- > Sustainability in the supply chain and product stewardship
- > Risk management



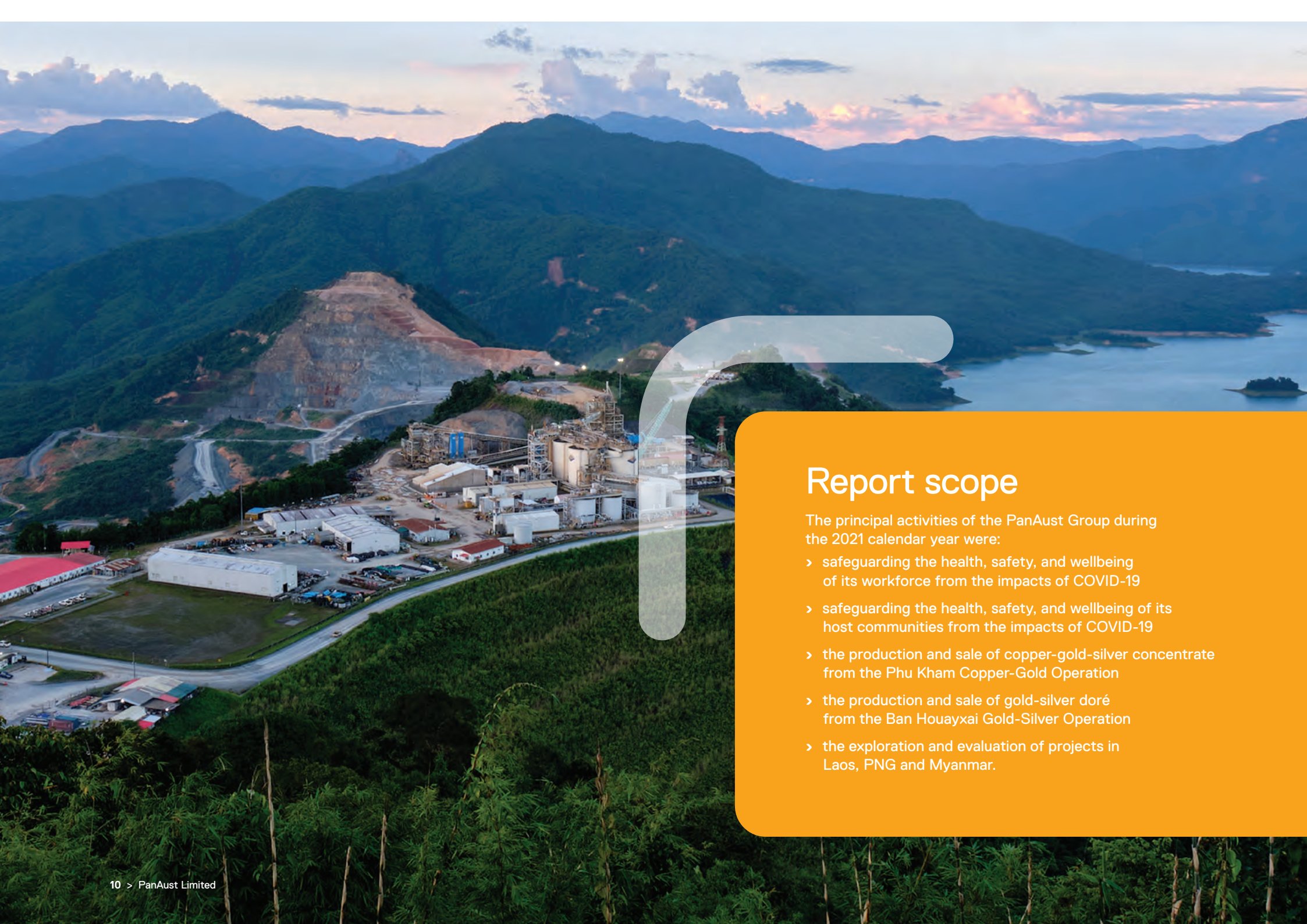
Environmental performance

- > Water management
- > Tailings and waste rock management
- > Cyanide management
- > Land rehabilitation and closure
- > Energy and carbon management
- > Dust and noise emissions



Our people

- > Protecting employee wellbeing during COVID-19
- > Training and development



Report scope

The principal activities of the PanAust Group during the 2021 calendar year were:

- › safeguarding the health, safety, and wellbeing of its workforce from the impacts of COVID-19
- › safeguarding the health, safety, and wellbeing of its host communities from the impacts of COVID-19
- › the production and sale of copper-gold-silver concentrate from the Phu Kham Copper-Gold Operation
- › the production and sale of gold-silver doré from the Ban Houayxai Gold-Silver Operation
- › the exploration and evaluation of projects in Laos, PNG and Myanmar.

Unless otherwise stated, data in this Business Review and Sustainability Report (Report) relates to PanAust's Phu Kham Copper-Gold and Ban Houayxai Gold-Silver Operations.

This Report is for the 2021 calendar year and is PanAust's fifteenth Sustainability Report. It follows the Report produced in 2021 for the 2020 calendar year inclusive of 2019 data.

Data collection protocols and reporting currency

Except for new reporting items, this Report presents data for a three-year period. Data for years prior to 2019 is available in PanAust's Business Review and Sustainability Reports which can be accessed on the Company's website: panaust.com.au/annual-publications

Sustainability performance data is disclosed in accordance with the GRI Universal Standards. Data reflects the annual disclosure of sustainability performance at wholly owned Operations and joint ventures where PanAust is the operator. Any variances from these boundaries are noted directly in the data table where applicable.

Unless otherwise stated, all monetary amounts in this Report are expressed in United States dollars (US\$). Data contained in tables and figures may include minor computational errors due to rounding.

Transparent reporting

PanAust values openness and transparency in its business activities. Each year, the Company produces an Annual Report and a Business Review and Sustainability Report (this document).

The Annual Report is submitted to the Australian Securities & Investments Commission (ASIC) and is available for a nominal fee paid to ASIC.

The 2021 Annual Report was independently audited by KPMG in accordance with the Australian Auditing Standards and was lodged with ASIC in 2022.

Materiality Counts provided independent limited assurance (in relation to key non-financial material issues) of this 2021 Business Review and Sustainability Report.

Through its Minerals Council of Australia (MCA) associate membership, the Company supports the Extractive Industries Transparency Initiative (EITI). EITI is a global initiative to improve governance in resource rich countries through the verification and full publication of company payments and government revenues from oil, gas, and mining. PanAust reports payments to its host governments in both its Annual Report and Business Review and Sustainability Report (see page 58).

When legally permitted and consented to do so by its host governments, PanAust supports making the material terms of its contracts publicly available (in line with EITI requirements).

The Phu Bia Mining Annual Business Review and Sustainability Report is tailored to, and translated for, Lao stakeholders. Content is sourced from PanAust's Annual Report and Business Review and Sustainability Report.


A detailed index of the GRI indicators and where they are reported – fully, partially, or not reported – for this Report can be found on PanAust's website:

panaust.com.au/annual-publications

For further information about PanAust or this Report:
email info@panaust.com.au
telephone +61 7 3117 2000

Forward-looking statements

This document includes certain 'forward-looking statements'. All statements, other than statements of historical fact, included herein, including without limitation, statements regarding forecast production performances, potential mineralisation, resources and reserves, and future expansion plans and development objectives of PanAust Limited, are forward-looking statements that involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements.



Looking towards the
Ban Houayxai Gold-Silver
Operation from ETL hill

Managing Director and Chief Executive Officer's review

With strong support from our shareholder and commitment from our people, I am proud to say PanAust performed strongly in 2021, with zero fatalities across our Operations and a record net profit after tax of US\$44.7 million (m).

Pleasingly our Ban Houayxai Gold-Silver Operation achieved one million ounces of gold produced since Operations commenced in 2012, marking an outstanding achievement for the Company.

In another challenging pandemic year, safety remained our number one priority. There were no compromises as we worked together to ensure everyone returned home safely. Working with host Governments, we implemented stringent COVID-19 controls to manage COVID-19 outbreaks and mitigate impacts on our people, host communities and Operations.



Charting a sustainable future

With support from our shareholder, Guangdong Rising Holding Group Co. Ltd (GRHG), we had a clear focus and set our sights on pursuing our long-term commitment to remain in Laos. A testament to this is the securing of life of mine extensions of our two Operating assets to 2025.

We took advantage of higher metals prices and reduced production and adopted batch processing at our Phu Kham Copper-Gold Operation. This was in a bid to alleviate geotechnical constraints and access limitations in key mining areas as the operation became increasingly mine and ore constrained. This approach saw overall improvements during processing, including increased plant availability rates, increased operating time, better managed workforce numbers, and management of direct C1 costs incurred in mining and processing, freight, and the sale of ore.

The South Wall Cutback Project featured on page 26 serves the Company's short-term objective to increase the life of our Operations, while allowing time to identify other viable long-term opportunities to extend the life of the business in Laos.

At our Ban Houayxai Gold-Silver Operation, we vigilantly pursued exploration activities to access increased ore reserves.

Additionally, in 2021, we established a wholly owned Lao entity, Saisana Lao Resources Sole Co Limited (Saisana). Phu Bia Mining's (PBM) Operations are restricted to the contract area defined in its Mineral Exploration Production Agreement (MEPA) with the Government of Laos. Saisana will pursue opportunities, subject to obtaining the necessary licences, outside PBM's MEPA contract area.

In Papua New Guinea, we achieved a key milestone in our pursuits to progress the permitting of the Frieda River Project.

Daling Zheng
PanAust Managing Director
and Chief Executive Officer

The independent Peer Review (IPR) of the Project's Environmental Impact Statement (EIS), conducted by consultants engaged on behalf of the Government of Papua New Guinea, was concluded. Frieda River Limited has since submitted responses to the draft report to the Conservation and Environment Protection Authority of Papua New Guinea.

Throughout the year we complied with the robust legislative and project approval and stakeholder engagement processes in Papua New Guinea. We look forward to continuing to work with the Government of Papua New Guinea to ensure all legislative requirements during the permitting phase of the Project are followed.

Following the political instability in Myanmar in early February, the Company demobilised and ceased all mineral exploration activities in country. Again, the safety, security, and health and wellbeing of our people in Myanmar remains a priority for the business. Mindful of our statutory obligations outlined in the Exploration Licences, we continued to pay and will continue to honour these payments: maintaining tenement licences, statutory tax obligations, administrative fees, employee wages and the costs associated with contractual arrangements.

Business performance

During the year, we implemented focused strategies to protect our cash flow. We established an additional hedging facility agreement for gold and silver. This price certainty guaranteed us positive cash flow against potential unfavourable metal price movements in 2021.

The Group's profit after income tax for the year ended 31 December 2021 was US\$44.7m, higher than the 2020 profit of US\$42.0m despite continued operational challenges caused by the COVID-19 pandemic. This was primarily driven by higher realised prices offset by an impairment charge. As at 31 December 2021, PanAust remains debt free and continues to generate positive operating cash flow with a closing cash balance of US\$212m.

In 2021, there were key infrastructure upgrades at the Operations. The US\$160,000 go line refurbishment at the Phu Kham Copper-Gold Operation was completed. The go line now boasts a modern facility where our people hold pre-start meetings, have meals, take scheduled rest breaks, and manage operator shift changeouts.

Other upgrades at Ban Houayxai included the replacement of the primary jaw crusher after reaching its end of service life, the addition of a slip energy recovery drive, pebble crusher and oxygen plant to the processing plant to improve the overall efficiency of the circuit and staff camp refurbishments were completed at both Operations.

Health and safety

Our learnings from managing the unprecedented COVID-19 pandemic in 2020 and our Zero Harm philosophy continued to keep our people and communities safe during 2021. The PanAust Group's total recordable incident frequency rate for 2021 continued to be significantly better than the mining industry average.

We channelled our resources of more than US\$19m to focus on improving and embedding our COVID-19 controls as business-as-usual practices. We are proud of the support we provided in our host countries of more than US\$350,000 to relevant COVID-19 relief efforts.

In Laos, following a surge in COVID-19 cases, COVID-19 controls implemented during 2020 were quickly reinstated, including lockdowns of all Operating sites, the commencement of 14-day quarantine periods, polymerase chain reaction (PCR) testing and the introduction of longer site-based rosters. The reinstatement of these controls coincided with the Government of Laos' internal travel restrictions and lockdown of provinces.

The PBM-led COVID-19 vaccination program saw over 96 per cent of our Laos workforce vaccinated, this critical initiative contributed to operational continuity and safeguarded our communities.

In Papua New Guinea we implemented a range of measures to help protect our communities from COVID-19 including communicating health protection messages on high frequency radio, training local community health workers and transporting PCR samples via Company helicopter on behalf of the Government.

We are committed to safeguarding the health, safety, wellbeing and rights of everyone we interact with in our business and supply chain. The publishing of our first Modern Slavery Statement highlights our commitment to eradicating this global challenge.

Our people

At PanAust our people's support is critical to our success. Congratulations to 352 employees who marked 10 and 15 years of service with the Company in 2021.

During the year, women's participation across our Operations increased to 21 per cent and maintained above 92 per cent localisation of employees in Laos.

In 2021, our Lao-registered company, PBM, announced that 87 of its Lao-national employees and contractors graduated from its Supervisory Skills Development Program. This talent pipeline is critical to our commitment to helping provide a long-lasting positive legacy of skilled people in Laos as well as the future of our Operations.

The PanAust Way, our company's code of conduct which sets the minimum standards of what we expect of our people, contractors and suppliers, was updated and published across all Operating sites. We were pleased to restart the employee awards program and congratulations to the respective winners for living by the PanAust Way.

We were honoured to receive the 'Lao Special Award in Skill Development' at the 2021 ASEAN Business Awards Lao People's Democratic Republic. The award recognises our significant contributions to economic growth and to human resources and skills development in the ASEAN Economic Community.

Our commitment to our communities

As a significant employer in our host communities the role we play in their economic and social development is important to us.

In 2021, we completed the construction of a 2.8km concrete road that runs from our Phu Kham Copper-Gold Operation to Ban Nam Mo Secondary School. The investment of US\$1.43m was made possible through our Community Development Fund enabling safer and better road access for our communities. Since commencing Operations in Laos, we have made significant contributions to investing in critical public road infrastructure valued at over US\$100m.

While some community initiatives were paused in our host countries due to COVID-19 travel restrictions, we are proud of our contributions to our communities. A total of over US\$248,000 was expended on community development fund (CDF) projects in Laos and over US\$350,000 on health, education, and sustainable livelihood capacity-building in Papua New Guinea.

While Community Leaders Forum (CLF) meetings were suspended in Papua New Guinea due to COVID-19 restrictions, these meetings recommenced in 2021 using the Company's video-conferencing facilities to minimise the infection transmission risks of face-to-face contact, see page 48.

Thank you to everyone at PanAust for putting safety first, and for your hard work and professionalism in 2021. I would also like to acknowledge the ongoing support of our shareholder, host Governments and our communities as we look to continue to chart a safe and sustainable future for our business.

2021 highlights

Boart Longyear Reverse Circulation grade control drilling activities at the Phu Kham Copper-Gold Operation



Economic performance

- › The Group's profit after income tax for the year ended 31 December 2021 was US\$44.7m, higher than 2020 profit of US\$42.0m despite continued operational challenges caused by the COVID-19 pandemic. This was primarily driven by higher realised prices offset by an impairment charge. As at 31 December 2021, PanAust remains debt free and continues to generate positive operating cash flows with a closing cash balance of US\$212m
- › The successful life of mine extensions to 2025 of the Operations in Laos
- › Hedged production ensured the Company maintained positive cash flow while protecting against adverse metal price movements enabling successful implementation of its mine plans at its Laos Operations.



Environmental performance

- › Revegetation, erosion control and surface water management measures applied across the Operations in Laos continued to support the progressive rehabilitation of existing and new landforms in line with agreed stakeholder expectations
- › The independent Peer Review of the Environmental Impact Statement (EIS) for the Frieda River Project conducted by consultants engaged on behalf of the Government of Papua New Guinea was concluded.



Governance

- › Continued commitment to transparent reporting as an unlisted public company, including disclosing material sustainability matters to GRI Standards (this is the fifteenth Sustainability Report prepared by PanAust)
- › Under the guidance of the sponsorships and donations committees, PanAust provided support of more than US\$350,000 to relevant causes, including COVID-19 relief efforts in host countries.



Health and safety performance

- › Reflective of PanAust's commitment to Zero Harm, response and mitigation measures implemented in response to the COVID-19 pandemic helped provide a safe working environment for its workforce.
- › PanAust Group's total recordable incident frequency rate (TRIFR) and lost time injury frequency rate (LTIFR) continued to be significantly better than industry averages.⁽²⁾



Social performance

- › Total Phu Bia Mining activity, including indirect benefits through employment, training, community development and payments to local suppliers accounted for 2.3 per cent of Laos 2021 real gross domestic product (GDP)⁽¹⁾
- › A total of US\$248,955 was expended on community development fund (CDF) projects in Laos and US\$359,250 on health, education, and sustainable livelihood capacity-building in PNG
- › PanAust continued engagement with its host communities on future closure options for its Phu Kham and Ban Houayxai Operations.



Our people

- › Women's participation in the workforce increased to 21 per cent
- › Maintained close to the highest rate of localisation since Operations commenced with 92 per cent localisation of employees in Laos.

¹ The Company estimates Laos' real GDP to be approximately US\$18.9bn. Total Phu Bia Mining activity including indirect benefits through employment, training, community development and payments to local suppliers accounted for 2.3 per cent of this estimated GDP.

² ICMM Safety Performance Report; Benchmarking progress of ICMM company members in 2021.



Economic performance

- › Maximise returns from existing assets and maintain net profit after tax (NPAT) and positive cash flow to support mine life extensions, shareholder dividends and Company growth projects
- › Maintain strong cash flow and minimise capital expenditure requirements with expected lower production profile of the Lao Operations
- › Identify near mine replacement production for the Operations in Laos
- › Leverage the Company's assets, systems, and human resources to generate new sources of cash flow
- › Identify and pursue acquisition opportunities to secure the Company's future.



Environmental performance

- › Continue to manage sediment and erosion control risks that are prevalent in the mountainous and high-rainfall setting of the Phu Kham and Ban Houayxai Operations, and the Frieda River Project
- › Identify further opportunities to improve energy efficiencies
- › Continue to understand and manage the risk profile of Operations in Laos, particularly in areas such as waste management (tailings, acid rock drainage).



Governance

- › Continue to apply governance processes to high-risk activities
- › Manage stakeholder expectations and maintain robust governance processes in Laos, PNG, and Myanmar
- › Negotiation of extensions of licences and permits with host governments
- › Ensure full compliance with the robust project approval and stakeholder engagement legislative processes in PNG for the Frieda River Project.



Health and safety performance

- › Continue to operate with stringent COVID-19 controls in place and proactively manage any future potential outbreaks at the Company's sites and offices
- › Grow and enhance the Company's safety culture to achieve Zero Harm safety objectives
- › Continue to work with local contractors to enhance their safety culture and meet PanAust's contractor management standards.



Social performance

- › Progress social closure strategies for the Operations in Laos in conjunction with key stakeholders to reduce mine dependency and ensure successful post-closure outcomes
- › Continue robust stakeholder engagement and capacity-building programs in PNG.



Our people

- › Leverage highly developed human resources systems and continue the development of the Lao-national workforce to increasingly operate, maintain and manage the Operations in Laos to international standards
- › Attract and retain high-calibre people in the lead-up to future mine closure in Laos.

2021 future challenges



Loss Prevention department trainer, Mr Sueyang Hnlanou, at the Ban Houayxai Gold-Silver Operation



PanAust's vision and values

Horizontal drilling activities in stage 12 in the foreground and stage 11 pre-stripping in the background at the Phu Kham Copper-Gold Operation

PanAust

Our vision

PanAust is a multinational resources company that delivers excellence in all its endeavours.

PanAust is committed to developing and operating a sustainable business model through:

- > creating value for its shareholder
- > enhancing Group-wide performance
- > leveraging the strength of its diversified culture.

Our values



People

In addition to our strong commitment to acting with integrity and building on our diversity, we have a clear focus on the health, safety, and wellbeing of everyone we interact with in all that we do.



Planet

We are committed to maintaining a positive and sustainable relationship with the natural environment wherever we operate.



Prosperity

We strive to advance the positive economic and social impact of our Operations on our people, our host communities, and our shareholder.



On stream analyser at the Phu Kham
Copper-Gold Operation processing
plant which provides instant readings
of copper recovery in the plant

Economic performance

In 2021 PanAust achieved an increase in its consolidated net profit after income tax for the year of US\$44.7m – exceeding both the 2020 result (US\$42m) and the pre-pandemic 2019 result (US\$43m). Higher copper, gold, and silver prices continued to prevail in 2021 enabling the Company to offset lower production and sales volumes resulting predominantly from the COVID-19 interruptions.

Group consolidated annual metal production performance against budget was lower in 2021, with 32,385 tonnes (t) of copper in concentrate produced (down from 48,433t in 2020). Gold and silver production totalled 126,671 ounces (oz) and 878,599oz respectively (up from 112,010oz and 829,393oz in 2020) in concentrate and doré.

The Company delivered a strong financial result and improved the sustainability of the business. This was delivered by continuing to implement rigorous operational and financial strategies to minimise pandemic-related disruptions and take advantage of the higher metals prices to pursue exploration and life of mine extension opportunities.

Safeguarding the Operations from the impacts of COVID-19

A key aspect of PanAust’s response to the COVID-19 pandemic was to safeguard the health, safety and wellbeing of its workforce and host communities. By adopting rigorous quarantine, screening, and hygiene practices, PanAust was able to safeguard its Operations. As a result, PanAust was able to maintain core business activities as close as possible to pre-pandemic levels, which facilitated consistent cash flow into the Company. PanAust’s efforts in this regard delivered improved profitability over the prior two years’ results.

Many of the activities initiated in 2020 as a response to COVID-19 continued in 2021 to minimise the potential for lockdowns, supply chain and other pandemic-related disruptions to Operations, including:

- › maintaining the Trigger Action Response Plan and business continuity plans
- › holding increased supplies (such as consumables, food, and other essential items) and critical stock inventory at operational locations
- › improved cost controls including placing limits on recurring orders
- › hedging activities
- › while contact tracing remained a viable infection control strategy, the use of the Company’s bespoke COVID-19 contact tracing application.

A critical, new initiative in 2021 that contributed to operational continuity was PanAust’s implementation of its extensive workforce COVID-19 vaccination program that achieved over 96 per cent coverage, COVID-19 testing and quarantine program for its workers. PanAust also contributed to the health and safety of the broader Lao community (see page 46).



Washing down a light vehicle at the Ban Thouay logistics facility in Laos

Cat® 777D – 100 tonne rigid chassis dump truck fully loaded with ore ascending the haul ramp at the Phu Kham Copper-Gold Operation



**ECONOMIC PERFORMANCE
CASE STUDY:**

Maintaining profitability through the COVID-19 pandemic

In 2021, PanAust achieved record profitability through a combination of operational and financial strategies and created the conditions for sustainable financial performance through the successful life of mine extensions at its flagship Operations in Laos. This was achieved against a backdrop of challenges presented by the COVID-19 pandemic.

The Company's Lao-registered subsidiary, PBM recorded an NPAT of US\$91.6m, double the Company's 2020 result of \$45.9m. This result, buoyed by higher copper, gold, and silver prices, was achieved despite lower production and sales volumes.

While focusing on risks to the current year's profitability, PanAust also maintained a forward outlook for the business, securing life of mine extensions at its Phu Kham Copper-Gold and Ban Houayxai Gold-Silver Operations from 2022 and 2023 respectively to 2025.

The Company implemented a range of strategies in 2021 to offset its operational risks including reduced productivity and cost pressures that had the potential to adversely impact its financial position. These strategies included:

- adopting ore batch processing methods and executing production activities in sequences that maximised throughput. The positive impacts of this approach saw overall improvements, including increased plant availability rates, increased operating time, better managed workforce numbers, and management of direct C1 costs incurred in mining and processing, freight, and the sale of ore
- implementing condition-based monitoring as a predictive plant and equipment maintenance strategy. This minimised costs as early detection, identification and response to faults increased the availability rates of critical site plant and equipment
- hedging activities provided price certainty by minimising the potential impact of adverse metal price movements and therefore securing medium-term profitability. By securing certainty around metal prices as a key profitability driver, the Company ensured its capacity to successfully implement its mine plans at its Lao Operations and safeguard its Lao exploration projects
- taking advantage of the opportunity presented by higher metals prices and slower production at its Phu Kham Operation due to geotechnical constraints and access limitations in key mining areas. PanAust pursued exploration to access increased ore reserves at Ban Houayxai resulting in life of mine extensions at both its Phu Kham and Ban Houayxai Operations.

The success of these strategies has enabled the Company to continue to mobilise effective support for the safety of its people and communities through the COVID-19 pandemic, at a cost of US\$19m in 2021. The direct costs of this support includes hotel and guest house quarantine accommodation, air charter flights, polymerase chain reaction testing, employee vaccination programs and personal protective equipment.



Phu Bia Mining Logistics Manager, Simon Pettig, carrying out a load inspection of a diesel fuel tank for delivery to the Operations

Community development support for the Frieda River Project's communities

The Company has engaged with the Frieda River Project's neighbouring communities since commencing exploration in the area in 2014. The value of PanAust's community development support for these communities, particularly the seven directly impacted villages, has increased over time and in 2021 totalled US\$359,000 (slightly above the 2020 spend of US\$356,000).

In 2021, COVID-19 curtailed the delivery of some education, health, and capacity-building programs. As travel restrictions eased in-country, the Company provided its communities with increased logistical support. This was primarily to transport community members for emergency medical evacuations, health consultations, education programs and community engagement on the Company's permitting process, while the usual transport options remained unavailable to communities.

The Company chartered flights and deployed its helicopter, increasing the cost of logistics support to the community to US\$115,000 for the year, a significant increase on the 2020 logistics spend of US\$25,000. Additionally, the Company appointed a new community development adviser from the Sepik region to work with the local communities and invested in video-conferencing facilities at the Project site that enabled community engagements on the permitting process to continue (see page 50 for more details).



Frieda River Limited Community Advisor, Joel Hamago, with the women from the Mian language group after women's capacity-building training

Operational performance

Phu Kham Copper-Gold Operation (PanAust owns 90 per cent)

Overview

The Phu Kham Copper-Gold Operation is located approximately 140 kilometres (km) north of Lao's capital city, Vientiane, and is the Company's flagship Operation. The Operation comprises an open pit mine feeding ore to a process plant with recovery of copper and precious metals into a saleable concentrate using conventional flotation technology.

The concentrate contains approximately 23 per cent copper and up to 8 grams per tonne (g/t) gold and up to 53g/t silver.

Seventy per cent of Phu Kham's concentrate is trucked in covered containers to the port of Hon La in Vietnam (approximately 650km from the Operation) and the remaining 30 per cent to Sriracha Harbour in southern Thailand (approximately 1,000km from Phu Kham) for export to smelters mainly in Asia.

Mining and processing

In 2021, Phu Kham recorded lower production and higher processing costs than budgeted with 32,385t of copper concentrate produced. This was a consequence of the increased difficulty of ore extraction at deeper pit levels and prioritising waste stripping to expose further mining areas to be accessed for production in 2022. Silver in concentrate sharply declined in 2021 compared to the prior year (by 52 per cent), due to lower silver grade and lower copper production. The 2021 C1⁽¹⁾ and all-in sustaining costs (AISC)⁽²⁾ after precious metal credits was US\$1.22/lb and US\$2.86/lb copper respectively.

Despite lost operating time, mining Operations performed well during the year even as ore continued to harden with the multi-stage deepening of the open pit. While total ex-pit material mined was slightly ahead of budget at 33m tonnes (Mt), milled ore of 8Mt was behind budget.

Copper recovery averaged 83.5 per cent which is a slight increase on 2020. The Phu Kham current Ore Reserve supports a mine life to the end of 2025.

Phu Kham Copper-Gold Operation production statistics

	2020	2021	Variance (%)
Total material mined (Mt)	38.5	32.8	(15)
Ore milled (Mt)	12.2	8.2	(21)
Copper grade (%)	0.48	0.51	6
Gold grade (g/t)	0.22	0.23	5
Silver grade (g/t)	1.74	1.41	(19)
Concentrate produced (dmt)	212,753	141,570	(33)
Copper in concentrate (t)	48,433	32,385	
Gold in concentrate (oz)	43,274	29,342	(32)
Silver in concentrate (oz)	286,107	135,867	(52)

1 Brook Hunt convention for reporting direct costs comprising mine site, production transportation and freight, treatment and refining charges and marketing costs; based on payable metal content after by-product credits.

2 AISC reporting are the C1 cost plus royalties, allocated corporate charges, shared services costs, sustaining capital, lease principal and interest charges, and deferred mining and inventory adjustments capitalised.

Ban Houayxai Gold-Silver Operation (PanAust owns 90 per cent)

Overview

The Ban Houayxai Gold-Silver Operation is located approximately 25km west of the Phu Kham Operation. Commencing production in 2012, the Operation comprises an open pit mine feeding ore to a conventional carbon in leach (CIL) and gravity recovery process plant.

Mining and processing

The COVID-19 pandemic continued to impact operational performance in 2021, resulting in lower than budgeted production and total material mined at the Ban Houayxai Operation – although results overall improved compared to 2020.

Mill operating time at 93 per cent was down resulting in reduced throughput for the year against budget.

A total of 15.2Mt of material was mined in 2021 which included 4.2Mt of ore; with 4.5Mt of ore and stockpiled material processed.

The Operation produced 97,329oz and 693,526oz of gold and silver in doré respectively. The average C1 cost after silver credits was US\$702/oz gold and an AISC of US\$1,040/oz gold was achieved.

The Ban Houayxai current Ore Reserve supports a mine life to the end of 2025.

Ban Houayxai Gold-Silver Operation production statistics

	2020	2021	Variance (%)
Total material mined (Mt)	13.2	15.2	15.2
Ore milled (Mt)	3.6	4.2	16.7
Gold grade (g/t)	0.64	0.79	23.4
Silver grade (g/t)	9.0	8.0	(11.1)
Gold in doré (oz)	68,736	97,329	41.6
Silver in doré (oz)	635,715	693,526	9.1





Komatsu PC3000 hydraulic front shovel loading a Cat® 77D – 100 tonne rigid chassis dump truck

Growth opportunities: evaluation and exploration

Frieda River Project, Papua New Guinea (PanAust owns 100 per cent)

PanAust – through its wholly owned subsidiary, Frieda River Limited – holds a 100 per cent interest in the Frieda River Project.

In 2021, the Company continued to progress permitting, community support and stakeholder engagement activities relating to the Project's proposal for development for the Special Mining Lease and Environmental Impact Statement (EIS), as required by the Government of Papua New Guinea's mandated project development process.

Community engagement activities relating to the permitting process were reinvigorated in 2021, with the Company deploying video-conferencing technology to enable engagements that would not otherwise have been possible given prevailing pandemic restrictions. See page 48.

The Independent Public Review (IPR) of the Project's EIS and proposed hydroelectric dam facility, which commenced in 2019, was completed by the PNG Government-appointed independent consultants in 2021. The Company was advised that this review concluded that the EIS process was on track and that the EIS and Large dam IPR were submitted to the Government of Papua New Guinea.

Sagaing Region Exploration, Myanmar (PanAust owns 90 per cent)

In Myanmar, PanAust holds a 90 per cent interest in Wuntho Resources Company Limited (WRCL) and has established a joint venture with Myanmar Energy Resources Group International Company Limited, a Myanmar-based company which holds the remaining 10 per cent of WRCL.

The Joint Venture holds seven Exploration Licences that cover approximately 1,500km² in the Sagaing Region.

Since February 2021, the Company has demobilised and ceased all mineral exploration activities in country. The safety, security and health and wellbeing of its people in Myanmar remain the priority for the business and the Company has continued to pay the wages of its Myanmar employees during this period. No exploration drilling work was completed in Myanmar in 2021.

Contract Area exploration, Laos (PanAust owns 90 per cent)

In 2021, infill drilling and definition continued at the Ban Houayxai Operation, which identified the Ban Houayxai Extension deposit as a significant source of additional ore with potential to underpin life of mine extensions. Pre-feasibility studies of this deposit are scheduled for completion in 2022.

Near-mine drilling continued at the Phu Kham Operation, the results of which informed an assessment of an open pit extension. Considering these results and the increase in metal prices in 2020 and 2021, the Company approved the South Wall Cutback Project, which enabled a life of mine extension to 2025. Project planning commenced in 2021 for project delivery in 2023. See page 26.

MMD sizer installation in the foreground linking to the existing Coarse Ore Stockpile which feeds the Phu Kham Copper-Gold Operation's processing plant

The South Wall Cutback Project extends Phu Kham Operation's life of mine to 2025

The South Wall Cutback (SWC) Project serves the Company's objective in the short term to increase the operational life of Phu Bia Mining's Operations, allowing time to identify other viable long-term opportunities to extend the life of the business.

Prior to the identification of the Project, Phu Kham's life of mine plan had its Operations winding up in early 2024. The Project will enable Phu Kham to produce an additional 41kt of copper and 37koz of gold in the extension period to 2025.

The increase in metal prices and the results of near-mine drilling in 2020 and 2021 supported PanAust's decision that a further cutback of the south wall of the Phu Kham pit to access additional ore resources would be economically feasible. The Project's key elements include decommissioning the current crusher located at the site of the proposed cut back area and the investment in and construction of a new US\$28m crushing facility.



Inca de Oro Copper-Gold Project (PanAust owns 66.15 per cent), Carmen deposit (PanAust owns 100 per cent), Chile

PanAust completed a feasibility study on the Inca de Oro Copper-Gold Project in 2014.

No material site activities were planned or undertaken at Inca de Oro or the nearby Carmen deposit. Both sites are currently in care and maintenance.

Saisana Lao Resources Sole Co Limited (PanAust owns 100 per cent)

Phu Bia Mining's Operations in Laos are restricted to the contract area defined in its Mineral Exploration Production Agreement (MEPA) with the Government of Laos. Any new opportunity outside this area must be pursued by a different Lao-registered entity. In 2021, PanAust established a wholly owned Lao entity, Saisana Lao Resources Sole Co Limited (Saisana), for the purpose of pursuing opportunities outside the MEPA contract area, subject to obtaining the necessary licences.

The Company has identified limited potential for large deposits on a similar scale to its current Operations. The Company, therefore, intends that Saisana will focus on two broad opportunities:

- > new mining opportunities within Laos that align to the Company's core value of sustainability, without restriction on commodity type, deposit size and location; and
- > the provision of mining services to PanAust and third-party companies.

In 2021 the Company reviewed resources opportunities throughout Laos in collaboration with other private enterprises and the Government of Laos. These opportunities will be evaluated in 2022 as potential opportunities for Saisana to progress and subject to obtaining the necessary licences.

Targeted acquisitions

Throughout 2021, PanAust continued to search for global opportunities to invest in base and precious metals projects. The Company targeted advanced projects that are in production or could be brought online within a few years and are of suitable mine life and cost structure in the context of the broader asset portfolio.

Financial performance

Higher metal prices continued to support financial performance in 2021 and offset the lower production and cost impacts from COVID-19.

PanAust's consolidated NPAT for 2021 increased to US\$45m (2020: US\$42m), with underlying earnings before interest, taxes, depreciation, and amortisation (EBITDA) of US\$221m (2020: US\$130m).

Sales revenue from ordinary activities increased year on year to US\$567m (2020: US\$497m) driven primarily by higher copper prices and despite lower overall production due to COVID-19 disruptions.

Average prices realised for sales during 2021 were US\$4.18/lb for copper, US\$1,797/oz for gold and US\$25/oz for silver (2020: US\$2.81/lb, US\$1,761/oz, and US\$21/oz respectively).

At the end of 2021, PanAust remained debt free and continued to generate positive cash flow with a closing cash balance of US\$212m.

Cash flows and sales

Net cash inflow from operating activities was US\$208m (2020: US\$110m).

a) Capital expenditure

There was no capital expenditure on major development projects in Laos in 2021 (2020: nil). Expenditure during the year on the Frieda River Project totalled approximately US\$4.4m (2020: US\$2.7m) and included field programs, study works, environmental assessments, lands identification, stakeholder consultation, community development, corporate support, and site-based operational activities.

b) Balance sheet

At the end of 2021, PanAust had a cash position of US\$212m (2020: US\$141m); no external debt (2020: nil); and no mobile equipment lease facilities (2020: nil).

c) Reporting compliance

As an unlisted public company, PanAust continues to lodge an audited Annual Report (including financial statements) for the year of income with ASIC and fulfilled its reporting and compliance obligations.

Operational costs year-on-year comparison

	2020	2021	Variance (%)
Phu Kham C1 cost (US\$/lb copper)	38.5	328	(15)
Phu Kham all-in sustaining cost (US\$/lb copper)	1.14	1.22	7.0
Copper price (US\$/lb)	1.88	2.86	137
Ban Houayxai C1 cost (US\$/oz gold)	940	702	(25.3)
Ban Houayxai all-in sustaining cost (US\$/oz gold)	1,346	1,040	(22.7)
Gold price (US\$/oz)	1,761	1,797	2.0



Governance

Phu Bia Mining Mobile
Maintenance Administration
Supervisor, Keomany Chanthasith

Sustainability structure

PanAust transitioned from a listed public company in 2015 to a subsidiary of Guangdong Rising Holding Group Co. Ltd (GRHG).

PanAust's has retained good practice corporate governance frameworks, systems and standards which are underpinned by the Company's Values and a culture of continuous improvement.

The PanAust Board of Directors

The Board of Directors is the highest governance body within PanAust. The Directors for the period 1 January to 31 December 2021 are listed below.

The PanAust Board of Directors		
Board member	Position	Date appointed
Mr Shu Yao	Chairman	11 May 2021
Dr Qun Yang	Executive Director	26 September 2017 - 15 January 2019
	Executive Chairman	15 January 2019 Resigned as Executive Chairman 11 May 2021
Mr Daling Zheng	Executive Director	27 August 2018
Mr Paul Arndt	Non-Executive Director	27 August 2018
Mr Muiyi Zhang	Non-Executive Director	29 March 2019 Resigned 7 May 2021
Mr Yong Yang	Non-Executive Director	29 March 2019 Resigned 7 May 2021
Mr Jianming Xiao	Non-Executive Director	29 March 2019 Resigned 7 May 2021
Mr Zhibin Huang	Non-Executive Director	29 March 2019 Resigned 7 May 2021
Mr Wenhao Pan	Non-Executive Director	11 May 2021
Mr Mengliang Dai	Non-Executive Director	11 May 2021

For the profiles of the current members of PanAust's Board, see the Company's website, www.panaust.com.au/our-people/#boardofdirectors.

PanAust's Board of Directors and members of the PanAust management team are responsible for ensuring effective measures, systems and controls are in place in relation to managing:

- › environmental, community, health and safety, human resources and other sustainability-related issues and incidents that may have material strategic, business, and reputational implications for the PanAust Group and its stakeholders
- › reporting by PanAust in accordance with the GRI Universal Standards or other reporting standards.

Remuneration strategy

PanAust's approach to employee remuneration promotes a performance-based culture. Remuneration, benefits, and rewards are aligned with PanAust's strategy, plans and objectives, and merit forms the foundation of performance-based pay and career progression.

Remuneration is linked to quantitative lead and lag targets against which sustainability performance is measured at all levels of the organisation. These targets reinforce sustainability performance as a key component of the Company's culture.

The senior management team members are evaluated against their position descriptions, of which sustainability performance is a component.

The mining equipment go line area at the Ban Houayxai Gold-Silver Operation with a Cat® 740 articulated dump truck, Cat® 16M grader and Cat® 740 water truck on standby



External standards, principles, and guidelines

PanAust measures its sustainability performance against international standards and commissions independent audits to evaluate its performance.

PanAust endeavours to act in accordance with the following standards, principles, and guidelines:

- > the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability (applied to PanAust's operating assets), [ifc.org](https://www.ifc.org)
- > the Minerals Council of Australia (MCA) Enduring Value¹ which aligns with the International Council on Mining and Metals (ICMM) Sustainable Development Framework Principles: [minerals.org.au](https://www.minerals.org.au), [icmm.com](https://www.icmm.com)
- > the ICMM's Principles on climate change policy design: [icmm.com](https://www.icmm.com)
- > the International Cyanide Management Code (the Cyanide Code). A voluntary industry program administered by the International Cyanide Management Institute (ICMI) for the gold-mining industry that promotes the responsible use of cyanide. PanAust has been a signatory to the Cyanide Code since 2011 for its Ban Houayxai Gold-Silver Operation in Laos (see page 75): [cyanidecode.org](https://www.cyanidecode.org)
- > the GRI Standards. PanAust reports against the GRI Standards on topics that are material to its business as determined through its risk management approach and materiality determination process: [globalreporting.org](https://www.globalreporting.org)

- > the Voluntary Principles on Security and Human Rights (VPSHR). A set of principles designed to guide companies in maintaining the safety and security of their Operations within a framework that encourages respect for human rights. PanAust has been a member company of the VPSHR since 2013 (see page 98): [voluntaryprinciples.org](https://www.voluntaryprinciples.org).

External recognition

PanAust is proud of its sustainability and operational performance and has been recognised internationally through several awards. A list and description of PanAust's awards can be found on the Company's website, panaust.com.au/external-recognition

Maintaining a sustainability culture

For PanAust, a successful and sustainable business is one where financial and non-financial performance outcomes are pursued in a complementary manner.

The Company's approach to sustainability has its foundations in its Vision and Values and code of conduct, The PanAust Way. PanAust's Sustainability Policy outlines the Company's commitment to sustainable performance through improving health and safety, host communities, environmental management, the application of ethical business practices, and corporate governance standards. The policy includes a commitment to continuously improve sustainability management and performance. The Sustainability Policy is available to employees in English, Lao, Tok Pisin, Vietnamese and Thai languages on the Company's intranet.

Sustainability is implemented through visible leadership and people management, induction and ongoing training and awareness sessions, strict observance of high-quality corporate governance standards, excellence in financial management, outstanding technical expertise and supportive processes and systems.

Sustainability performance forms part of the PanAust management team's critical tasks for each year. In 2021, the Head of Safety and Internal Control was responsible for risk management, and sustainability across the PanAust Group, and reported directly to PanAust's Managing Director and CEO.

Since 2009, the Company has facilitated an annual workshop with senior management, managers, and sustainability support staff across the Group. In 2019, the format of these workshops transitioned to a Safety Summit, with a focus on managing operational safety for 2020 and beyond. The new format provided a fresh approach to the management of material risks and sustainability. A plan was formulated during the 2019 Safety Summit that detailed objectives for the coming year and beyond. The 2021 Safety Summit was once again postponed due to COVID-19 travel restrictions and restrictions on gatherings of large groups of people. PanAust plans to reconvene the Safety Summit in 2022.

The PanAust Group Risk Annual Plan and individual achievement plans describe the operational line managers' responsibility for the delivery of sustainability-related targets.

Business conduct

PanAust is a company with a clear Vision and a strong commitment to high-performance outcomes. It recognises that the way it conducts its business is key to developing and maintaining its social licence to operate in host countries and with host communities. PanAust's Vision and Values and code of conduct (The PanAust Way), applies to all employees, directors, and business partners providing guidance on how the business will operate legally, ethically, with integrity and respect.

Our business partners include contractors, consultants, suppliers, and service providers working with or for the PanAust Group, regardless of their position and location. The PanAust Way includes sections on workplace behaviour, operating with integrity, communicating externally, and managing sustainability.

PanAust's Vision and Values and The PanAust Way are presented and distributed throughout the Company in English and Lao. Key concepts are also frequently communicated to reinforce the application of the Company's Vision and Values.

PanAust has internal controls and procedures in place to monitor for the possible misappropriation of funds, bribery and corruption and other code of conduct-related issues. This includes periodic checks through external audits and senior management-led reviews.

No incidents relating to breaches of The PanAust Way were identified during 2021.

¹ PanAust is an associate member of the MCA and a signatory to its 'Enduring Value – The Australian Minerals Industry Framework for Sustainable Development'. The framework commits companies to uphold fundamental human rights and respecting cultures, customs, and values in their dealings with people affected by their activities. As an associate member of the MCA, PanAust is committed to applying operational standards globally that are consistent with Australian operational standards, while accommodating variations because of cultural, geographical, or environmental circumstances in Laos, Papua New Guinea, Myanmar, and Chile. Full MCA membership requires Australian-based assets.

Anti-bribery and corruption

PanAust recognises that acts of corruption undermine the effectiveness and legitimacy of government institutions to the detriment of the general public. Such acts are illegal and real or perceived acts of corruption can also impact PanAust's social licence to operate. PanAust strictly prohibits employees, directors, and its business partners from making or receiving bribes or corrupt payments and endeavours to ensure complete transparency of all transactions.

The PanAust Way communicates the Company's position in relation to anti-bribery and corruption, and provides guidelines relating to gift giving and receiving, anti-competitive behaviour and compliance with the law.

The PanAust Way prohibits employees from making facilitation payments. PanAust has a Company-wide training package that informs employees about relevant anti-bribery legislation and prohibited conduct.

PanAust also has in place specific anti-bribery and corruption standards in Laos and Myanmar that set out the standard of behaviour expected of directors, employees as well as contractors, consultants, suppliers, and services providers while working for PanAust and its subsidiaries.

PanAust employees, directors and business partners must comply with the laws of the countries in which the Company operates. Under Australian law, it is an offence for Australian companies, citizens, and residents to bribe foreign public officials (*Criminal Code Act 1995*).

PanAust will not use third-party intermediaries to circumvent the application of the Company's strict prohibition of bribery and other corrupt payments.

PanAust has cash management policies in place that promote the active reduction of the use of cash across the business. Strict accounting and reporting processes are in place to ensure transparency relating to the transaction.

PanAust also uses business integrity screening software to improve the detection and prevention of anomalous payments.

There were no instances of Company-related bribery and/or corruption reported to the PanAust Board or the PanAust management team in 2021. Additionally, there were no fines or legal actions for anti-competitive behaviour or anti-trust or monopoly practices, nor did the Company receive any fines or non-monetary sanctions for non-compliance with laws and regulations in 2021.

The Whistleblower Standard and Service

PanAust has in place a Whistleblower Standard and a Whistleblower Service that allows for the reporting of any conduct that is contrary to The PanAust Way. Issues can be raised via the Whistleblower Service by mail, email, telephone, or an online form available on PanAust's website, panaust.com.au/whistleblower-service.

The Whistleblower Service is available in English, Lao, and Tok Pisin and a translation service is available for other languages for submissions made online, by email, or voicemail message. Issues can be reported anonymously, and employees are encouraged to use the service if they are uncomfortable raising issues through normal day-to-day reporting channels.

PanAust prohibits any form of retaliatory action against anyone who raises a genuine concern, or for helping to address a concern. A link to PanAust's Whistleblower Service is available on the Company's website, panaust.com.au/corporate-governance.

In 2021, no material matters were reported through the Whistleblower Service.

Human rights

Human rights are basic rights and freedoms to which all people are entitled. Human rights apply to every person across the globe regardless of their birthplace, age, personal beliefs and/or any other individual attribute.

PanAust supports and respects human rights consistent with the Universal Declaration of Human Rights.

Human rights encompass a broad range of issues in relation to PanAust's employees, contractors and suppliers, host communities, customers, business partners and other stakeholders impacted by its Operations. The Company understands that to manage human rights risks and realise opportunities, PanAust needs to build collaborative and transparent relationships with these key stakeholders across the mining lifecycle.

Where available, PanAust uses existing systems and processes for the assessment and management of human rights issues, and as a minimum, PanAust meets applicable legal requirements in relation to human rights.

2021 represented the second reporting period for the Company under the Australian *Modern Slavery Act (2018)*, with the second statement due in 2022. Furthermore, in 2021, PanAust recorded no breaches of Indigenous people's or other human rights, however, one complaint was received.

In December 2021, the Australian National Contact Point for Responsible Business Conduct (AusNCP) received a complaint from two non-governmental organisations (NGOs) (Project Sepik Inc. and Jubilee Australia Research Centre), claiming to represent 2,638 Indigenous residents along the Sepik River, downstream of PanAust's proposed Frieda River Mine site in Papua New Guinea (PNG).

In summary, the complaint alleged that PanAust's actions breached the Disclosure, Human Rights and Environment standards of the Organization for Economic Cooperation and Development Guidelines for Multinational Enterprises. PanAust responded to the complaint by firmly denying any such breach and confirmed that the matters complained about are the subject of ongoing legislative and consultation processes in PNG. PanAust engaged in the complaint process in good faith and provided submissions to the AusNCP. In response to the submissions of the complainants and PanAust, the AusNCP is to provide an Initial Assessment in 2022 and a final statement in 2023.



A summary of PanAust’s approach to managing human rights is provided in the table below and includes references to examples presented in this Report.

PanAust’s approach to managing human rights

Stage	Approach
Commitment	<ul style="list-style-type: none"> > The PanAust Way > Sustainability Policy > Sustainability Standards > Human Resources Standards > Member Company – Voluntary Principles on Security and Human Rights (see page 98) > Alignment to the ICMM Indigenous Peoples and Mining Position Statement > Annual reporting requirement under the Australian <i>Modern Slavery Act (2018)</i>
Assessment	<ul style="list-style-type: none"> > Human rights risk assessments > Human rights due diligence > Environmental and Social Impact Assessments > Stakeholder analysis (including Indigenous peoples, gender, vulnerable and disadvantaged) > Modern slavery supply chain analysis and risk assessment
Action	<ul style="list-style-type: none"> > Workforce practices and feedback mechanisms > Stakeholder engagement (including disadvantaged groups) appropriate to the project and location context and the IFC Performance Standards (see pages 45 and 54) > Supplier evaluations and contract clauses related to human rights (see page 31) > Project designs, development, and closure consistent with cultural and social values of host communities (see pages 62 to 63) > Grievance mechanisms, resettlement, and compensation protocols (see page 54) > Human Resources grievance mechanisms including the Fair Treatment Standard and Workplace Representative Committee > Community development (including opportunities to enhance the human rights of host communities, for example, access to water and improved healthcare, education, and livelihood opportunities) (see page 54 to 56) > Social and Environmental Management Plans
Check and report	<ul style="list-style-type: none"> > Periodic surveys including socioeconomic, perception, employee surveys > Periodic audits including audits of the Lao Operations against the IFC Performance standards and sustainability standards and contractor audits (see page 39) > Internal and external reporting > Whistleblower Standard and Whistleblower Service (see page 31) > Annual Modern Slavery Statement





Phu Bia Mining Fire and
Emergency Services Supervisor,
Phatthana Thorphialouang,
leading the Emergency Response
Team training at the Phu Kham
Copper-Gold Operation

Sponsorships and donations

PanAust sponsors and donates to programs, organisations and causes that build goodwill in operational areas and align with its Values.

PanAust's sponsorship and donation committees transparently and consistently assess requests against the priority areas:

- › projects located in the countries where PanAust has operating assets or is undertaking project development activities
- › activities of national importance and symbolism
- › projects benefitting the people of the provinces and districts in which the Company operates or is present
- › projects promoting the culture, history, society, and ethnic minorities representative of the areas in which the Company operates
- › projects that support capacity-building of relevant sector government agencies.

Decisions are reviewed by the PanAust management team. Details of the Company's sponsorships and donations in 2021 are provided on page 57 of this Report.

Sustainability in the supply chain

Building mutually beneficial relationships with suppliers and contractors creates a sense of shared value that benefits the broader community and the PanAust Group.

The PanAust Way, along with PanAust's Procurement Policy and Contractor Health Safety and Environment Management Standard, set the minimum expectations for suppliers and contractors in areas including safety, environment, community, human rights and operating with integrity. The safety systems and performance of local contractors in Laos is a material issue for PanAust (see page 94).

In 2018, PanAust risk-profiled the Company's top tier (by expenditure) suppliers, which represent approximately 80 per cent of direct supplied goods. Each supplier was risk-ranked across several categories including safety, environment, compliance and anti-bribery and corruption. The profiling highlighted that within the top tier of the supply chain, PanAust engages reputable organisations whose systems and in-country legal obligations mean the necessity for PanAust to further influence performance is either not required or is limited.

A further risk review of suppliers used in 2021 was carried out using the *2017 Global Estimates of Modern Slavery: Forced Labour and Forced Marriage Report*, *Global Slavery Index 2018 Report* and the *2021 Trafficking in Persons Report* to assess the risk of modern slavery in PanAust's supply chain. This assessment identified that almost 72 per cent of PanAust's 2021 procurement spend was with suppliers incorporated in countries whose governments fully meet the minimum standards for eliminating of trafficking or who do not fully meet the standards but are making significant efforts to bring themselves into compliance. This drop from 95 per cent in 2020, is due to five countries in the region, including Thailand, who had their categorisation downgraded from Tier 2 to the Tier 2 watchlist. The suppliers are still chosen based on the risk assessment and can be classed as reputable organisations.



Copper concentrate
produced at the Phu Kham
Copper-Gold Operation

Governance

PanAust procures goods and services locally where practical and bases all decisions on a defined and transparent process that covers commercial competitiveness, risk profile and contractor/supplier capacity. This support of local businesses results in direct and indirect benefits accruing to host communities and regional economies in Laos (see page 62) and PNG. For this reason, PanAust acknowledges that its greatest supply chain responsibility is at a local level where it has the maximum ability to influence local suppliers and contractors. This will continue to be the focus of the Company's efforts in 2022 and beyond.

In 2021, 54 per cent of goods and services for the Company were purchased in Laos; 78 per cent of goods and services are purchased regionally (Laos, Thailand, and Vietnam). At the Frieda River Project site, over 90 per cent of goods and services were sourced from local suppliers in PNG.

Product stewardship

In Laos, PanAust produces copper concentrate which is sold directly in Asia to international smelters or through merchant traders. Gold-silver doré is sold directly to a refinery. Given the volume of product relative to the overall market size, PanAust has limited influence on the end-purchaser or end-product (copper cathode or refined precious metals). When a direct sales contract is placed with a smelter, due diligence is conducted to provide assurance on the customer's reputation, financial capability, and legal and business structure. Contracts are subject to PanAust's standard terms and conditions. All sales are secured by pre-payment or letter of credit.

PanAust's product stewardship approach focuses on the storage and transport of concentrate from mine site gate to port in such a way the product meets customer specifications and in-country requirements. PanAust owns and operates its own road transport fleet for concentrate movement

in Laos and Vietnam. PanAust's management systems and associated auditing processes are integral to the product stewardship approach, and they include global positioning system monitoring and tracking of the product, and the use of escort vehicles on high-risk sections of the haulage route to enhance road safety and reduce the risk of concentrate spillage.

The market considers PanAust's copper-gold concentrate 'clean' and product metal specifications are incorporated in contract terms and conditions with international customers. The Company complied with agreed contract specifications for product shipments during 2021. All trace elements, including arsenic, were in compliance with destination country maximum limits. PanAust engages directly with its customers through industry forums and office or site visits. PanAust received one customer complaint in 2021, related to disputed shipment weight, which was rectified to the satisfaction of both parties.

Risk management

PanAust's approach to risk management

PanAust recognises that identifying and managing risk is integral to business management. It improves the Company's profitability and protects and creates long-term value. PanAust uses risk registers, incident management systems and stakeholder feedback, combined with auditing and benchmarking processes to proactively identify, evaluate, prioritise, and manage risks. The aim is to track and improve business performance.

PanAust fosters a risk-aware corporate culture. Materiality and risk tolerance are key considerations in all business decisions. Risk management is embedded throughout the business and mining lifecycle, including PanAust's critical activities across all business functions and processes.

The risk management framework is also applied when considering business cases for growth projects and entry into new jurisdictions. Risk assessments and risk management plans are developed to ensure that potential reputation, legal, business, regulatory and political exposures are addressed and have appropriate mitigations embedded into business strategies and plans.

Crisis Management Framework

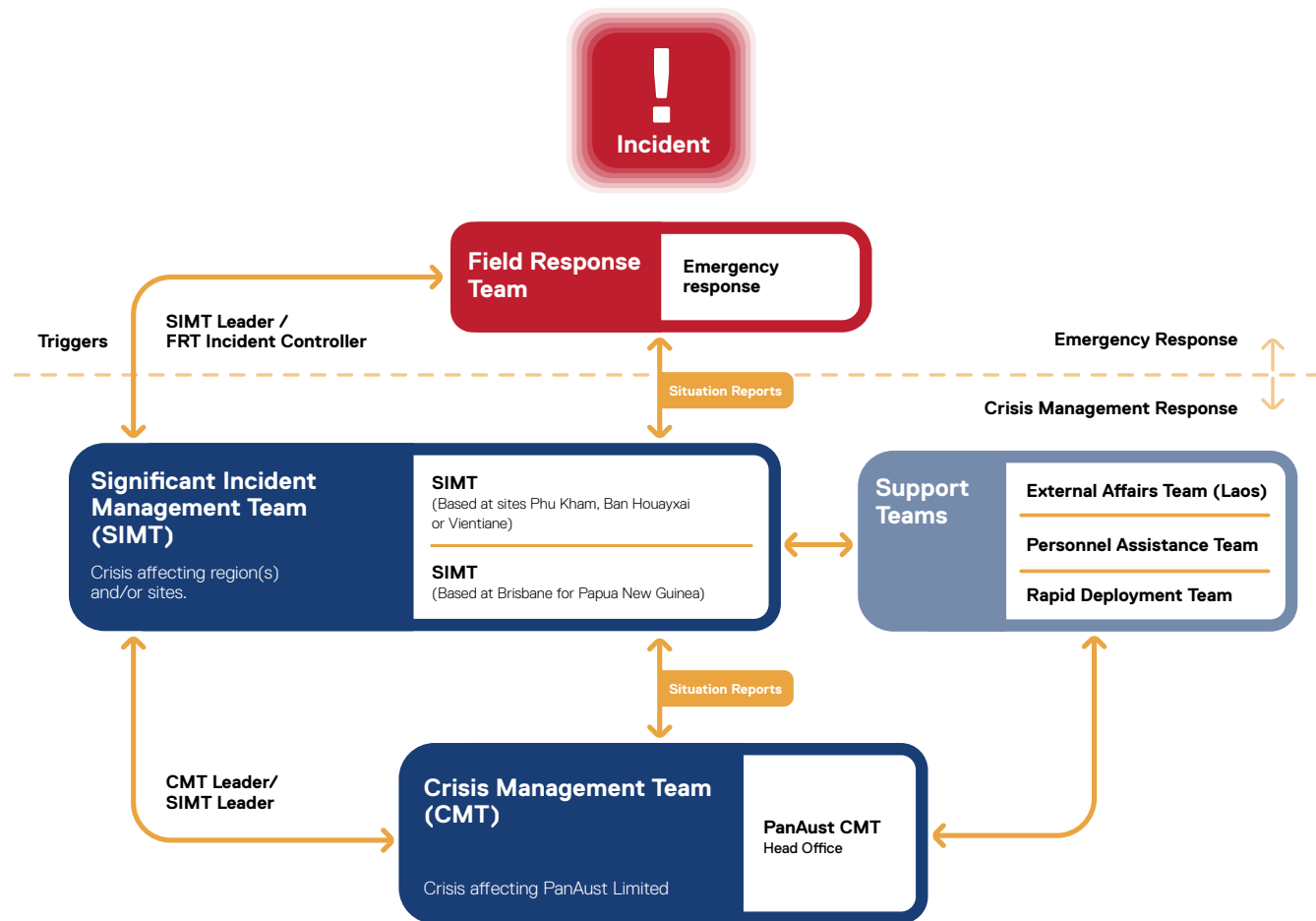
PanAust's crisis management structure enables an appropriate organisational response to potential incidents across the Company's diverse geographical locations of its operational activities.

The organisation's response to an unplanned event is structured around a three-level event, three-level response framework:

Incidents: Events that have occurred and resulted in or have the potential to result in adverse consequences to PanAust. The Field Response Teams (FRT) at PanAust sites provide a first physical response to people or assets in the event of an incident occurring.

Emergency: Incidents that have occurred and have the potential to be outside the range of normal Operations and require actions beyond everyday actions to contain or control the incident. A Significant Incident Management Team (SIMT) is called to manage the business aspects of any incident beyond site capabilities or boundaries and is responsible for ensuring all aspects of a crisis are managed within the relevant host country or region's requirements.

Crisis: These are events with the potential to impact the underlying value of the Company. The PanAust Crisis Management Team (CMT) in Brisbane is formed. This team supports the SIMT and works on the crisis specifically as it relates to material business aspects of a crisis for PanAust.



The crisis management process was initially enacted in January 2020 to monitor and plan the Company's response to COVID-19. Following its creation in 2020, the SIMT based in Laos was convened in 2021, with the focus still on preparing the business in the event of further COVID-19 disruptions. In 2022, PanAust is looking to implement the learnings and processes from the SIMT into normal business practices. The CMT continued to oversee the Company's COVID-19 response at a Group-level in 2021.

The CMT and SIMT continued to meet regularly throughout 2021 to manage the Company's response to COVID-19.

Risk management policies, framework, and processes

PanAust's Enterprise Risk Management (ERM) Policy outlines the requirement for an effective ERM system to identify and manage all material risks. The policy is supported by the Company's ERM Standard.

In 2021, PanAust continued to focus on integrating risk management into all business processes, projects under evaluation and planning for closure infrastructure.

PanAust's risk management framework includes criteria for materiality and guidance on treatment and reporting measures. Procedures align with:

- › the International Organization for Standardizations (ISO) ISO 31000 Standard on Risk Management
- › the Company's Sustainability Standard 4, Risk and Change Management
- › Principle 15 of the Rio Declaration ⁽¹⁾ (the Precautionary Principle).

The PanAust ERM system is based on a three lines of defence model:

- 1) Operational level activities carrying out risk assessments and implementing control measures.
- 2) Corporate oversight including the development of the ERM framework and processes and carrying out assurance of the operational level activities.
- 3) Independent assurance to verify the first two lines are operating effectively.

PanAust's management team is comprised of senior managers and is responsible for ensuring that risk management systems and internal controls are in place. Issues are reported to the PanAust Board as significant matters arise. Regular risk reporting processes are in place.

The management team carefully considers the level of risk it is prepared to tolerate. The PanAust management team guides corporate risk strategy, provides oversight of strategic issues, is accountable for implementing the ERM framework and for monitoring effective implementation.

The PanAust management team has responsibility for a high-level risk register that identifies key material business risks relevant to PanAust at the Group level. Risk owners present to senior management on the management of material risks through a peer review process. In addition, every senior manager has responsibility for operational, departmental or project risk registers and is required to have in place plans to address significant risks.

The Company has a clear process for defining materiality. Group-level risks are defined as an event that would result in a consequence Level 5 or above, evaluated using the PanAust Extended Consequence Table (which uses a rating scale of 1 to 9, with 9 being the highest consequence) on the following basis:

- › is the risk significantly material to require public disclosure?
- › could the risk substantively influence the assessment and decision of stakeholders?
- › could the risk materially change the underlying value of the Company?
- › given the strong reliance on Phu Kham for cash flow, could a production stoppage at the operation cause a US\$5m to US\$10m impact on cash flow and EBITDA respectively (equivalent to 10–14 days production)?
- › by considering impacts on short, medium, and long-term production and financial results, impacts to health and safety, the environment, social outcomes, the Company's regulatory environment and its reputation.

PanAust has identified 27 active Group-level risks that are material to the Company. These include economic, environmental, and social risks. Areas of non-financial risk that have been identified as material or potentially material to PanAust and its stakeholders are addressed in detail in this Report. Financial risks are outlined in PanAust's Annual Report which is submitted annually to ASIC as a component of the Company's regulatory obligations.

Group-level risks were reviewed by the PanAust management team in 2021.

For certain high-risk activities, specialist governance structures are implemented to mirror the ERM system model:

- 1) Operational sites are responsible for carrying out the day-to-day risk mitigation activities.
- 2) An internal specialist review committee is formed to provide support and oversight for the operational teams.
- 3) An external independent review committee is chartered to carry out reviews of the operational practices and report their findings to the PanAust Board via the management team.

These specialist governance structures are currently in place for tailings dam risk management and open-pit geotechnical risk management, and closure management.

PanAust's sustainability standards

PanAust carries out its activities in a manner consistent with international leading practices and in compliance with:

- › the Company's Sustainability Policy and 14 Sustainability Standards.
- › legal obligations (including environmental/ social impact assessments for projects).

Requirements and obligations are applied through the Company's Environmental and Social Management Systems. All PanAust employees and contractors are obliged to operate within these requirements.

PanAust's 14 Sustainability Standards apply to all business activities across the Group and have been designed to provide a risk-based management system against which each Operation's performance can be measured and continual improvement implemented.

PanAust's operational performance is regularly assessed against the Sustainability Standards and external commitments. The Company's Operations in Laos have well-developed discipline-specific safety standards which are being progressively elevated to Group standards in support of other regions where PanAust has development projects and/or potential future Operations.

¹ Principle 15 of the Rio Declaration states that in cases of threats of serious or irreversible environmental damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent degradation.



(L-R) The Sandvik crushing area, turkey nest dam and mobile maintenance facility at the Ban Houayxai Gold-Silver Operation

Phu Bia Mining Fire and Emergency Services Superintendent, Dave Boreham, overseeing a training drill at the Phu Kham Copper-Gold Operation



Auditing and benchmarking

PanAust has established a corporate review and audit program to support its Enterprise Risk Management programs. Some reviews are carried out internally while others require external auditors.

2021 sustainability audit plan and progress

External/internal audits	2021 performance	Next audit
Economic performance		
Group financial audit	Completed annually and disclosed in PanAust's Annual Report to ASIC	2022
External insurance audit	Completed	2022
Social performance		
Risk-based environmental and social performance audit (replacing the IFC audit)	Not completed ⁽¹⁾	2023
Socio-economic surveys	No surveys planned for 2021 Lao socio-economic survey deferred due to extension of mine life	2022
Community Development Fund (CDF) reviews	No reviews undertaken during 2021	Household survey planned for 2022
Environmental performance		
Acid rock drainage (ARD) external audit	Due to COVID-19-related travel restrictions there was limited activity on auditing the ARD activities on site with focus remained on working through the action plan from the previous audit in 2020.	2022
Cyanide Code Recertification	In 2021, a bench top review of the International Cyanide Management Code (ICMC) compliance was held by the Ban Houayxai Operation and WSP (Golders). This provided a gap analysis and action log which was completed ahead of the formal audit in 2022.	2022 recertification audit
Tailings Independent Review Panel (TIRP) and design engineer tailings storage facility construction inspections	One virtual site inspection was undertaken by the TIRP in 2021 to review the performance of both tailings storage facilities (TSFs). The Panel confirmed good management practices for the construction, operation, monitoring and corporate governance of both facilities. The Engineer of Record also completed a physical site inspection (November 2021) to verify the construction and operational performance of both facilities.	2022
Comprehensive dam safety review (CDSR)	A CDSR was not completed in 2021 as it was not required. According to the Australian National Committee on Large Dams (ANCOLD) guidelines a CDSR is due every 3–5 years or when a change of status of the TSF is proposed. The last CDSR was conducted in 2018. The virtual Annual Dam Safety Review (ADSR) was completed in 2021. This indicated the TSF were operating in line with design intent. Physical inspections are expected in 2022 as COVID-19 travel restrictions are lifted.	2022
Open-pit geotechnical review	Virtual independent reviews by the Geotechnical Independent Review Panel (GIRP) were completed for the Phu Kham and Ban Houayxai open pits in the September and December quarters. Ongoing work has been undertaken to address the GIRP recommendations.	2022 in person site visit planned

1 Delayed due to COVID-19-related travel restrictions.

2021 sustainability audit plan and progress

External/internal audits	2021 performance	Next audit
Health, safety, and security		
Technical safety audits for high-risk activities and/or hotspots	Third-party aviation audits were completed remotely for Laos and Papua New Guinea providers.	2022
Contractor safety management compliance reviews	13 contractor audits were completed for the Operations in Laos. A combination of compliance reviews, risk register reviews and inspections were also completed.	2022
Security setting and security management	Quarterly internal security audits conducted.	2022
Governance and risk management		
Sustainability Standards internal benchmarking: Phu Kham and Ban Houayxai Operations and Frieda River Project	PanAust Asia Safety Standards continued to be reviewed and updated throughout the year by subject matter experts. PanAust Sustainability Standards continued to be implemented at the Frieda River Project.	2022 full benchmarking and review of Sustainability Standards.

2021 sustainability performance

Targets	Results	Commentary 2021	2022 Target
Economic performance			
Achieve budget for production and cost	Partially achieved	Production and costs for the year were below budget for the Phu Kham Operation and above budget for the Ban Houayxai Operation.	Achieve budget for production and costs.
Advance the Frieda River Project permitting through proactive engagement with landowners, communities, provincial and national Government stakeholders	Achieved	During 2021, the Frieda River Project team continued to work with the Mineral Resources Authority (MRA) and the Conservation and Environment Protection Authority (CEPA) to progress the Project permitting process. Stakeholder engagement activities were increased throughout the year. The Frieda River Project team completed the Independent Peer Review process.	Continue to advance the Frieda River Project permitting through proactive engagement with landowners, communities, provincial and national government stakeholders.

2021 sustainability performance

Targets	Results	Commentary 2021	2022 Target
Complete pre-feasibility studies at the Ban Houayxai Extension (BHX Extension) satellite deposit Discover more potential ore	Partly achieved	Excellent progress at BHX Extension. Established a significant resource that will add to the life of mine. Successful execution of near-mine drilling at the Phu Kham Operation.	Complete pre-feasibility studies at the BHX Extension satellite deposit. Discover more potential ore. Complete deep drilling program at Nam San and upgrade existing resource to inform further life of mine studies.
Recommence regional exploration in Myanmar should the political situation allow	Not achieved	No further exploration was carried out due to the political situation in Myanmar exacerbated by the lingering effects of COVID-19.	Recommence regional exploration in Myanmar should the political situation allow.
Successfully transition the Exploration team off the MEPA after further defining potential satellite deposits for the Ban Houayxai Operation (BHX)	Partially achieved	Delayed transition of the Exploration team off the MEPA related to the establishment of PanAust's new Lao-registered subsidiary, Saisana Lao Resources, and the ability to procure new ground outside of the existing MEPA. Nam Ve silver and gold satellite prospects in the MEPA advanced.	Complete scoping level studies at Nam Ve silver and gold satellite prospects. Identify further satellite mineralisation to increase life of mine for the Ban Houayxai Operation. Identify and evaluate gold base metal opportunities for Saisana Lao Resources and initiate exploration programs once tenure is granted.
Governance			
The PanAust Way updated, implemented and embedded consistently across each site/geographical location	Achieved	Updates to The PanAust Way were finalised and published across the Group during 2021. The Group's first PanAust Modern Slavery Statement was published.	Governance practices to be progressed including training in The PanAust Way and the publication of the annual Modern Slavery Report.
2020 Business Review and Sustainability Report prepared to GRI standards	Achieved	The 2020 Sustainability report was released in 2021 and prepared following the GRI standards.	Prepare and publish an externally assured 2021 Sustainability Report to the GRI standards.

2021 sustainability performance

Targets	Results	Commentary 2021	2022 Target
Social performance			
Review and revise community development fund (CDF) plans for both Phu Kham and Ban Houayxai Focus CDF programs on long-term projects to last beyond the Phu Kham and Ban Houayxai mine life Fully implement the five-year CDF Plan 2018–2022 and work towards achieving the UN Sustainable Development Goals	Partially achieved	No new CDF projects were started during 2021. Of the 34 projects that were planned for implementation between 2019-2020, at the end of 2021, 21 were completed with the remaining 13 programs to continue in 2022. The unused budgeted funds from 2021 will be carried over to be used on projects in 2022.	Complete the remaining CDF projects. Establish a new CDF memorandum of understanding with the local government in Xaisomboun Province.
Continue with positive engagement practices in countries where PanAust has a presence	Achieved	Strong government relationships were maintained and managed in Laos, Vietnam (haulage and port) and Thailand (haulage and port). Stakeholder engagement continues with the Government of Papua New Guinea, provincial administrations, landowners, and host communities towards securing all relevant permits and licenses, including a social license to operate.	Continue with positive engagement practices in countries where PanAust has a presence.
Environmental performance			
No level 3 environmental incidents	Achieved	No level 3 environmental incidents.	No level 3 environmental incidents.
Continued identification and implementation of energy efficiency projects	Achieved	Several energy efficiency opportunities were identified in 2021 resulting in savings across the Company's Scope 1, 2 and 3 emissions of greenhouse gases.	Continued identification and implementation of energy efficiency projects.
Submit preliminary Mine Closure Plans for Phu Kham and Ban Houayxai to the Government of Laos Establish a Closure Governance Charter with an internal review committee and an independent review panel	Achieved	Preliminary Mine Closure Plans were submitted in July 2021. Group Closure Review Committee Charter developed and endorsed. Closure Review Committee established. Closure Independent Review Panel established.	Advance discipline-specific studies for the Closure Feasibility Study. Develop final landform designs for completed waste rock dumps. Improve integration of Closure planning to mine planning.

2021 sustainability performance

Targets	Results	Commentary 2021	2022 Target
Health and safety performance			
Zero fatalities on controlled work sites	Achieved	Zero fatal work-related events occurred during 2021.	Zero fatalities on controlled work sites.
TRIFR \leq 0.76	Achieved	2020 TRIFR of 0.22.	TRIFR of \leq 0.81.
Crisis management training simulation for PanAust	Partially achieved	While formal training was not undertaken during 2021, the crisis management framework was used extensively during the Company's COVID-19 response and provided practical experience of its application.	Crisis management training simulation for PanAust and process review.
Implement a Critical Control Verification (CCV) process to ensure that risk controls considered critical are verified as in place and working as intended	Partially achieved	A procedure and process for verifying critical controls was developed and published in 2021. However, verification activities had not yet commenced.	Implement verification activities for critical controls.
Our people			
Maintain Lao localisation above 90 per cent Continue to improve Lao-nationals' development to enable promotion into roles previously held by expatriates	Achieved	Lao localisation remained above our target for 2021 at 92 per cent. In 2021, a total of 321 Lao-national employees were promoted into senior roles supporting the Company's focus on continuing to transition professional, leadership and management roles to Lao-national employees.	Maintain Lao localisation above 90 per cent. Continue to improve Lao-nationals' development to enable promotion into roles previously filled by expatriates.
Continue to develop technical trades training capability in Laos	Achieved	While COVID-19 made 2021 a challenging year for external training due to school closures and travel restrictions, the Three Year Accelerated Trades Training Apprenticeship Program progressed into its 2nd Year for our current intake of 44 apprentices.	Continue to develop technical trades training capability in Laos.



Social performance

PanAust is committed to ensuring its presence positively impacts the host communities and countries in which it operates.

Mr Ja Lor, a local villager from Ban Nam Gnone, participating in the cattle fattening Sustainable Livelihoods Program at GMO Valley

PanAust's materiality process identified the following social performance focus areas for 2021 as:

- safeguarding community health, safety, and wellbeing from COVID-19 impacts
- social licence to operate and stakeholder engagement
- economic value generated
- community development
- closure preparedness and messaging
- artisanal and small-scale mining.

In 2021, the COVID-19 pandemic continued to present the Company with complex challenges to the safe delivery of community development and engagement. Many ongoing programs were delayed due to COVID-19-related travel restrictions and the Company's internal processes to limit community interaction to minimise COVID-19 transmission risk. Programs that were limited resumed as the risk of COVID-19 infection within PanAust's communities reduced. Further details are discussed in this section.

The Company's approach to community development is underpinned by its commitment to meeting the global demand for resources in a socially responsible way, ensuring respectful and ongoing dialogue with stakeholders, recognising, and supporting traditional rights and values and respecting cultural heritage.

Community development projects enable host communities to build long-term capacity and empower them to determine their own development priorities. The Company's community development plans consider host communities' needs, host countries' development plans and the UN Sustainable Development Goals. The plans are developed in consultation with government authorities and community representatives and are supported by the information obtained from socio-economic surveys. This approach ensures that the development projects meet the needs of the communities while aligning with government and/or aid agencies working in the region where appropriate.

Host communities and countries obtain enduring benefits from PanAust's Operations through taxes and royalties, employment of local people, sourcing of goods and services locally, contributions to community infrastructure, training, and capacity-building and long-term economic and social development projects.

PanAust identifies the needs, issues, and standards of living in host communities through stakeholder engagement activities and social impact assessments, including periodic updates via socio-economic surveys. These methods enable the Company to gain a deeper understanding of the diversity and priorities of stakeholders, Indigenous and vulnerable peoples and assess risks and opportunities.


Partnering with and generating value for stakeholders, including host communities, governments, and employees, is essential for PanAust's growth and ongoing stakeholder support.

PanAust's management systems and supporting processes provide the guidelines, tools, and mechanisms to address social and environmental impacts while progressing opportunities. The systems are aligned with the IFC Performance Standards.

PanAust has mechanisms built into its business practices to monitor and evaluate its engagement and development activities. Communities can discuss concerns with Community Relations teams, or lodge concerns through a complaint, grievance, or request mechanism. Where PanAust's activities unavoidably impact livelihoods, compensation and mitigation schemes are activated.

Phu Bia Mining Senior Community Relations Officer, Ms Phouvanh Sypaserd, feeding fish at a fish farm in Nam Mo village with the owner Mr Phoum Mee





Flying over Paupe Village
near the Frieda River Project
site in Papua New Guinea

Safeguarding community health, safety, and wellbeing from the impacts of COVID-19

A key to PanAust's commitment to ensuring its presence has a positive impact on those living in its host communities is its drive to safeguard their health, safety, and wellbeing. This was highlighted in 2020 during the initial outbreak of the COVID-19 pandemic across its sites.

In Laos, given the population's low general health baseline and the highly contagious nature of the COVID-19 virus, the Company quickly identified in 2020 that local health authorities in its communities would need support for their pandemic response. Community health activities that the Company initiated in 2020, such as COVID-19 awareness programs in local villages on wearing face masks, correct hand-washing techniques and social distancing, continued into 2021.

Quarantining also remained a critical mitigation strategy to reduce COVID-19 transmission risk in 2021, until quarantine periods and requirements began to reduce mid-year, with the increase in the population's vaccination rate. Local business and the economy benefitted from the Company's quarantine-related expenditure, amounting to more than US\$9m in 2021, as described at page 47.

In PNG, a range of measures continued in 2021 to help protect the local villages from COVID-19, including:

- communicating information about COVID-19 via high frequency radio
- providing educational materials delivered to villages during crew changes about how to reduce the transmission of diseases by wearing face masks, washing hands correctly and maintaining social distance
- issuing detergents and sanitisers to the local villages
- supplying rapid diagnostic test kits to each village and providing training on their use
- training and awareness about COVID-19 for local community health workers
- helicopter transport of PCR test samples to the laboratory on behalf of the Government of PNG.

In 2021 the Company also established video-conferencing facilities at its Frieda River Project site, to continue community engagement while minimising face-to-face contact. See page 48.

In Myanmar, the Company suspended COVID-19 management activities upon its suspension of Operations in February 2021 due to the growing unrest in the country.

Hotel and guesthouse quarantine a silver lining for the local economy

In 2021 PanAust continued to adhere to strict quarantining standards for its workforce as required by government public health directives to safeguard the health, safety and wellbeing of its workforce and host communities and to protect its Operations.

As restrictions on movement between locations within Laos relaxed and more of the workforce were able to return to site, the Company's need for – and expenditure on – quarantine facilities also increased.


Throughout 2021, the Company exclusively occupied 18 hotels and guesthouses in Vientiane, the capital of Laos, where most of its workforce was quarantined. At peak, these hotels and guesthouses accommodated hundreds of workers, with typically between 100 and 200 workers entering and leaving quarantine daily. The Company established in-room polymerase chain reaction (PCR) testing for those quarantined to minimise the risk of infection transmission from transporting potentially infectious individuals.

PanAust also established quarantine facilities with medical supervision in more than ten guest houses in villages near its Operations in Xaisomboun Province, Laos, to enable infected workers to remain in their villages.

The cost of these quarantine arrangements, totalling more than US\$9m in 2021, provided some benefit to local businesses impacted by the pandemic. This local spend was significantly less than the potential cost to the Company of further shutdowns of its Operations caused by uncontrolled COVID-19 infection outbreaks.

Phu Bia Mining personnel being transported to hotel quarantine





Frieda River Limited Community Affairs
Coordinator, Sheila Aquila, picking up local
vegetables from Sokamin village

Engaging with the community in the pandemic: a technology solution

PanAust is committed to supporting the communities we are a part of, and we recognise that our success is reliant on the support of our host communities.

Part of this commitment is enabling genuine and inclusive community engagement with those impacted by our Operations, including listening to, and actioning the feedback and the issues raised by our communities.

In 2021, PanAust invested in new IT infrastructure at its Frieda River Project site to enable critical community engagement activities to recommence after the COVID-19 hiatus while also minimising the infection risks of face-to-face contact.

Members of the Community Leaders Forum, representing the seven villages impacted by the Frieda River Project, were assisted with travel arrangements to site for quarterly meetings, provided a negative rapid antigen test was recorded.

The Company hosted the Forum using its on-site video-conferencing facility, where at times up to 25 Forum members would meet virtually with Company representatives from the Project site and offices at other locations, such as Laos and Australia.

These virtual meetings were well received by the community, as they enabled the timely sharing of Project information and raising of issues of interest to the community directly with the Company.

PanAust's engagement processes enable community participation and respect for traditional methods of decision-making. PanAust aims to achieve free, prior, and informed consent (FPIC) of affected communities in accordance with IFC Performance Standard 7: Indigenous Peoples. PanAust recognises that this intent does not contradict the right of sovereign governments to make decisions on resource exploitation. PanAust's position is consistent with the ICMM's Indigenous peoples and mining position statement.

At PanAust's Phu Kham and Ban Houayxai Operations and the Frieda River Project, the Company has in place stakeholder engagement plans that identify the interests and relationships of stakeholders. These plans contain a range of culturally and socially inclusive engagement activities which are designed in collaboration with stakeholders and consider the needs of vulnerable groups.

During 2021, PanAust's stakeholder engagement activities included:

- a range of regular meetings with host communities, their nominated representatives (including representation by women) and other special interest groups
- meetings with relevant government departments and officials
- community development programs: community members, local and district-level authorities are engaged in all stages of the planning, approval, and delivery of community development activities
- community awareness campaigns: awareness campaigns in villages near Operations and projects provide an effective avenue for engagement with government agencies and other stakeholders to reach a large audience on key issues.

Many engagement campaigns were paused due to COVID-19-related travel restriction in Laos and PNG but continued where possible. Campaigns undertaken during 2021 in Laos included: COVID-19 health awareness, road safety campaigns and a Nam Gnone awareness program about the dangers of close proximity mining activities to the village. In PNG, where the lack of mobile telephone coverage in and around the Frieda River site presents communication challenges, the Company increased its use of very high frequency radio communications to engage with and provide services to the community while travel restrictions remained in place.

This included the weekly scheduled communications that cover a range of matters, from medical consultations to project consultations, status updates and grievances and facilitating communications between villages. In late 2021 as travel restrictions eased, the Company resumed helicopter transportation to facilitate direct engagement with its local communities.

- reports: PanAust's sustainability performance is comprehensively reported via its annual Business Review and Sustainability Report. An abridged version focused on Phu Bia Mining's activities is provided in English and Lao to key stakeholders in Laos. In addition, reporting to the Government of Laos occurs regularly.



Social licence and stakeholder engagement

PanAust seeks to build collaborative and transparent relationships with its stakeholders. Ongoing and open dialogue through informed consultation and participation with governments and host communities close to its Operations and projects enables PanAust to understand and address issues and identify opportunities for those directly and indirectly affected by its business activities.

Government engagement

The Government of Laos is one of PanAust's principal stakeholders. A framework of regular scheduled and ad-hoc meetings with central, provincial and district government-level officials provides important opportunities for dialogue. A dedicated Government Relations team is in place, with regular monthly and annual reports submitted on Company activities to the Government of Laos. A digital portal has been established to facilitate the timely sharing of Company information and ensure various Government stakeholders can access the information they require. Representatives from key government ministries are represented at both Phu Kham and Ban Houayxai Operations to ensure transparency, mutual understanding, and close and productive relationships at the operational level.

In addition, PanAust regularly engages senior Government of Laos representatives through meetings in Vientiane and site visits to the Operations; however many meetings and site visits did not occur in 2021 due to COVID-19-related travel restrictions.

In PNG, a Joint Provincial Consultative Committee (JPCC) supports provincial-level engagement. The JPCC, which meets quarterly, comprises officials from the West and East Sepik Provinces, as well as relevant district officials and national Government agencies, including the Mineral Resources Authority. During 2020 the JPCC was unable to meet due to COVID-19-related travel restrictions, however Project updates were provided directly to the Mineral Resources Authority.

The JPCC, which had been unable to meet in 2020, met once in 2021 to discuss its concerns with the Frieda River Project's waste management impacts, with a way forward being progressed at a JPCC workshop later in 2021.

While the Community Leaders Forum did not resume its usual quarterly meetings it was able to meet twice in 2021, using the video-conferencing facilities, see page 48. These meetings focused on matters including updating the CLF on the status of the Company's mining permit application and the independent peer review of its application status, seeking the CLF's support for the renewal of the exploration lease (EL) tenements, and progressing community development programs safely during the pandemic.

While it was not possible to meet with State government representatives in 2021 due to pandemic restrictions, engagement with provincial governments continued via phone and video-conferencing and the Telefomin and Ambunti district administrations participated in the CLF meetings.

In Myanmar, prior to 2021 the External Affairs team facilitated Government engagement through quarterly Joint Committee meetings with the Department of Geology, Survey and Exploration, in addition to ad-hoc meetings and written communication with Government Ministers. However, in February 2021 the Company placed the Operations in care and maintenance including suspending all community engagement activities.

PanAust's stakeholders and interested parties

The Company takes a diverse range of external and internal stakeholder interests and concerns into consideration during its business activities. Stakeholders are identified based on the potential impacts of the Company's activities on both them and the Company.

Stakeholder priority and importance differs across the material issues for each stakeholder group.

Engagement mechanisms are designed to provide stakeholders and other interested parties with an awareness of the Company's economic, governance and social performance, and understand stakeholder issues and concerns.



Phu Bia Mining Senior Firefighter, Ms Maiphan Syhongthong, at the Phu Kham Copper-Gold Operation

The following table outlines key stakeholder groups and engagement mechanisms and priorities in 2021.

Stakeholder and interested parties, mechanisms and priorities

Stakeholder group	Engagement mechanisms	Interests or concerns
Primary Stakeholders		
PanAust workforce – all employees and contractors across Laos, Papua New Guinea, Thailand, Vietnam, Myanmar, and Australia	<ul style="list-style-type: none"> > Forums include group/team meetings (daily, weekly and/or monthly), workplace representatives committee, employee briefings and toolbox talks > Communications channels include onsite posters, group-wide employee newsletter, PanAust website and intranet > HR programs target competency development, trades training (apprenticeships), leadership development, Lao localisation > A Fair Treatment process for employment-related concerns not addressed via other PanAust processes > External remuneration benchmarking > Employee engagement survey and resulting action plans to address key identified issues > Employee Awards Program 	<ul style="list-style-type: none"> > Health, safety, and wellbeing > Employment terms and conditions (including remuneration) > Continuity of employment > Development and training > Engagement > Environmental management
Landowners and host communities	<ul style="list-style-type: none"> > Issues-based and community development engagements – consultation and collaboration mechanisms include routine meetings, frequent informal interaction, stakeholder surveys, workshops for community development planning and project implementation, site tours > Formal grievance management process > PanAust participation in key community cultural events and festivals 	<ul style="list-style-type: none"> > Environment and social impacts and land access associated with project development and Operations and community participation and consultation in impacts management > Community health, safety, and wellbeing during the COVID-19 pandemic > Community development (local capacity-building through training and education, local employment, and business opportunities, enhancing public health, poverty reduction, access to clean water, food security and infrastructure development) > Access to benefits including local employment, opportunities for partnerships, business development, training and education, donations > Grievance management and compensation > Closure planning (Laos)
Guangdong Rising Holding Group Co. Ltd (GRHG), parent company and the Board of Directors	<ul style="list-style-type: none"> > Board meetings > Shareholder meetings, functions, visits, and presentations > Public reporting (e.g. annual business review and sustainability report) and internal management reporting > Communications including correspondence, company announcements, media reports, website, corporate videos 	<ul style="list-style-type: none"> > Sustainable long-term and consistent shareholder value and financial returns > Continuous improvement, sound risk management and operating discipline > Good Environmental, Social and Governance (ESG) performance against benchmarks, and relationships with stakeholders impacted by PanAust's Operations > Executive remuneration

Stakeholder and interested parties, mechanisms and priorities

Stakeholder group	Engagement mechanisms	Interests or concerns
Primary Stakeholders		
Joint venture (JV) and/or equity partnerships	<ul style="list-style-type: none"> > Forums are dependent upon the structure e.g. management committee meetings of the joint venture; Board and shareholder meetings; technical meetings > Reporting on matters relevant to the JV or partnership > Ad hoc issues are addressed through tailored responses (including where necessary action plans or site visits) 	<ul style="list-style-type: none"> > Sustainable performance including in financial management and returns, project development, operating discipline, safety, risk management and compliance > ESG performance and stakeholder relationships > Benefits for host communities and their culture > Disclosure for JV partners including process on permitting status EIS, SML, feasibility studies and associated approval hearings
PanAust Senior Management	<ul style="list-style-type: none"> > Strategic direction and feedback from Board and Board Committees (including the Sustainability Committee) on business performance > Access to regular management reports and relevant Board papers, presentations (including by industry experts), interactions with employees and other stakeholders, site visits 	<ul style="list-style-type: none"> > Sustainable growth in shareholder value and financial returns > Continuous improvement and operating discipline > ESG performance and risk management
Governments	<p>Consultation and collaboration in project planning and in relation to Operations, including via:</p> <ul style="list-style-type: none"> > Communications through the Government Relations team > Scheduled and ad-hoc meetings and agreements with local, provincial, and central/national government representatives and officials > Site visits for government officials > Tailored responses to queries and publications – proactive approach, including frequently asked questions > Online portal for the Government of Laos > Ad-hoc ministerial and department-level meetings with the PanAust Senior Management team > Frieda River Project update to the Papua New Guinea Mineral Resource Authority > Joint initiatives with government for community development > Provision of regulatory information and participation in compliance assessments 	<ul style="list-style-type: none"> > Compliance with national, regional, or local legislative and regulatory and policy frameworks including permitting and impact assessments and exploration licensing > Economic contributions, including local employment, business opportunities and workforce localisation > Progression of project approvals > Community development > Closure planning (Laos)
Customers	<ul style="list-style-type: none"> > Technical support for product quality, use, handling, and safety; benchmarking > Regular customer communications including updates and virtual meetings, site visits > Tailored responses to queries 	<ul style="list-style-type: none"> > Product stewardship, cost, and reliability of supply, quality, and delivery > Safety and ESG performance, including materials and resource efficiency; waste and lifecycle management

Stakeholder and interested parties, mechanisms and priorities

Stakeholder group	Engagement mechanisms	Interests or concerns
Primary Stakeholders		
Contractors and suppliers	<ul style="list-style-type: none"> > Requests for proposals (RFPs) and tendering; contracts > Major supplier pre-qualification process > Regular performance review meetings covering specific performance metrics and monthly performance reports > Price adjustment mechanisms undertaken quarterly, six monthly and annually > Commodity price forecasting value add by suppliers with access to price indices > Inductions and quarterly contractor safety workshops > Risk management processes for one-off projects and where incidents occur > Participation in community workshops by site-based contractors > Tailored meetings 	<ul style="list-style-type: none"> > Terms and conditions of supply agreements > Reliable payment > Access to business opportunities; product and pricing information > Product stewardship > Health and safety and ESG performance including safety workplace inspections, Job Safety Observations (JSOs), hazard identification, inspections, audit, and review > Expectations of contractor performance including training, compliance to the PanAust Contractor Health Safety and Environmental (HSE) Management Standard
Interested parties		
Industry peers and associations	<ul style="list-style-type: none"> > Participation in industry joint initiatives, committees, conferences, and market surveys > Presentations and correspondence > Benchmarking visits to peer Operations and hosting site visits > Memberships including the Australia-New Zealand Business Association in Laos, the PNG Chamber of Mines and Petroleum and the Australia PNG Business Council > Tailored responses to specific queries 	<ul style="list-style-type: none"> > Education and knowledge transfer > Health and safety and ESG performance and stakeholder relationships > Leading practice, industry alignment and benchmarking including in technology and employee, safety, and sustainability practices
Media	<ul style="list-style-type: none"> > Interviews and briefings > Corporate announcements and media releases > Tailored responses to media enquiries > Hosted site visits > Correction of material factual errors when identified in online or print media 	<ul style="list-style-type: none"> > Public interest in project development and operational status > The Company's COVID-19 response and controls > Economic, health and safety and ESG performance and risk management > Community contributions, development and support including COVID-19 initiatives
Non-government organisations (NGOs)	<ul style="list-style-type: none"> > Provision of Company information to inform NGO reports > Participation in NGO at related events, conferences, and other forums; feedback surveys > Local and Group level engagements with NGOs > Attendance and/or presentation at NGO conferences > Tailored responses to specific queries 	<ul style="list-style-type: none"> > ESG performance and risk management > Socio-economic contributions
Capital market participants (including investment banks, debt, equity, and independent analysts)	<ul style="list-style-type: none"> > Meetings and industry forums, including ESG conferences > Market announcements and investor briefings > participation in surveys > Tailored responses to queries 	<ul style="list-style-type: none"> > Sustainable long-term and consistent shareholder value and financial returns > Continuous improvement, sound risk management and operating discipline > Good ESG performance against benchmarks, and relationships with stakeholders impacted by PanAust's Operations > Executive remuneration

Community relations

PanAust provides opportunities for men, women, youth, and vulnerable groups to participate in consultation, community development and decision-making processes. Community Relations teams include members from local ethnic groups who are close to PanAust's activities, enabling culturally effective communication between the Company and community members.

In Laos, communications with the community including local village Naibans (village leader) and local authorities occur regularly via in-person meetings, phone and other digital platforms to ensure that community stakeholders are consulted and participate in decision-making processes relevant to them. The regularity of these meetings was impacted in 2021 due to COVID-19-related travel restrictions and internal Company controls to limit contact with communities to reduce the risk of possible COVID-19 infection and transmission.

The Company conducts periodic socio-economic surveys to support community engagement activities and to better understand issues and changes in community living standards. The various surveys provide an important mechanism to build an understanding of the needs and expectations of host communities. They inform priorities and initiatives and provide feedback on community engagement effectiveness by assessing the extent stakeholders believe their concerns are being effectively addressed. The next socio-economic survey is a household survey scheduled for 2022.

In PNG, PanAust has convened a Community Leaders Forum (CLF) with representatives from the seven host villages and two district administrations. The CLF is a pre-development forum that allows the Company to inform and consult with key stakeholders in the lead up to the final permitting of the Frieda River Project and is pivotal to achieving FPIC in the PNG context.

PanAust has hosted CLF meetings since 2014, when it acquired its majority shareholding in the Frieda River Project. While in 2020 CLF meetings were suspended due to COVID-19 restrictions, these meetings recommenced in 2021 using the Company's video-conferencing facilities to minimise the infection transmission risks of face-to-face contact (see page 48).

Grievance management

PanAust has in place a grievance mechanism at its Laos Operations, which is also utilised in Myanmar, and a similar mechanism specific to the Frieda River Project. These grievance mechanisms are designed to meet the intent of Principle 31 of the United Nations Guiding Principles on Business and Human Rights.

The grievance mechanisms are:

- legitimate, predictable, equitable and transparent
- culturally appropriate and based on dialogue and engagement
- accessible
- rights-focused
- accountable (with monitoring and evaluation, disclosure, and annual reporting).

The Company's Grievance Management Procedure provides for escalation and arbitration if required. Depending on the nature and severity of the concern raised, it may require further investigation or referral to an independent party.

In Laos, PanAust's electronic reporting and corrective action event management system, INX's InControl, captures engagement activities, feedback, complaints, grievances, and commitments. Borealis software is used to capture this information for the Frieda River Project and Exploration Tenements in Myanmar. The data captured by these systems is used to monitor and identify trends and reporting.

In 2021 four grievances were raised in Laos. The grievances related to livestock, produce and property damage and loss. They included failure to erect a fence around an operational sump resulting in a community member's cow

falling in to its death; the accidental death of a community member's horse from a vehicle collision in a mine activity area; destruction of the fence around a community member's vegetable garden during road construction resulting in cattle entering and eating the produce; and flooding of a community member's house adjacent to road construction during heavy rain.

At the Frieda River Project, two grievances were raised. One complaint submitted by Project Sepik and Jubilee Australia Research Centre on behalf of affected Sepik River communities to the Australian National Contact Point for Responsible Business Conduct (AusNCP) related to the provision of Free, Prior and Informed Consent to the Project to the affected Indigenous communities, see page 31. The other from local construction workers, raised repeatedly, relating to lack of payment for building work due to the absence of an agreed contract. Payment is currently being arranged.

With the cessation of activities in Myanmar in February 2021 due to the growing unrest in the country, no grievances were raised in 2021.

The Company had zero disputes relating to Indigenous people and customary rights during 2021.

Resettlement, livelihood restoration and compensation

Zero involuntary resettlement took place across PanAust's Operations in 2021. The Company seeks to minimise involuntary physical relocation and to minimise the negative impacts of economic displacement related to business activities.

Protocols and procedures that the Company has in place to achieve this goal include planning, participative land access and acquisition practices, transparent compensation, and livelihood restoration approaches.

If resettlement is required, the Company is committed to implementing programs in accordance with IFC Performance Standards

5 and 7: Land Acquisition and Involuntary Resettlement, and Indigenous Peoples. This includes ensuring that resettled people and communities have their livelihoods and standard of living restored or improved after resettlement.

The Company's compensation process in Laos aims to ensure that those affected by PanAust's Operations are compensated fairly for the loss of assets and/or livelihoods. The Company does this by maintaining, at a minimum, pre-impact standards of living, housing and livelihoods and identifying opportunities for participation and other benefits. Physical and economic displacement is managed using the Company's Compensation Standard, Grievance Management Procedure and the Stakeholder Engagement Plans for each operation. The Compensation Standard aligns with Lao regulations and international standards, such as those outlined by the IFC and ICMM.

The requirements for compensation become more prescriptive as the degree of impact increases. When significant impacts occur at the household level (that is, more than 20 per cent of household livelihood is affected), Lao regulations require livelihood restoration rather than cash compensation.

Compensation is paid in a transparent manner at an agreed and documented schedule of rates via the grievance management process.

Compensation rates in Laos are calculated based on market price surveys, provincial agreements and in consultation and/or with approval from local government and community leaders.

In PNG, compensation is paid according to the interim compensation agreement that is based on compensation rates set by the Government of Papua New Guinea's Valuer General and are adjusted for inflation. If the Company believes the Government set compensation rate is too low, compensation is adjusted accordingly to be more equitable.

In 2021, US\$351,666 was paid in compensation for economic livelihood impacts in Laos.



The Xaisomboun Provincial Government steering committee members and Phu Bia Mining Community Relations team members inspecting the Phu Kham Copper-Gold Operations stage 14 development location

In PNG and Myanmar, there were no requests for compensation from affected landowning communities for issues relating to impacts on community lands.

Economic value generated

PanAust recognises it has a responsibility to make a positive social and economic contribution to the communities, regions, and countries in which it operates. The Company's philosophy is that wherever it operates, it collaborates with local authorities and communities to improve the socio-economic livelihood and make sustainable contributions to the region.



Phu Bia Mining auto electrical apprentice, Mr Xengxlong, performing a Take 5 safety checklist prior to starting his work activity

PanAust contributes to the Lao economy in many ways, including through:

- > revenues from copper, gold and silver including payment of royalties
- > profit tax and other payments including tenement rental fees to the Government of Laos
- > salaries paid to employees and salary taxes to provincial governments
- > training and skills development of host communities through capacity-building programs
- > capital expenditure in exploration, project development and project operating costs, particularly through payments to Lao suppliers of goods and services
- > investments in community development programs through community development funds
- > payment of dividends to the Government of Laos as a 10 per cent shareholder in Phu Bia Mining
- > investment in regional infrastructure including roads, water access and treatment and sanitation
- > sponsorships and donations
- > local procurement of goods and services from contractors and businesses.

Where appropriate, PanAust engages local companies (Lao and international companies based in Laos) to procure goods and services for PanAust's Lao-based activities. In doing so, the Company takes into consideration commercial competitiveness, risk profile and contractor capacity to ensure goods and services are provided in a safe and responsible manner. Support is also provided to local companies where required to ensure health and safety standards are met.

To date, PanAust has invested approximately US\$1.64bn in Laos. Since 2006, PanAust has invested nearly US\$105m in Lao public road infrastructure. Improvements and maintenance of sections of the Phu Kham and Ban Houayxai transport and haulage routes have benefitted 12 villages with a combined population of more than 16,000 people, by providing faster access to markets and public services including hospitals and schools.

Total Phu Bia Mining activity, considering investments and in-country operating expenditure, accounted for over 1.8 per cent of Laos's real gross domestic product which, was US\$18.9bn in 2021⁽¹⁾. This investment does not consider the indirect impacts of the Company's presence, for which a widely accepted and typical multiplier effect of the positive impacts mining projects have in developing countries (such as Laos) exists⁽²⁾.

During 2021, PanAust's other economic contributions to Laos included:

- > the payment of US\$166m to Lao suppliers of goods and services; over 57 per cent of external expenditure on goods and services was to companies in Laos and the Government of Laos
- > contribution of approximately US\$60.5m to the Government of Laos through the payment of taxes, royalties, and excise duties
- > contribution to capacity-building programs and activities at district, provincial and central government levels
- > employment of 3,647 people in Laos during 2021. By year end, 92 per cent were Lao-national employees, of whom 30 per cent are from local villages adjacent to or near PanAust's Operations
- > administering a sponsorships and donations program in Laos (in addition to the community development program), providing support of over US\$350,000 in 2021 to a wide range of recipients through cash and in-kind donations (see page 60).

Phu Bia Mining revenues of US\$583m for the sale (and export) of copper, gold, and silver in 2021 represents 9 per cent of total Lao goods exports (estimated by Laos Government as US\$6,115m).

2021 total payments in Laos, Myanmar, and Thailand (US\$m):

- > direct production costs US\$211.23 (52.1%)
- > transport and selling costs US\$15.21 (3.7%)
- > salaries and wages (incl. taxes) US\$64.29 (15.8%)
- > royalties US\$33.02 (8.1%)
- > exploration costs US\$9.21 (2.3%)
- > equipment and other assets US\$66.8 (16.5%)
- > interest and other finance costs US\$6.04 (1.5%).

2021 payments for goods and services in Laos, Myanmar, and Thailand (US\$m):

- > Lao companies US\$65.00 (22.5%)
- > Lao-based international companies US\$73.54 (25.4%)
- > Lao Government and semi-Government US\$27.91 (9.6%)
- > Thai companies US\$66.14 (22.9%)
- > international companies US\$56.76 (19.6%).

Ban Houayxai Gold-Silver Operation
Mining Manager, Akhom Phuaksom



1 The Company uses the Bank of Laos annual report for the GDP figure and converts it from Lao Kip into US dollars using the average exchange rate over the 2021 calendar year.

2 Sources: ICMM publication, *The role of mining in national economies (Romine) (third edition)*, 2016; World Bank and IFC publication, *Large mines and communities: forging partnerships, building sustainability*, 2012.

2021 total payments in Laos (US\$m)⁽¹⁾

Description	US\$m		
	2019	2020	2021
Payroll tax	4.15	4.03	4.21
Customs excise (import service fee)	1.74	1.48	1.09
Road tax	4.11	3.61	2.93
Profit tax (income tax)	23.68	11.54	19.56
Royalties	36.92	32.64	33.02
Concession fees	0.06	0.06	0.06
Dividend	21	1.7	0.00
Total contribution	91.66	55.07	60.87
Copper price (US\$/lb)	2.43	2.81	4.18

2021 total payments by PanAust (US\$m)

Description	US\$m			
	Operating costs by region	Employee wages and benefits by region	Payments to providers of capital by region	Payments to government by region
Region				
Laos	246.91	64.24	0.81	60.87
Thailand	1.48	0.57	0.00	0.02
Vietnam	0.80	0.04	0.00	0.01
Chile	0.42	0.00	0.00	0.00
Myanmar	0.92	0.17	0.01	0.30
Papua New Guinea	3.24	1.07	0.00	0.31
Australia	4.22	11.23	0.01	0.57
Total	257.99	77.32	0.84	62.08
Group revenue ⁽²⁾	567.35			
Group economic value retained ⁽³⁾	169.11			

1 Payments made in Thailand, Vietnam and Myanmar are not included on the basis that they are not material.

2 Sales revenue, derivative gains/losses, interest income and other income.

3 Group economic value retained is calculated by Group revenue less Group operating costs, employee wages, payments to providers of capital and payments to governments.

Mrs Wa Vang, a local villager from Ban Nam Gnone, cutting grass as part of the cattle fattening Sustainable Livelihoods Program at GMO Valley



Community development

PanAust's community development programs aim to make meaningful contributions to building long-term community capacity, thereby empowering people to determine and progress their own development priorities now and beyond the life of the Company's Operations.

Frieda River Limited Community Affairs Coordinator, Shelia Aquila, delivering medical supplies to Wameimin 2 village



Social performance

All operational and active development projects support community development programs in line with good international practice.

As part of its broader sustainability commitments, PanAust continues to assess other socially responsible projects that fit within its host community development priorities of capacity building and promoting economic independence.

PanAust total community development contributions (US\$m)

Description	US\$m		
	2019	2020	2021
Community development in Laos	0.11	0.24	0.36
Community development in Papua New Guinea	0.28	0.07	0.09
Community development in Myanmar	0.02	0.02	0
Logistics costs associated with Papua New Guinea community development	0.16	0.07	0.29
Sponsorship and donations in Laos	0.06	1.04	0.35
Sponsorship and donations in Papua New Guinea	0.00	0.00	0.01
Sponsorship and donations in Myanmar	0.06	0.01	0.00
Sponsorship and donations in Vietnam	-	0.02	0.00
Sponsorship and donations in Australia	0.05	0.00	0.00
Total contribution	0.74	1.47	1.10
PanAust adjusted earnings before interest, taxes, depreciation, and amortisation (EBITDA)	213.25	129.86	220.87
Total contribution as a percentage of EBITDA	0.35	1.14	0.50

Pre-development, exploration, and regional community development

In 2021 PanAust recommenced community engagement for its Frieda River Project permitting process, which had been suspended in 2020, although engagement activities were still constrained by COVID-19 restrictions, see page 49.

In 2021, PanAust contributed US\$359,250 to community development programs in PNG, including over US\$120,000 was committed to charter flights and the use of the Company's helicopter to transport community members. Transportation was required for emergency medical evacuations, health consultations, education programs and community engagement on the Company's permitting process, while usual transport options remained unavailable to communities due to pandemic impacts.

The Company's community development programs in PNG focused on improved health and education services and capacity-building with an emphasis on the maintenance and establishment of infrastructure to support these services.

Health programs are delivered in collaboration with Telefomin District Health Pacific Island Ministries (PIM) and PNG Baptist Church Health Services. Activities included attending to medical emergencies, and the evacuation and referral of patients to regional health facilities. In 2021 the Company also completed the construction of six community health facilities used by government health workers posted to villages impacted by the Frieda River Project.

Education assistance was delivered in cooperation with Telefomin District Education and the Boards of various local schools. Activities included primary school improvement programs, provision of materials for maintaining and upgrading learning infrastructure, logistics support to teachers and their families, and school fee assistance for students at primary, secondary and tertiary levels. The Frieda River Project Community Affairs team, in conjunction with the Telefomin Secondary School, also implemented programs to retain children in primary school, particularly girls. To strengthen the confidence parents have in the school system, PanAust is directly investing in infrastructure improvement of various schools throughout the district and provides support to teachers.

In 2021 the Company, via Frieda River Limited, delivered the Women in Extractives in PNG program to continue to build the capacity of local women in the areas of literacy and numeracy training that will lead into business development and Operations training.

The Company made no contributions to community development projects in Myanmar after suspending Operations in February 2021.

Delivering community infrastructure in PNG

Since the commencement of PanAust's Frieda River Project in 2014, the Company has made significant contributions to improve and increase access to quality healthcare for its rural and remote communities. This same philosophy is adopted in its Operations in Laos.

PanAust commenced a program of community health facility infrastructure projects for the benefit of the seven villages impacted by its Frieda River Project in 2018. The program, under which the Company deployed its own skilled workers to plan, construct and commission the facilities, aimed to enable the PNG Medical Board to register the facilities and for government health workers to be posted to the villages.

Works on these infrastructure projects, which were suspended in 2020 due to the COVID-19 pandemic, resumed in 2021 and six of the facilities that had an assigned government health worker were completed.

These health facilities play an important role in improving the health of the communities in which they operate. Together they cover a population of over 2,500 and offer a range of services such as obstetric care and referral of acute patients as well as outpatient visits, estimated at a monthly average of over 1,000 patients.

Community development in Laos

The Company's community development programs support the achievement of the UN Sustainable Development Goals by contributing to poverty alleviation and supporting economic progress in rural communities adjacent to its Operations. Focus areas are infrastructure, health, education, agriculture, small business development, and microfinance.

Community development projects are managed in partnership with host communities and closely coordinated with local government authorities. In 2021, Community Development Funds (CDFs) remained in place at the Phu Kham and Ban Houayxai Operations, under a Memorandum of Understanding between PanAust and the Government of Laos that defines coordination and management arrangements. CDF planning follows a process that begins with community-led needs assessments and a review of the socio-economic situation in each community. As closure of the Operations in Laos approaches, CDF projects are strategically focused to ensure that benefits continue to sustain the Company's host communities post-closure.

Consultations are held with local government authorities to ensure alignment with national development strategies and goals and to avoid duplication with existing or planned government initiatives. The Company and local governments jointly approve the final annual community development plans. This approach distributes benefits appropriately and aligns with government and/or aid agencies working in the region.

In 2021, a total of US\$380,000 was budgeted for CDF activities in Laos: Phu Kham, US\$300,000 and Ban Houayxai, US\$80,000. While no new projects commenced during the year, 13 projects remain within the CDF program and a number of these were progressed or completed in 2021. Of note is the completion of PanAust's US\$1.4m investment in the newly constructed 2.8km concrete road between Nam Mo village and Nam Mo secondary school.

A total of US\$248,955 was expended on CDF projects during the year, up on the 2019 spend of US\$243,475, as pandemic constraints began to ease. Several infrastructure projects that commenced in 2020 continued in 2021, including the primary school at Nam Gnone, a cable bridge at Nam Ou and a gabion weir and a dormitory for nurses and teachers at Nam Kor 2, which are planned for completion in 2022.

Community Development Fund total expenditure in Laos (US\$)

Description	US\$		
	2019	2020	2021
Expenditure	113,942	243,475	248,955

Year on year, community development contributions are not determined only by the Company's consolidated profit position; a range of factors is considered such as Company presence, impact, local capacity, and dependency levels as communities mature. The community development budget reflects only the Company's direct spend and does not include in-kind and administration contributions towards community priorities or the Company's operational expenditure on items purchased from the community such as locally produced consumables including fruit, vegetables, and water.

a) Education

PanAust understands that education is a foundation for improving people's lives. A sound education is a cornerstone of social development with literacy and numeracy skills creating opportunities for advancement in many areas of life. For these reasons, PanAust's first CDF programs in Laos included a particular focus on education.

While primary education is compulsory in Laos, enrolment rates, completion rates and learning outcomes are low due to issues related to poverty, insufficient schools and/or skilled teachers and a lack of teaching aids. Over-crowding is also an issue in many village schools. While access to primary education has improved significantly, many children leave school before completing the full five-year curriculum, meaning functional literacy – adults who can independently meet the reading and writing demands placed on them – has not been achieved. Secondary and tertiary education completion rates are lower still.

The Company's education programs aim to improve learning outcomes for children and adults in host communities. Projects have focused on improving children's access to primary school through school construction, provision of school uniforms and stationery, scholarships and providing measures to improve the quality of education through teacher training and the provision of teaching aids.

In Laos, historically girls stop attending school if they are required to travel a long distance from their village. PanAust's ongoing commitment to improving access to education for its priority villages is addressing this trend.

Since 2010, PanAust has contributed to the construction, expansion and/or improvement of schools in Laos, thereby improving access to education for students. During 2021, the Company contributed US\$9,341 towards initiatives designed to increase access to education and the quality of learning within communities close to its Operations. This figure is lower than previous years, driven by COVID-19 delaying delivery or finalisation of some programs. This spend included works on additional classrooms at Nam Gnone primary school, a school hall and soccer field for Nam Mo secondary school and teachers' dormitories at Nam Gnone.

b) Community health

In 2010, PanAust handed the management of community health clinics at Nam Mo and Nam Gnone back to the District Health Office. Specialists in family planning and nutrition work in the clinics and vaccinate infants against diseases such as hepatitis B, tuberculosis, diphtheria, pertussis (whooping cough), tetanus, encephalitis, rubella, polio, and general malnutrition.

In 2021, PanAust contributed US\$5,406 towards improved health outcomes in host communities. Community health checks completed during 2021 continued to focus primarily on COVID-19 controls and assistance.

c) Local enterprise development

PanAust aims to build long-term capacity in communities through economic development and strengthening community resilience.

The Company prefers to source products and services locally and/or regionally. This approach encourages local suppliers to expand their customer base in preparation for the eventual transition to mine closure.

Agriculture is an industry in which local communities can build on their existing farming capabilities to supply PanAust's Operations, while providing for the expansion of enterprise opportunities.

Post-closure, agriculture has significant potential to be a sustainable source of cash income for local communities, which prior to the Company commencing Operations, was largely farming at the subsistence-level.

The Company established its Sustainable Livelihoods Program (SLP), in 2018, with the aim of developing positive legacies for local economies that can be sustained beyond the life of the Operations. In 2021 the collaboration between the community, government authorities and the Company through the SLP visibly advanced towards achieving these legacies, see pages 64 to 65.

In 2021, through its CDF programs, PanAust contributed US\$2,168 towards agriculture and small business support activities including construction works on the Nam Mo community market.

In 2021, the Company collectively purchased US\$547,896 of consumables (vegetables, drinking water, eggs, fruit, and fish) from host community businesses for its Operations in Laos and the Frieda River Project.

d) Infrastructure provision

PanAust has made a significant contribution to improving community infrastructure in Laos. This includes medical and educational facilities, other building infrastructure, road development and maintenance, and water and sanitation systems. The Company delivers infrastructure projects (as much as possible) in partnership with governments and host communities.

Under this 'community-constructed infrastructure' model, PanAust procures the materials for projects and host community members, where appropriate and with supervision from local authorities and Company representatives, complete the projects themselves.

In 2021 the Company completed the construction of the 2.8km concrete road which now runs from the Phu Kham Operation to Nam Mo secondary school. The construction commenced in 2020, cost of over US\$1.4m and was supervised by the Phu Kham Infrastructure and Road Maintenance team.

Access to financial services

The Company helped 12 communities establish microfinance schemes through the Village Savings and Credit Funds (VS&CFs). The Funds empower communities, in particular women, through enterprise development and other benefits that accrue from saving for the future.

The VS&CFs provide access to savings and loan facilities that are not otherwise available in rural areas.

Members access loans to support a variety of small-scale income-generating activities and to cover household expenditure such as education and healthcare. Village-level management committees provide oversight of the Funds and are supervised by a District Supervisory Committee, which is headed by the Lao Women's Union.

PanAust worked with local villages and districts to pursue a more sustainable long-term structure for the VS&CFs and after a period of oversight, handed responsibility for the management of the VS&CFs to the relevant villages and districts.

Income generated from small business initiatives (US\$)

Country	US\$		
	2019	2020	2021
Laos	746,119	628,714	543,410
Papua New Guinea	14,354	3,656	4,486
Total (US\$)	760,473	623,370	547,896

Closure preparedness and messaging

Closure planning is an integral part of strategic and life of mine planning for PanAust. While in 2021 mine closure for the existing Lao Operations was extended to the end of 2025, it is recognised as good practice to establish early dialogue with stakeholders and to align operational commitments with post-closure outcomes during the life of the Operations. The Company acknowledges the need to ensure that communities close to its Operations are supported to build capacity and skills to plan for, and manage, post-closure issues and capitalise on commercial opportunities. The Company has established the Sustainable Livelihoods Program to meet this need.



The Phu Kham Copper-Gold Operation open pit

**SOCIAL PERFORMANCE
CASE STUDY:**

Sustainable Livelihoods Program

The Sustainable Livelihoods Program (SLP) aims to support long-term improvement in the local economies beyond life of mine by creating opportunities for sustainable, high value livelihoods for the local communities following mine closure.

The SLP, which has operated in the Anouvong District and Xaisomboun Province since 2018, aligns with the Phu Bia Mining life of mine plan, local government development frameworks and policies and UN Sustainable Development Goals. The intended legacies of the SLP include:

- > increased capacity in relevant Government of Laos agencies to support the local economic development of host communities
- > identification of agricultural products that are demonstrably environmentally sustainable and commercially viable
- > implementation of successful value realisation models, such as integrated farming system and farming cooperatives.

In 2021, despite the ongoing challenges of the COVID-19 pandemic, the SLP made several advances through its work with local communities and government authorities.

By year end the revenue potential and sustainability of four major commercial agriculture products (CAP) – clean commercial vegetables, cattle fattening, commercial pineapples and commercial avocados – was confirmed.

The SLP supported 143 small farm holdings' households to generate significant income from the sales of the three identified CAP, from sales both to the Company and other local markets. These households each achieved annual average incomes of 24,260,006 LAK (US\$2,473) – exceeding the SLP annual target of 20m LAK (US\$2,038) over the life of the SLP and spurring local economic recovery from the pandemic in the Company's host communities in Xaisomboun Province.

While Phu Bia Mining remains a key customer for the CAP and other produce from its host communities, there is growth in other markets for these products. In 2021, 42 per cent of the clean commercial vegetables and 39 per cent of commercial pineapples were sold to other local markets. Also, in 2021 the Company worked with local government authorities to explore the feasibility of accessing markets in Vientiane and established a trial in two market locations.

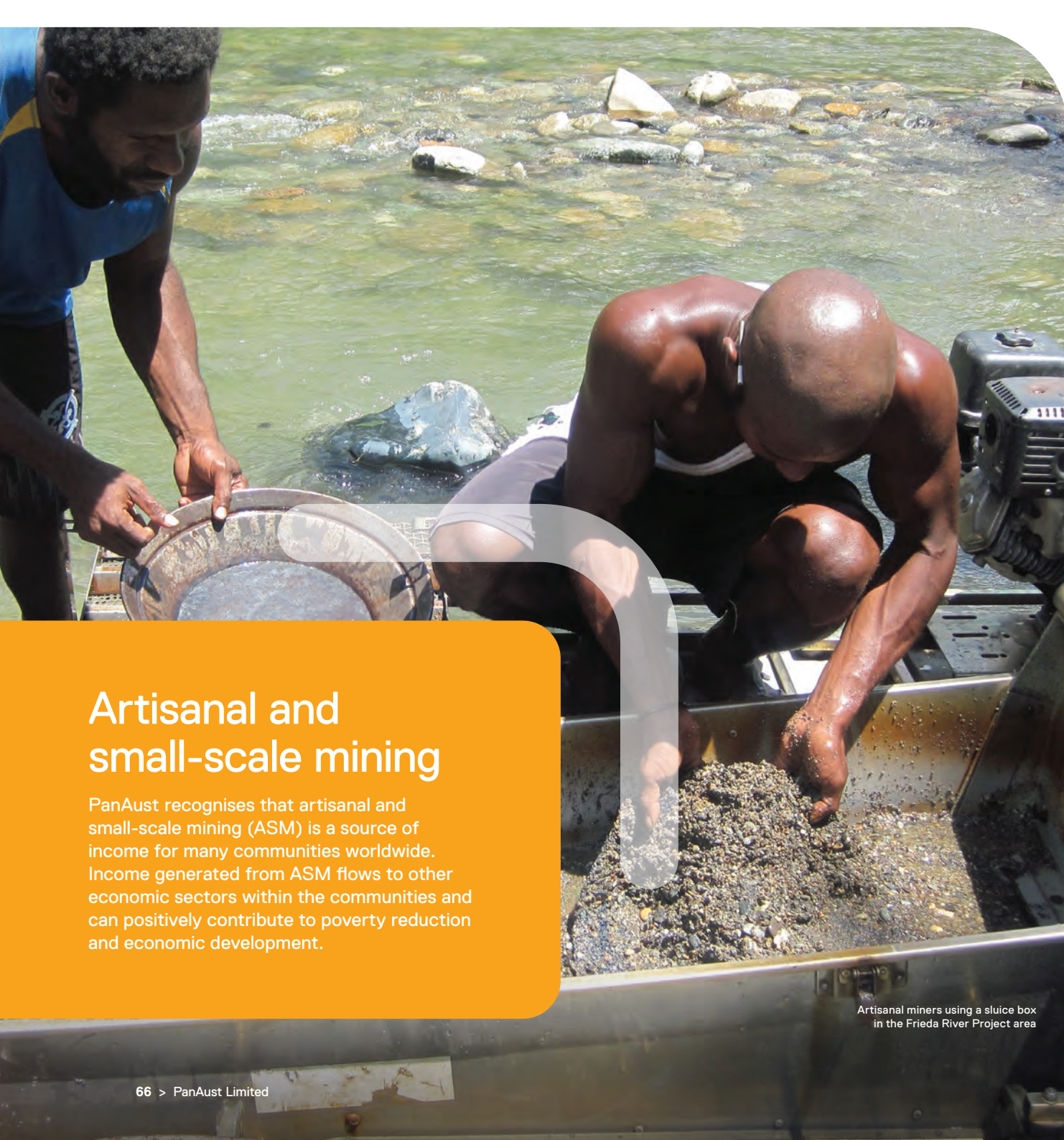
A pilot of 16 farmer groups of 178 household members from the clean commercial vegetables and cattle fattening groups was established in the eight villages in the Anouvong District and Xaisomboun Province. This pilot tested the potential of a cooperative model to replicate and extend the outcomes for local incomes and economies achieved in 2021 into the future and post mine closure.

Work also progressed at the rehabilitated Gold Heap Leach (GMO) site, an area of some 30 hectares with potential to support over 100 households that has been returned to the community, where testing of an integrated farming system model is underway. Under this model, integrated practices for cattle forage and fattening and commercial vegetable production deliver efficiencies that are not possible at the scale of household farm holdings.

Capacity building in local government authorities to support the ongoing economic development of host communities is a key element of the SLP. The Company, therefore, works closely with relevant authorities in the development, implementation, and evaluation of SLP initiatives and supports internal technical and managerial skills development of the authorities.



Phu Bia Mining Sustainable Livelihoods team members from the Phu Kham Copper-Gold Operation, talking to local pineapple farmers participating in the program



Artisanal and small-scale mining

PanAust recognises that artisanal and small-scale mining (ASM) is a source of income for many communities worldwide. Income generated from ASM flows to other economic sectors within the communities and can positively contribute to poverty reduction and economic development.

While in many jurisdictions ASM may be considered traditional, informal, or even illegal, the Company recognises the importance of engaging with communities and stakeholders involved in ASM within the boundaries of its Operations and projects.

PanAust engages early with the host communities and stakeholders to understand their concerns and issues regarding ASM. This approach is consistent with the IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts.

ASM activity is present within the Company's MEPA in Laos at some of the regional exploration prospects and near the Phu Kham Operation – but not within its operational boundaries. There are ASM activities within the Frieda River Project area and within the Company's Exploration Tenements in Myanmar.

ASM activities inside the Company's MEPA have declined with the proliferation of the Company's community development programs that have provided an alternative, sustainable livelihood. An ASM Standard and an ASM Guideline provide a framework to understand, manage – and where applicable – prevent or accommodate ASM activities with the potential to impact the Company's Operations and/or reputation.

For the Frieda River Project, there are four villages which participate in ASM activities in the proposed footprint area. These four villages, or the ASM sites, are not located within the special mining lease area for the Project. The Company continues to work with the host communities to understand the extent of ASM and how it might interact with the Project in the future.

Artisanal miners using a sluice box in the Frieda River Project area

In 2019, the Company engaged a consultant to undertake a pilot program for an in-situ value assessment of the alluvial gold deposits within the Frieda River Project area. The pilot program, using methods like ASM miners including pitting, dredging, and panning, was undertaken in the second half of the year. The results of the program were used to design a full in situ value assessment program, the results of which will enable informed discussions with the communities about how to best use the resource.

The full assessment program was deferred in 2020 and was not resumed in 2021 due to COVID-19-related travel restrictions. The Company aims to recommence studies from 2024.

In Myanmar, the 2019 Company-sponsored program for maintaining good relationships between ASM and large-scale mining (LSM) stakeholders, suspended in 2020 due to COVID-19-related travel restrictions, remained on hold in 2021 due to the Company's suspension of its Operations including community programs.



Artisanal mining in Laos in the northern section of the Phu Bia Mining Contract Area

Phu Bia Mining Environment
team members recording water
quality readings at the Phu Kham
Copper-Gold Operation

Environmental performance

Respect for the environment is a core Company Value and is at the forefront of business strategy, decision-making and day-to-day Operations.

PanAust's materiality process identified the environmental performance focus areas for 2021 as:

- › water management
- › tailings and waste rock management
- › cyanide management
- › land rehabilitation and closure
- › energy and carbon management
- › dust and noise emissions.

From exploration to development, throughout Operations and into mine closure, PanAust endeavours to limit its impact on the natural environment. It does this by complying with host country legal requirements and/or international standards (when local standards are either lower and/or silent on a material environmental issue) through the effective management of mine waste, efficient use of resources, progressive rehabilitation of land and the maintenance of ecosystem services⁽¹⁾.

Planning for the management of environmental issues at the pre-development stage is the cornerstone of PanAust's success regarding its environmental performance.

The Company's approach to environmental management follows ISO 140001 standard process including an understanding of baseline environmental conditions, followed by the identification of project-specific risks and potential impacts, then the implementation of controls in conjunction with monitoring and measurement of performance.

Baseline studies, environmental and social impact assessments (ESIAs), external audits and an external international panel of experts for tailings management are used in conjunction with internal risk management processes to understand PanAust's environmental risk profile.

Environmental risks are managed through PanAust's Environmental Management System which includes sustainability standards, procedures and management and monitoring plans for each site. Progress against management and monitoring plans is assessed at regular intervals. For key material issues, external audits and/or detailed reviews of performances are undertaken (for example, for tailings and waste rock management).

The Company recognises that an environmentally-aware workforce is integral to achieving high standards and continual improvement. Each year, PanAust delivers environmental awareness training programs. This includes inductions to all employees and contractors working at its Operations in Laos and at the Frieda River Project site.

PanAust encourages the reporting of all environmental incidents as it reinforces a risk-aware culture and ensures that even minor issues are investigated and appropriately addressed. Incidents are recorded in PanAust's electronic reporting and corrective action event management system, InControl Software by INX. The use of InControl allows for trends to be identified to assist in avoiding repeat occurrences where possible. In 2021, PanAust reported no significant environmental incidents, complaints, spills, penalties, fines, or non-monetary sanctions for any legal non-compliance.

During 2021 the Company's subsidiary Frieda River Limited, was involved in the Conservation and Environment Protection Authority (CEPA) independent peer review process (IPR).

Consultation was undertaken throughout the year with CEPA peer reviewers with the draft reports issued for both the EIS and Large Dam review. During this consultation period, PanAust provided feedback to the matters raised during the peer review process. CEPA has now received the final reports for both the EIS and Large Dam review. PanAust has worked with CEPA to plan out the Sepik River awareness statutory engagement campaign that was delayed due to COVID-19 restrictions. The engagement campaign will commence in 2022 and is projected to be completed by the end of 2022. The Company continues to work closely with the Mineral Resource Authority (MRA) and CEPA to ensure stakeholder engagement in the Project and legislative requirements during the permitting phase of the Project are followed.

The Project EIS is available on the Frieda River Limited website: friedariver.com.

Phu Bia Mining Mine Planning Engineer, Sonephet Latxaiyavang



¹ Ecosystem services are the benefits people, including businesses, derive from ecosystems. They can be grouped into four broad categories: provisioning, such as the production of food and water; regulating, such as the control of climate and disease; supporting, such as nutrient cycles and crop pollination; and cultural, such as spiritual and recreational benefits.

A water truck carrying out dust suppression activities at the Ban Thouay logistics facility in Laos

Water management

PanAust recognises that water resources need to be managed responsibly to meet operational requirements – including water for processing ore – while limiting adverse impacts on receiving environments and communities. To this end, PanAust manages water-related risk through internal risk management processes.

At the Phu Kham and Ban Houayxai Operations, mine water run-off challenges stem from the location of the sites (steep mountainous terrain in a tropical climate with distinct wet and dry seasons). The Phu Kham and Ban Houayxai Operations are not located in areas of water stress (all human and ecological demands for water are sufficiently met).

Water balance models are in place at the Phu Kham and Ban Houayxai Operations. The models are supported by water management and monitoring programs and incorporate water consumption and run-off and groundwater inputs to the open-pits and tailings storage facilities to predict water discharge volumes. Models also account for high sulphur tailings and waste rock that must remain under a cover of water or encapsulated in clay-lined cells to prevent the generation of acid rock drainage (ARD). At each Operation, most of the water entering the TSF is rainfall run-off from the upper catchments, with a small volume of treated water coming from site processing activities and (at Phu Kham) from pit dewatering. The controlled discharge from each Operation's TSF is closely and regularly monitored by the Company's Environment team together with Government of Laos' Environmental Monitoring Unit (EMU) officials. Results are assessed against World Bank, IFC and Lao ambient water-quality guidelines as well as background water quality conditions.

While PanAust's Operations use a significant amount of water, considerable effort is placed on effective resource management. At Phu Kham, approximately 95 per cent of the water used is recycled. The fresh water used at Phu Kham is drawn from the nearby Nam Mo River and is used predominantly for specialised cooling systems and equipment for the process plant. Water used for domestic purposes is extracted from a combination of water bores and surface water supplies.

The Phu Kham open-pit and TSF have been designed with clean water diversion drains to minimise the capture of rainfall run-off. Water management aims to divert as much clean water run-off as possible and maximise recycling to limit freshwater consumption and discharge volumes. Given the amount of annual rainfall, there is a net positive water balance and excess water is discharged as necessary in a controlled manner throughout the year. In 2021, controlled wet season discharge from the Phu Kham TSF occurred between May and November in accordance with internal permitting specifications. The Government of Laos is notified when discharge events occur during this time and receive discharge volume and monitoring reports from EMU officials. All discharges were compliant with relevant water quality guidelines.

Ban Houayxai's TSF is located a significant distance from the Operation's processing plant. This geographical constraint limits the amount of water recycling that can occur. Water reuse is therefore maximised within the processing plant area.

The Ban Houayxai TSF is a continuous discharge facility. Exceedances of total suspended solids (TSS) in the facility's discharge occurred during the 2021 wet season. Although the discharge water is still compliant at the ambient monitoring point, the Company has worked to understand the mechanism causing the TSS exceedance. A correlation has been determined that TSS levels are high when total dissolved solids (TDS) are low. TDS is reduced in the wet season, when the water pond increases in size, with TSS increasing and exceeding discharge criteria. The TSS during these instances, is too fine to be removed by filtration. The visible TSS disappears when the discharge water enters the Nam Ngum 2 reservoir. Monitoring of the surface water and borehole water quality confirms that the TSS has a negligible impact to the environment.

PanAust is working with local government officials to establish site-specific guidelines for TSS discharge from the Ban Houayxai TSF, including the proposed movement of the discharge compliance point.

Water withdrawal and discharge Phu Kham and Ban Houayxai Operations

Water usage and recycling summary	Megalitres ⁽¹⁾		
	2019	2020	2021
Fresh water domestic use	720	806	660
Fresh water to process	8,766	7,857	7,506
Total water used in process	60,577	38,260	31,021
Recycled water to process	51,810	30,403	23,515
Compliant water discharged ⁽²⁾	6,298 ⁽³⁾	65,394	66,165
Percentage of recycled water	86	79	76

1 Measured by water meters or other estimation techniques.

2 Discharge water from the Phu Kham and Ban Houayxai TSFs.

3 Discharge water in 2019 was significantly lower than other years due to a combination of low rainfall and a major raise of the Ban Houayxai TSF embankment wall and spillway.

Water withdrawal by source Phu Kham, Ban Houayxai and total Phu Bia Mining 2021

Water withdrawal by source Indicator	Megalitres		
	Phu Kham	Ban Houayxai	Phu Bia Mining
Surface water ⁽¹⁾ (total)	28,590	6,440	35,030
Fresh water ⁽²⁾	5,075	6,440	11,515
Other water ⁽³⁾	23,515	0	23,515
Ground water ⁽⁴⁾	510	150	660
Fresh water	510	150	660
Other water	0	0	0
Total water withdrawal	29,100	6,590	35,690

1 Water that occurs naturally on the Earth's surface in ice sheets, ice caps, glaciers, ice bergs, bogs, ponds, lakes, rivers, and streams.

2 Water with concentration of total dissolved solids (TDS) equal to or below 1,000 milligrams (mg) per litre (L).

3 Water with concentration of TDS above 1,000mg/L.

4 Water that is being held in, and can be recovered from, an underground formation.

Water discharge Phu Kham, Ban Houayxai and total Phu Bia Mining 2021

Water discharge Indicator	Megalitres			
	Phu Kham	Ban Houayxai	Total	
Water discharge by destination	Surface water	11,088	55,077	66,165
	Ground water	0	0	0
	Total water discharge	11,088	55,077	66,165
Water discharge – fresh or other	Fresh water ⁽¹⁾	0	55,077	55,077
	Other water ⁽²⁾	11,088	0	11,088
Water discharge by treatment	No treatment	0	48,637	48,637
	Sewerage treatment plant	61	129 ⁽³⁾	190
	Manganese treatment ponds	1,830	N/A	1,830
	Lime dosing	25,181	N/A	25,181
	Cyanide destruction	N/A	5,823	5,823

1 Water with concentration of total dissolved solids (TDS) equal to or below 1,000 milligrams (mg) per litre (L).

2 Water with concentration of TDS above 1,000mg/L.

3 Ban Houayxai sewerage treatment plant discharge also includes all process plant runoff water.

Phu Kham Copper-Gold Operation,
tailings storage facility floating
tailings deposition lines

Tailings and waste rock management

Tailings and waste rock management continues to be the most significant short- and long-term environmental risk for PanAust. The quantity of tailings material, its mineral composition and fine sediment nature and the requirement for long-term stable TSFs necessitates robust tailings management strategies.

The management of waste rock to prevent ARD is comprehensive due to the potential for ARD to induce acidity and dissolved metals into water which can be harmful for receiving environments. To effectively manage these risks, detailed planning and designs are required before mine development. Further comprehensive governance during Operations is crucial to ensure environmental impacts are equal to, or better than, international standards. Operational governance also promotes beneficial post-mining land use and reduces post-closure liability.

Tailings

PanAust operates two purpose-built TSFs, one for each of its Operations in Laos. Each is designed and constructed to international standards and guidelines (including the Australian National Committee on Large Dams, ANCOLD) and considers an integrated life of mine and closure management strategy. The Phu Kham TSF contains waste rock and tailings. The Ban Houayxai TSF is used to store tailings with waste rock placed in separate engineered waste rock dumps.

TSFs require comprehensive management and governance processes throughout the life of each facility. PanAust has a well-established stewardship program for its TSFs in Laos which includes the following:

- › **PanAust senior management commitment:** a commitment from the MD and CEO to ensure appropriate governance processes are in place and construction and operating procedures for the facilities are consistently adhered to
- › **Tailings Independent Review Panel (TIRP):** the TIRP directly reports to the Board of Directors via the MD and CEO on material risks to the facilities. The TIRP consists of up to three industry-leading tailings, geotechnical and water specialists. Each year, the TIRP review process includes physical inspections of the Phu Kham and Ban Houayxai TSFs and an evaluation of the monitoring and measurement systems.

In 2021, due to COVID-19-related travel restrictions, the TIRP review of both TSF Operations was again carried out remotely using documentation and information on the facilities including photographs, videos, and drone footage. The Panel reports its findings to the MD and CEO and PanAust's Tailings Review Committee. Action plans are developed, and a follow-up audit is completed ahead of each wet season to confirm progress (see page 39)

- Tailings Review Committee:** the Committee reports directly to the Board of Directors via the PanAust MD and CEO and consists of the MD and CEO, Phu Bia Mining Managing Director, PanAust General Manager Technical Services, Phu Bia Mining General Manager Operations, PanAust Group Manager Risk and Safety, PanAust Principal Tailings Engineer and the Phu Bia Mining Tailings and Geotechnical Manager. Each year the Committee oversees the implementation of actions related to material risks, facilitates the TIRP review and oversees the actions and updates in the relevant risk register

In November 2021, a gap analysis was completed on the draft requirements of the Global Industry Standard on Tailings Management (GISTM) and current stewardship activities undertaken by the Company for the management of their tailings facilities. The findings of this analysis were presented to the committee for consideration. Further work around tailings dam governance and the GISTM will continue in 2022

- Overview and quality assurance:** the Principal Tailings Engineer, based in the Vientiane office and the Engineer of Record provide overview and quality assurance of design and construction activities

- Annual dam safety inspections:** due to COVID-19 travel restrictions, the annual inspection did not occur in 2021 and was deferred to 2022. However, the Engineer of Record was at site in November 2021 for site inspections and risk reviews of both facilities. The dam safety report for 2020, was issued in February 2021
- Risk-based review:** a risk-based review of both facilities is completed annually by the site teams and was conducted in November 2021
- Engineer of Record:** the Engineer of Record is responsible for the design, construction, operation, and performance monitoring of PanAust's TSFs
- Quarterly inspections:** due to COVID-19 travel restrictions, only one inspection was completed in November 2021, by PanAust's Principal Tailings Engineer. The Engineer of Record also only conducted one physical site inspection during November 2021, due to the COVID-19 travel restrictions. The inspections will recommence quarterly in 2022
- Inspections and monitoring:** daily, weekly, and monthly inspections and monitoring by trained PanAust employees reporting to a site-based Tailings and Geotechnical Manager. Monitoring of seepage and embankment deformation is undertaken as well as inspections and audit programs to ensure that the equipment is operational and working appropriately
- Detailed dam design:** a detailed dam design for each construction period is produced by the Design Engineer, Knight Piesold
- On-site laboratory:** the quality control and assurance of construction TSF materials is completed at the on-site laboratory at each Operation
- Mine closure:** mine closure designs for both facilities were updated in 2021

Addressing Nam Mo villagers' TSF odour concerns

Nam Mo villagers near the Phu Kham Operation have raised an ongoing issue regarding the odour coming from the tailings storage facility.

In response to understanding the impacts of our Operation, in 2021 a project was initiated by the site based Mine Processing team to address the odour issues. The team worked to identify the root cause including identifying the chemicals that were likely causing the odour and sought to identify alternatives.

The potential cause was identified and alternative chemicals substituted. However, due to COVID-19 restrictions, PanAust has been unable to implement monitoring and surveys following the chemical change. PanAust recognises the importance of treating its communities with respect and will look to implement a collaborative approach with the villagers to resolve the issue in 2022. The Company recognises its responsibility to minimise and avoid adverse impacts on the health, safety, and wellbeing of communities.

Waste rock

PanAust’s approach to Acid Rock Drainage (ARD) management is considered leading practice across the global mining industry.

PanAust actively manages the potential for ARD from the early stages of mine planning through to Operations and closure. At Phu Kham and Ban Houayxai, the management strategy to address the potential for ARD commenced well before mining Operations began, with sulphur content being an integral component of orebody modelling and mine planning processes. The sulphur content assessment facilitated detailed characterisation of rock types based on their acid-forming potential which informed the development of an integrated ARD life of mine plan. A similar approach has been applied to the hydroelectric facility proposed for the Frieda River Project.

The ARD Management Plans provide strategies for the identification, control and monitoring of mine waste and are regularly updated with any relevant changes in sulphur modelling. The Phu Kham and Ban Houayxai ARD Management Plans classifies waste rock and how it is managed in accordance with the following categories:

- > **Blue waste rock:** lithologies with non-acid forming potential and acid-neutralising capacity; can be deposited in designated site locations
- > **Green waste rock:** non-acid forming; can be deposited in designated site locations and can be used for other purposes
- > **Amber waste rock:** low acid-forming potential; suitable for placement within the catchment of the TSF and within purpose built, clay-lined cells to prevent oxidation
- > **Red waste rock:** high acid-forming potential; deposited within the catchment of the TSF and is progressively submerged below a water cover and within purpose-built, clay-lined cells to prevent oxidation and reduce the potential for ARD.

During 2020, the waste rock classifications for both Operations were reviewed and refined, and a new testing methodology introduced to increase the reliability of internal laboratory test results following a quality assurance and quality control program. Calibration and development of new criteria based on total sulphur, total carbon, and organic carbon for routine on-site testing at both sites has led to much improved reliability of results, cost savings and laboratory efficiency. This waste classification criteria was successfully implemented during 2021, resulting in greatly improved reliability of ARD rock type distributions and proportions.

High-level governance of ARD management is provided through PanAust’s ARD Review Committee which is comprised of PanAust and external ARD specialists. The Committee ensures that management strategies effectively limit the potential for ARD generation during construction and placement of waste and that such strategies will continue to be effective post mine closure. The ARD Review Committee meeting was suspended in 2021 due to COVID-19 travel restrictions and is to be reinstated in 2022.

Consultant reviews of ARD management at Phu Kham and Ban Houayxai confirm that the programs are comprehensive and consistent with methods described in the Global Acid Rock Drainage Guide (which is sponsored by the International Network for Acid Prevention with the support of the Global Alliance, 2014).

At Phu Kham and Ban Houayxai, mineralised waste and low-grade ore stockpiles are managed through internal water management systems. Rehabilitation of these stockpiles is accounted for in mine closure plans.

Mining Operations at Phu Kham and Ban Houayxai use a mobile fleet management system (Jigsaw) that incorporates real-time global positioning technology to ensure that specific waste rock types are directed to the correct destination on a truck-by-truck basis.

Tailings/waste rock quantities at Phu Kham and Ban Houayxai Operations

Tailings/waste rock quantities	Tonnes		
	2019	2020	2021
Waste rock (total)	40,073,294	37,572,385	35,732,384
Red waste rock	11,723,712	11,554,503	4,140,462
Tailings	23,054,451	16,249,721	12,126,098

Ban Houayxai adopts an effective co-disposal solution to landfill management

The landfill site location at Ban Houayxai has been a perennial issue due to the steeply sloping terrain surrounding the Operations providing limited options to construct a readily accessible and safe landfill facility.

In 2021, the landfill became a priority issue due to its filling capacity. Previously, waste was disposed in large trenches dug on top of Waste Rock Dump (WRD) 1. However, WRD 1 had reached its design height and capacity, and was no longer an option for landfill disposal.

WRD 2 was identified as the next location for landfill, and a solution was introduced to optimise the process and ensure efficient use of space. The solution was to develop a co-disposal facility at WRD 2, where landfill waste is delivered to an active dump face. Soon afterward the material is covered by the next load of run-of-mine waste. This new approach has removed the need for trenching and no longer requires excavators and dozers to be on standby, resulting in a far more efficient system without compromising on safety.

Cyanide management

The Ban Houayxai Operation uses cyanide in the processing circuit to extract gold and silver from mined ore. PanAust recognises that the use of cyanide for precious metal extraction is very common practice but does not dismiss the need for stringent operating and environmental controls to necessitate the safe transportation, use and disposal of cyanide and cyanide-related products.


Hydrocyclones used in the classification step of processing at the Ban Houayxai Gold-Silver Operation

PanAust is a signatory to the International Cyanide Management Code (the Cyanide Code) and maintains certification of its Ban Houayxai Operation to the Cyanide Code. The Cyanide Code is administered by the International Cyanide Management Institute (ICMI) and is a voluntary program for the responsible manufacture, transport, use and disposal of cyanide used in gold production.

The Ban Houayxai Operation's design was predicated on achieving Cyanide Code compliance and included robust process control systems, bunding, leak detection systems and organisation procedural controls. The most notable feature is the plant's detoxification circuit which destroys cyanide in the tailings slurry using the INCO process. Ban Houayxai tailings contain less than the IFC's Environmental, Health and Safety Guidelines (2007) safe levels of cyanide for solutions discharged into the environment and due to there being 0.5 parts per million cyanide present, technically does not require ICMC code compliance.

Ban Houayxai received pre-operational certification to the ICMC in 2012 and operational certification in March 2013. It was recertified in 2016, and again in 2019 with the next recertification due in 2022. PanAust conducts annual internal gap audits at Ban Houayxai to ensure the Operation remains compliant to the Cyanide Code. PanAust's compliance to the Cyanide Code is testament to how effective planning during design can mitigate environmental issues during Operations. The Company's certification audit reports and signatory status are available on the ICMI website, cyanidecode.org.

PanAust recognises that the ongoing management of cyanide risks is dependent upon a trained, competent, cyanide-aware workforce. The site-based Emergency Response Team is trained to respond to cyanide incidents and environmental rehabilitation techniques to contain the spill are well established. Cyanide transportation activities are undertaken by a Cyanide Code-certified transporter and the site regularly hosts cyanide awareness sessions with communities along Ban Houayxai's transport and concentrate haulage route.

A man wearing a white hard hat with 'SG GUARD' on the chin strap and an orange high-visibility work shirt is focused on tending to a young fern plant in a nursery. He is wearing safety glasses and has a lanyard around his neck. The background is a lush green nursery with many other plants.

Phu Bia Mining Rehabilitation team member, Mr Somphan Philavong, tending to plants in the Ban Houayxai Gold-Silver Operation nursery for use in future revegetation projects around site

Land rehabilitation and closure

The progressive rehabilitation of land and appropriate closure planning is essential for ensuring that end land-use meets stakeholder expectations and environmental requirements.

The Phu Kham and Ban Houayxai Operations progressively rehabilitate land to minimise their ongoing environmental impacts and facilitate achieving post-mining land use objectives.

Both Operations have nurseries to propagate native seedlings used in rehabilitation. This is supplemented by hand seeding with the assistance of locally sourced casual labourers and mechanised hydro-seeding across large areas to both facilitate revegetation and promote surface stability.

Annual programs to rehabilitate disturbed land are incorporated into each site's operating plan. PanAust recognises that, in most cases, achieving full rehabilitation to meet stakeholder agreed completion criteria may take several years, and that monitoring, and maintenance form an important component of successful rehabilitation at both Operations.

Land disturbance and rehabilitation at the Phu Kham and Ban Houayxai Operations

Land disturbance and rehabilitation	Hectares		
	2019	2020	2021
Land disturbed and not rehabilitated	1,519	1,507	1,586
Land disturbed in reporting year	43	97	137 ⁽¹⁾
Land rehabilitated in reporting year	55	17	84.7
Total land disturbed and not yet rehabilitated	1,507	1,586	1,638

¹ Evidence of land disturbed data for Phu Kham, Ban Houayxai and Phu Bia Mining exploration activities could not be provided, hence it is not assured. Establishing a process to reconcile land disturbed by site each year represents a priority.

PanAust considers closure planning at all stages of a project's lifecycle. Where significant risks are posed by ARD, PanAust's Operations are designed to manage long-term closure risks.

PanAust aims to align with the International Council on Mining and Metals (ICMM) principles and follow ICMM good international industry practices relevant to climate change. Best practice in the principles notes the effects of climate change must be considered from a risk and design perspective for the closure design of mine infrastructure.

In 2020, an external consultant, Earth Systems, a multidisciplinary environmental and social consulting firm, conducted a closure climate change study for the Phu Kham and Ban Houayxai Operations. The study assessed the future climate and rainfall in the region and developed a strategy

to ensure that climate change is adequately considered in closure designs for operational sites, including developing an updated climate data sequence. In 2021, the study results and recommendations have been incorporated into closure designs.

The Company has in place a Closure Standard which set out the closure requirements for both the Phu Kham and Ban Houayxai Operations. Preliminary Mine Closure Plans are also in place for both Operations and for the Gold Heap Leach (GMO) decommissioned facility, each of which is supported by financial provisioning. The Preliminary Mine Closure Plans were updated and reissued to the Government of Laos in July 2021.

Internal oversight of the closure planning process and stakeholder engagement strategy is provided by the Company's Closure Review Committee (CRC) and the Closure Independent Review Committee (CIRP). The Committee is supplemented by technical consultants as required.

The rehabilitation trial using acacia and eucalyptus tree seedlings donated to the Company by the Burapha Agroforestry on the Red Road Waste Dump at the Phu Kham Operation is continuing with monitoring in 2021. The trial investigated whether run-of-mine waste material (primary conglomerate) can be used in lieu of topsoil to support the growth of potentially value-adding timber products. The acacia and eucalyptus grew very well, with the trial considered a success. Although this result supports alternative land use options for mine closure, this option is currently not part of the mine closure plans.

In 2021, work continued at GMO to improve surface water management of the Heap Leach Pad (HLP) at the decommissioned facility. The redesign of the HLP to re-align the drainage channel system to stop percolation and eliminate water infiltration into the HLP was successful in reducing leaching. The discharge water now consistently meets the ambient water quality criteria, except for iron levels which still require work. The constructed wetland created to passively treat site run-off is no longer essential. The Company is now looking to bypass the wetland and directly discharge water into the Nam Gnong River. The wetland will remain in place as monitoring continues, with the long-term plan to rehabilitate the wetland in line with agreed end user requirements, see page 78.

At Ban Houayxai, the Government of Laos Closure Committee did not accept the waste rock dump being rehabilitated with elephant grass, due to it promoting a monoculture environment reducing the biodiversity of the area and posing an increased fire risk during the dry season. In 2021 all the elephant grass was removed, and although the site has since been re-established as a waste dump, this learning has provided vital information to future site rehabilitation.



ENVIRONMENTAL PERFORMANCE CASE STUDY:

GMO rehabilitation and redesign of surface water management

PanAust's approach to mine closure hinges on strategies that will ensure the Company is proud of its former operational sites which exemplify responsible mine closure. This vision is embodied in objectives that aim to achieve acceptable outcomes for closure and rehabilitation.

The objective for the closure of the GMO Heap Leap Pad (HLP) was to ensure a safe, stable, and non-polluting landform that meets water discharge compliance limits. A wetland was constructed as an interim solution downstream of the HLP, to passively treat stormwater and site leach pad run-off. A long-term plan was developed to meet all the local community end-user requirements for site rehabilitation.

The initial importance of the wetland came from rainfall ingress and percolation of the HLP causing leaching and pulses of key contaminants of concern. The wetland was designed to passively treat these contaminated outflows from the HLP.

To resolve these issues in the long term, a redesign of the HLP was implemented. The HLP's formation was reshaped to enable rainwater shedding off the pad, and the introduction of a barrier layer to eliminate water infiltration. Diversion bunds and a drainage channel system were also installed on the HLP to redirect rainwater away from the HLP. A one metre capping layer was installed above the barrier layer for protection and to provide a growth medium for vegetation. The impacted area was then hydroseeded to allow for vegetation growth to assist with controlling surface run-off and prevent erosion.

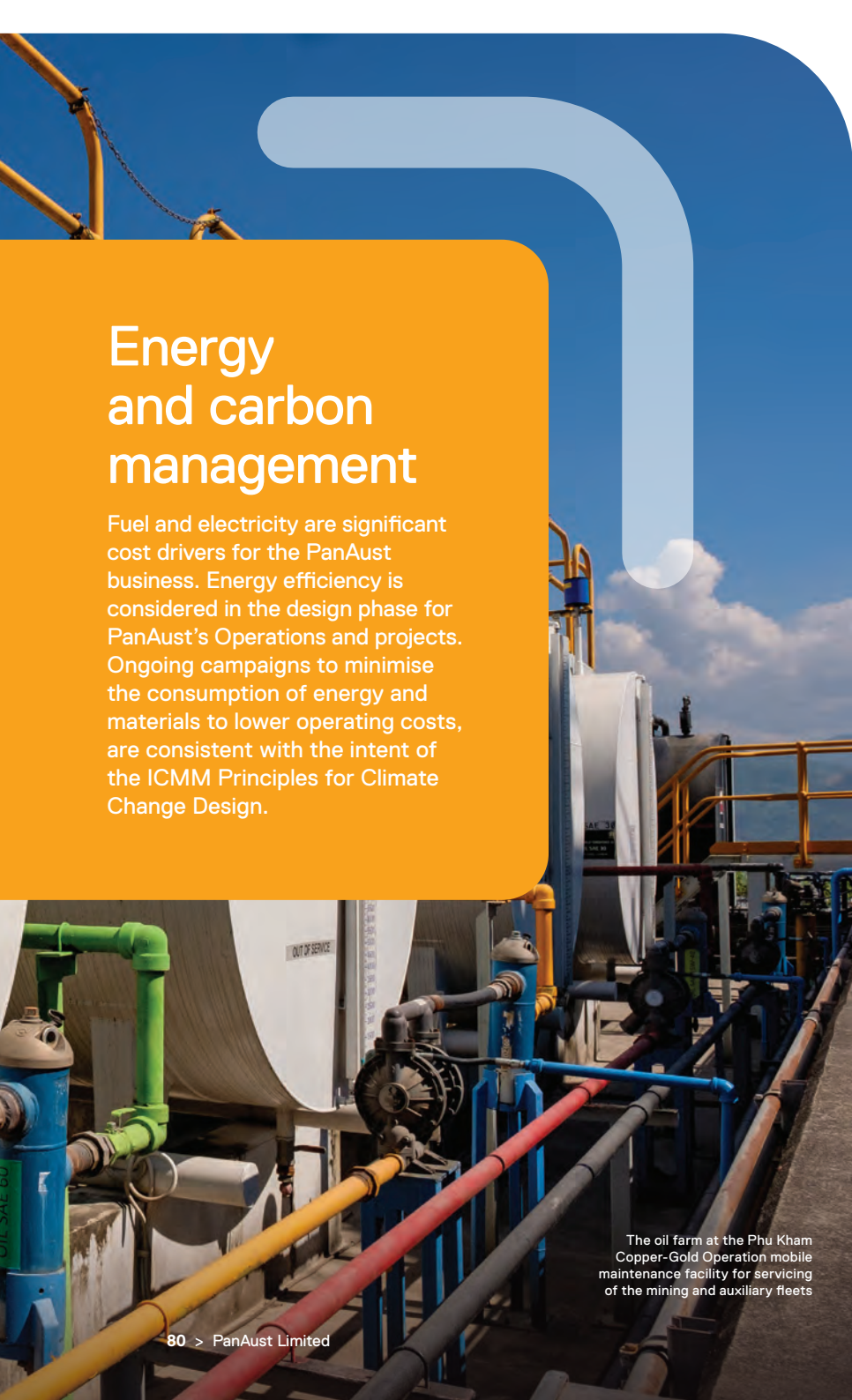
The redesign of the HLP and the drainage channel system was successfully completed in April 2021. Regular monitoring data confirms the discharge water now consistently meets the ambient water quality criteria. The Company is looking to bypass the wetland and directly discharge water into the Nam Gnone River. The wetland will remain in place as monitoring continues, with the long-term plan to rehabilitate the wetland and return it to its natural environment.

This outcome highlights how PanAust is striving to ensure it remains at the forefront of closure practices to provide the best possible outcomes for environments and surrounding communities at closure and beyond.

Rehabilitation of the GMO
heap leach pad north of the Phu
Kham Copper-Gold Operation

A pilot-model cattle fattening project on three hectares of rehabilitated land as part of Phu Bia Mining's Sustainable Livelihoods Program at the previous GMO Operation





Energy and carbon management

Fuel and electricity are significant cost drivers for the PanAust business. Energy efficiency is considered in the design phase for PanAust's Operations and projects. Ongoing campaigns to minimise the consumption of energy and materials to lower operating costs, are consistent with the intent of the ICMM Principles for Climate Change Design.

The oil farm at the Phu Kham Copper-Gold Operation mobile maintenance facility for servicing of the mining and auxiliary fleets

PanAust assesses and manages carbon and climate change risks through internal and risk management processes and systems. It recognises water risks associated with extreme weather events at its Operations and project sites.

The Company has previously changed its preferred port for shipment of its copper concentrate produced at its Phu Kham Operation from the Sriracha port in Thailand to the Hon La port in Vietnam. The reduced distance continues to reduce the Company's emissions associated with the burning of fossil fuel.

As a substantial consumer of energy, particularly in Laos, PanAust identifies annual efficiency programs to reduce energy requirements. Each year, teams across the Group identify and submit for selection and implementation, improvement projects to reduce energy and/or materials consumed. These projects are tracked to identify annual cost and greenhouse savings and associated payback periods.

In 2021, several operational efficiency programs were implemented that resulted in reductions in energy consumption and related greenhouse gas reductions.

The Mining team at the Phu Kham Operation implemented an efficiency program to reduce empty truck waiting times and reduce queuing at dumping locations including the primary crusher and balance truck allocations for shovel capacity. This project is believed to have reduced diesel use and therefore the Company's Scope 1 and Scope 3 greenhouse gas emissions. However, given the number of variables involved, such as varying distance and gradient the loads are transported, alongside reduced production levels during some months of the COVID-19 pandemic, it is challenging to create a level playing field on which to calculate these savings. The Mining team will continue to work on this challenge towards a more complete dataset and greater transparency in future Reports.

From July 2021 the SAG mill at the Ban Houayxai Operation process plant was retrofitted with a slip energy recovery (SER) drive that allows for the recovery of excess energy from the stator terminals to use in the plant. Based on an estimated energy saving per tonne of ore processed through the SAG Mill of 0.25kWh, this project resulted in a saving of more than 500 MWh over six months reducing the Company's Scope 2 greenhouse gas emission.

The Mining team at the Ban Houayxai Operation implemented a project to increase the payload size of the 777D haul truck fleet from 95t per load to 98t per load. This project reduced the number of truck cycles and use by 2,387 hours, saving more than 100,000 litres of diesel, dependent on multiple variables such as varying distance and gradient the loads are transported. This reduced the Company's Scope 1 and Scope 3 greenhouse gas emissions.

Energy consumption (terajoules)

Energy consumption	Terajoules ⁽¹⁾		
Material	2019	2020	2021
Diesel	2,628.2	2,409.0	2,064.4
Electricity	2,075.3	1,678.8	1,278.5
Petrol	0.9	0.7	1.6
LPG	7.6	7.0	6.5

Energy intensity (kilojoules/tonne ore and waste mined)⁽²⁾

Energy intensity	Kilojoules/Tonne		
Material	2019	2020	2021
Diesel intensity (kJ/t)	42,550	46,648	43,005
Electricity intensity (kJ/t)	33,599	32,509	26,634
Total ore and waste mined (Kt)	61,766	51,642	48,004

Greenhouse gas emissions (tCO₂-e)⁽³⁾

Greenhouse gas emission scope	2019	2020	2021
Scope 1 (direct greenhouse gas emissions) ⁽⁴⁾	215,221	203,224	172,278
Scope 2 (indirect greenhouse gas emissions from the generation of purchased electricity) ⁽⁴⁾	50,681	41,094	31,376
Scope 3 (greenhouse gas emissions from the broader project lifecycle including materials used, travel and transport)	206,885	175,972	138,167

1 Data updated across all years as a minor transposition error was identified in a number of conversion factors.

2 Includes Phu Kham, Ban Houayxai, Frieda River, exploration activities and offices.

3 Measured according to the World Resources Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol.

4 Emissions include Phu Kham, Ban Houayxai, Frieda River, exploration activities and offices.

Greenhouse gas emission intensity

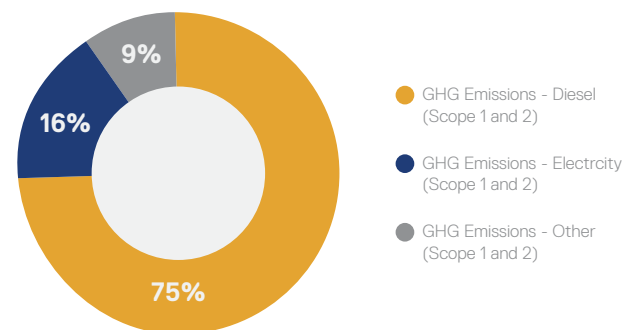
Greenhouse gas emissions	2019	2020	2021
Phu Kham Operation (tCO ₂ -e/t copper)	2.90	3.71	2.81
Ban Houayxai Operation (tCO ₂ -e/oz gold and silver)	0.08	0.09	0.09

In 2019 PanAust's Phu Kham and Ban Houayxai Operations' maintenance facilities retained their Caterpillar 5-star contamination control rating for the fifth and sixth year respectively. However, due to COVID-19 travel restrictions, the audits and ratings were paused for both Operations in 2020 and 2021. The audit to confirm the Caterpillar rating will recommence in 2022. Phu Kham and Ban Houayxai are two of only three Operations worldwide that have the maximum 5-star rating (as advised by Caterpillar).

The work that is in place to achieve and maintain this rating is significant for greenhouse gas emissions savings, particularly in terms of reduced materials consumption. Specifically, the efforts involved in achieving the maximum 5-star accreditation have led to reduced oil consumption and extended replacement/rebuild life of the mining fleet at both Phu Kham and Ban Houayxai.

Diesel consumption for mining and transport activities accounts for the largest component of PanAust's energy and greenhouse gas inventory. PanAust recognises that drivers play an essential role in delivering fuel efficient transport. The Company continues to implement its 'smooth drive' fuel efficiency program which rewards logistics drivers for driving in a manner that reduces fuel consumption.

2021 Scope 1 and Scope 2 greenhouse gas emissions by energy source



Komatsu PC2000 hydraulic excavator loading a Cat® 777D – 100 tonne rigid chassis dump truck at the Phu Kham Copper-Gold Operation





Dust and noise emissions

Mining and processing, the haulage of product and the transportation of goods to and from PanAust's sites have the potential to generate dust and noise emissions. PanAust recognises the importance of assessing and managing the attendant risks associated with these emissions.

Dust and noise emissions are the most common environmental concern for those living in the communities adjacent to the Phu Kham Operation. This is due to the proximity of the work associated with the construction of waste rock dumps and the Haul Road Anomaly open pit. While similar monitoring is carried out at the Ban Houayxai Operation, dust and noise are less of a concern for those living in the host communities given the Operations' comparatively remote locations.

Dust

The principal issue of concern relates to the visual impacts of dust particulates on vegetation and community infrastructure. Dust at the Phu Kham Operation is generated from activities on haul roads, the ore stockpile, blasting, drilling, and excavating and ore dumping at the primary crusher.

The Company works to limit dust generation by minimising land disturbance, carrying out road watering, using filters and dust suppression equipment on drills and conveyor systems and transporting product in covered vehicles.

An internal dust management forum and Dust Management Plan are in place at Phu Kham. A Trigger Action Response Plan (TARP) is used to manage acute dust emissions issues.

Ambient air quality monitoring is regularly conducted in communities adjacent to the Phu Kham Operations and haulage route. Personal exposure monitoring is also conducted in the workplace.


A dust monitoring report is provided on a weekly basis during the wet season and daily during the dry season to the Mining team to ensure adequate haul road watering is achieved in areas close to the Nam Gnone village which borders the Operation. Presentations of dust monitoring results are provided quarterly to local authorities, and monthly to village communities, to provide opportunities for feedback including grievance issues related to dust management at Phu Kham. There were no major air quality issues involving dust management in 2021.

In 2020, air quality monitoring stations were introduced to monitor ambient and operation-related air quality levels, with the program continuing in 2021. The four strategically located dust monitoring stations remain in place at Nam Mo, Nam Gnone, the Phu Kham process plant and the accommodation camp. Of the additional two monitoring stations located near the Nam Gnone village, one monitor has been moved closer to the village to assess air quality more accurately. The monitoring stations provide immediate notification, with the information able to be passed on to the Mining team and adjustments made accordingly as required. The monitoring stations continue to provide valuable data, which ensure dust mitigation strategies are effective for the Phu Kham Operation. Despite the controls being implemented, elevated dust levels remain an issue during the dry season influenced largely by regional burning across Southeast Asia.

Noise

The principal concern with noise relates to potential night-time impacts (including disrupted sleep and related fatigue) for those living in the villages close to the Phu Kham Operation. Noise at the Operation is primarily generated from mining equipment operating near the villages, haulage trucks reversing and the noise from the primary crusher.

The Company has worked to reduce the impact of noise on the villages adjacent to the new waste rock dump construction areas by limiting Operations in these areas to daytime only. The established noise monitoring program has continued in 2021. Of the four noise monitoring stations located adjacent to the Nam Gnone village and close to the north-west dump development area, one monitor has been moved closer to the village for more accurate readings. Like the air quality monitors, the noise monitors are also capable of providing immediate notification, with the information able to be passed on to the Mining team and adjustments made as required. Data collected from these monitoring stations continues to be reviewed by the site Environment team and is reported to the Mining team weekly to support the continuous improvement of noise abatement strategies. A presentation of noise monitoring results is delivered quarterly to local authorities and monthly to village communities, which provides an opportunity for direct stakeholder feedback and collective/personal grievances to be addressed in relation to noise management.



Phu Kham Copper-Gold Senior
Firefighter, Maiphan Syhongthong,
participating in a live fire drill

Health and safety performance

The Company's Zero Harm philosophy considers all workplace incidents and injuries preventable.

PanAust’s materiality process identified the health and safety performance focus areas for 2021 as:

- › health and safety response to COVID-19
- › safety performance
- › contractor management
- › fitness for work
- › security management.

Achieving business objectives, while keeping the workforce and host communities safe, is essential to PanAust’s success and is closely aligned with the Company’s Values. This approach was applied to the Company’s response to the COVID-19 pandemic and actions PanAust took to safeguard the health, safety and wellbeing of its workforce and surrounding communities (see page 88).

Through visible leadership, plans and actions, PanAust’s leaders are committed to promoting a culture of Zero Harm. Visible safety leadership is driven at all levels of the organisation. Recognising that a risk-aware workforce is fundamental to achieving strong safety outcomes, behavioural-based safety programs contribute to the Company’s remuneration incentives and drive continual safety improvement.

Leading-indicator programs prioritise visible safety leadership and include hazard identifications, job safety observations (JSOs) in the field, deep dive reviews, workplace inspections, planned task observations (PTOs) and safety training.

PanAust assesses and manages health and safety risks across the Group through its Safety Management System (SMS), which is consistent with ISO 45001. The SMS is based on a continuous improvement model of policy and standard setting; planning; implementation and operation; checking and corrective actions; and management review of performance against the model. The SMS is applicable across the PanAust Group, including all sites and locations where PanAust has operational control. PanAust attempts to influence the health and safety outcomes in locations and for activities outside its operational control (such as the inbound and outbound supply chain) through contractual arrangements and the Company’s contractor health, safety, and environment (HSE) standards.

Number ⁽¹⁾ and percentage of employees and contractors covered by a Safety Management System (SMS)

Site/Country	Number of employees	Number of contractors	Percentage (%) of employees and contractors
Brisbane head office/Australia	40	9	100
Phu Kham Copper-Gold Operation/Laos	1,419	598	100
Ban Houayxai Gold-Silver Operation/Laos	474	328	100
Commercial, Logistics, External Affairs and Business Support functions/Laos/Vietnam/Thailand	1,469	67	100
Exploration/Laos	124	206	100
Exploration/Myanmar	10	20	100
Frieda River Project/Papua New Guinea	14	5	100
Total	3,550	1,233	100

1 Average numbers for 2021.

In 2021 the Company continued the review commenced in 2020 of location-specific (Asia) safety standards, with the objective of elevating them to PanAust Group-level safety standards covering material safety risks.

PanAust has seven Cardinal Rules which are clear and simple instructions with which all PanAust employees must always comply. Cardinal Rules focus on those high-risk activities within the mining industry that have historically caused serious harm to people and are applicable to PanAust. One additional location-specific Cardinal Rule applies specifically to work undertaken by employees in Laos and relates to the potential presence of unexploded ordnances (UXO). Given the serious consequences for breaching the rules, the rules must be unambiguous, and all employees trained to fully understand their importance and have the necessary competencies to be able to fully comply.

PanAust’s Cardinal Rules include:

- › never operate any mobile equipment while under the influence of alcohol or drugs
- › never operate any mobile equipment unless specifically licenced, trained or properly authorised to do so
- › never maintain any equipment before first rendering it safe by isolation, unless specifically licensed, trained or properly authorised to do otherwise
- › never remove, modify, or bypass a Safety Protection Danger Tag or Lock unless properly authorised to do so
- › never work at heights greater than 1.8 metres unless either the work area is fully guarded to prevent falls or appropriate personal fall protection is worn
- › never enter a designated confined space unless properly authorised
- › never instruct another person to breach a Cardinal Rule.

Supplementary Cardinal Rule

- › never handle any item of UXO or related military objects unless qualified/licensed to do so.

The Company requires all employees, contractors, and visitors to undergo a safety induction prior to entering a PanAust-controlled site. The induction may include general safety and workplace-specific inductions as well as hazard identification and Take 5 training. The Company also facilitates several mandatory core safety training programs and specialist training for high-risk activities. Training needs are assessed based on location and a person’s role and are provided free of charge to employees and the contractor workforce. Contractor organisations are charged a nominal fee for non-mandatory training and specialist high-risk work training.

The general induction for Phu Bia Mining employees and contractors includes the following courses

Employee mandatory	Contractor mandatory	Employee and contractor location and role-specific
General safety induction	General safety induction	Open-pit induction
Cardinal Safety Rules	Cardinal Safety Rules	Processing induction
Workplace behaviour	Workplace behaviour	Mobile workshop induction
Fatigue management	Fatigue management	Material Safety Data Sheets
Human rights	Human Rights	Job safety analysis
Hazard identification	Hazard identification	Job safety observation
Take 5	Take 5	Working under a permit to work
New employee induction		Radiation safety awareness
Introduction to Lao/Falang culture		Dangerous goods storage
Fair treatment policy		Safe manual handling
PanAust Vision and Values		Workplace inspections
The PanAust Way		Excavation permit procedure
Geotechnical hazard awareness		Geotechnical hazard awareness
Geotechnical landslide risk management		Geotechnical landslide risk management

In Laos, the general induction training is designed and delivered internally by the Phu Bia Mining training department, while other specialist courses are delivered by the relevant specific departments such as the Fire and Emergency Services department for fire extinguisher training, or by the High-Risk Work Training department for specialist High-Risk Work licences. All training is available in both Lao and English.

Basic hazard identification training empowers and encourages the workforce to identify hazards as part of their normal work activities, fix them immediately (if it is within their ability to do so), or report the hazard/s to their supervisor on a 'hazard identification form'. Other processes for identifying hazards associated with a person's work include the Take 5 (also included as part of the general induction), job safety analysis development, workplace inspections, job safety observation and planned task observation processes.

Identified hazards are assessed using the PanAust risk management framework and controls are implemented to either eliminate the hazard in the first instance or to reduce the level of risk associated with the hazard. The hierarchy of controls is used as the basis of determining the most appropriate and effective controls to be implemented. Hazard identification is enshrined in the Company's Zero Harm philosophy outlined in The PanAust Way. The PanAust Way highlights no one is to compromise their own or someone else's safety by carrying out an activity they believe is unsafe. Furthermore, people are empowered to stop real or suspected unsafe activities and are also protected against threats or reprisals for reporting legitimate safety concerns.

In 2021, 19,997 hours of safety inductions and HSE training were completed at PanAust's Operations in Laos – a significantly lower number of hours than in 2020 (26,291 hours), reflecting the reduction in contractors coming to site because of COVID-19-related travel restrictions.

The Company's Group-level Incident Reporting and Classification Procedure is aligned with the MCA's guidelines for tracking and reporting health and safety statistics. The procedure outlines the process for the notification, investigation and reporting of incidents. PanAust uses the Incident Cause Analysis Method to determine the root cause of significant incidents (that is, actual or potential controlled incidents and/or actual or potential influenced incidents) and determine where corrective actions need to be undertaken to prevent recurrences of the incident.

The investigation and management of significant incidents is overseen by senior managers with operational oversight. Their role is to ensure the Group-wide implications of significant incidents and any emerging safety concerns are given appropriate consideration and action as part of the investigation.

This approach ensures findings and recommendations are shared across the Group where similar activities occur, or where different activities with similar risks occur. These findings are not limited to the incident and the affected people only.

PanAust's annual Safety Summit of senior management, managers and superintendents from both corporate and operational areas, high-potential employees, contractors and invited peer companies and safety specialists was postponed in both 2020 and 2021 due to the COVID-19 pandemic. The Company plans to reconvene the Summit in 2022 to progress safety leadership programs and identify emerging issues and safety hot spots for the business and refresh the Group action plan.

Other forums in place across the Group for communicating health and safety issues with the workforce include quarterly contractor workshops, monthly health and safety committee meetings and weekly toolbox meetings (convened by and held with site-based operational teams).

During 2021, individual departments held 3,280 health and safety-related toolbox meetings and 17 health and safety committee meetings with their workforce. Seven contracting companies attended the Company's only contractor workshop. The usual program of quarterly workshop was not run due to COVID-19-related travel restrictions.

PanAust's Operations in Laos and the Frieda River Project site are in remote areas where there is limited government infrastructure or systems to deal with complicated or severe medical emergencies. The Company's ability to manage medical emergencies is therefore vital to ensuring the health and safety of its employees and host communities. The Phu Kham, Ban Houayxai Operations and the Frieda River Project site are equipped with medical (including trauma management) clinics staffed by doctors and/or paramedics.

Phu Kham Copper-Gold Operation Senior Firefighter, Mr Toulor, observing a live fire drill

The trauma management clinics also undertake a range of occupational health services for the site-based workforce including health-related education and provide emergency services to the host communities.

Each Operation in Laos has dedicated Occupational Health and Hygiene (OHH) teams. Services carried out by these teams include pre-employment medical checks, functional assessments, drug and alcohol testing, medical consultations for non-work-related health issues and education programs relating to alcohol and drug awareness, paediatric health, family planning and good personal hygiene practices.

In early 2021, some monitoring programs and services were suspended due to potential COVID-19 exposure risks, with the teams focusing instead on COVID-19 control and surveillance programs. These activities included major programs for COVID-19 vaccination and PCR and rapid antigen testing. However, by late 2021 with the COVID-19 vaccination program well advanced, the OHH teams were able to resume their usual monitoring activities. Each Operation has in place an emergency response plan and trained, dedicated professional fire and emergency services teams and equipment. Teams complete training modules equivalent to an Australian Certificate III in Mines Emergency Response and Rescue.

PanAust has a well-established crisis management structure to deal with the strategic response and management of Company-wide impacts during a crisis. The system is tested regularly to ensure that team members are proficient in their roles. For more information about the Company's crisis management frameworks, see page 35.



A Phu Bia Mining employee completing a medical check at the Ban Houayxai Gold-Silver Operation's medical centre

Health and safety response to COVID-19

PanAust recognises that its people are important to the Company's ongoing success. This is underpinned by our Zero Harm philosophy. To this end, ensuring the health of the Company's employees and contractors during the COVID-19 pandemic remained a priority.

Response to the COVID-19 pandemic

In 2021 the COVID-19 pandemic continued to be a significant health and safety issue across the PanAust Group. The Company therefore maintained its proactive response to protect the health, safety and wellbeing of its people and continued to observe best-practice equivalent standards for COVID-19 prevention, detection and containment and strictly comply with all decrees, protocols, and guidance of the Lao National Taskforce Committee for COVID-19 Prevention and Control.

This included observing World Health Organization (WHO) standards for social distancing, mask use, and hand-washing protocols, daily mandatory temperature testing, comprehensive contact tracing, single-room isolation facilities and exceptional Company medical staff administering large volume PCR and rapid antigen testing and COVID-19 vaccinations to personnel.

As COVID-19 infections took hold in the wider Lao community in early 2021 PanAust increased its controls significantly, effecting a voluntary lockdown of its operational sites in April 2021 to avoid an outbreak in its workforce. Controls included a 14-day quarantine period for workers in single occupant rooms prior to returning to site, with PCR testing at day 2 and 13 of the quarantine period. Work rosters were extended to allow for 14 days in quarantine, 28-days' work on-site and a 14-day rest and recreation period.

In late April 2021, having satisfied the Government of Laos of its stringent COVID-19 infection controls, PanAust was granted a conditional exemption from the prevailing travel restrictions for its workforce to resume travel between Provinces. As the year progressed the pandemic continued to present both operational and personal challenges for the Company and its workforce, with some 2,256 personnel in lockdown at the Phu Kham and Ban Houayxai Operations in September 2021.

However, high workforce commitment to the Company's COVID-19 management practices allowed these impacts to be minimised and by September 2021 the Company had achieved a 96 per cent vaccinated workforce in Laos, with 4,499 employees and contractors vaccinated out of a total workforce of 4,684. Only a very small number of PanAust's personnel experienced a COVID-19-related hospitalisation during the year.

PanAust believes that strong uptake by personnel of social distancing practices, promoted via the Company's 'Hands Face Space' awareness campaign, and its program of PCR and rapid antigen testing, and vaccination were key contributors to this outcome.

At other PanAust sites outside of Laos including the head office in Brisbane and the Frieda River Project, a wide range of COVID-19 control measures continued in place to protect the health, safety, and wellbeing of its workforce. These included:

- › ongoing awareness and communication about COVID-19, its symptoms, and controls to prevent possible infection (i.e. hand washing, social distancing and wearing a face mask)
- › suspension of all non-essential business travel
- › working from home arrangements where possible.

There were no COVID-19 management activities in Myanmar upon its suspension of Operations in February 2021.

HEALTH AND SAFETY PERFORMANCE CASE STUDY:

COVID-19 PCR testing and vaccination program by PBM medical team

In May 2021, having received an exemption from the Government of Laos that allowed the Company's workforce to resume travel between Provinces, the Company increased its COVID-19 polymerase chain reaction (PCR) testing program and introduced a vaccination program. These programs for all employees and contractors at Phu Kham, Ban Houayxai, Ban Thouay and Langkhang, were implemented to protect its own Operations and support the Government of Laos to manage and control the spread of COVID-19 infection in the community.

Under this program, the Company's Medical team administered COVID-19 vaccination doses at designated Company sites. Individual vaccination records were logged by the Ministry of Health and registered in SAP.

The rollout of the vaccination program was accompanied by extensive communications, to ensure that personnel were made aware of and had a good understanding of the program. This included providing information to the workforce of how and when to access vaccine doses, how their personal information would be used and to allay workforce concerns regarding the side effects of vaccination.

By September 2021 the Company had achieved a 96 per cent vaccinated workforce in Laos, totalling 4,684 employees and contractors.

The vaccination program was rolled out in parallel with the Company's ongoing COVID-19 testing process.

The Company's COVID-19 testing process reflected its approach to managing transmission risk and included PCR (and later, rapid antigen testing) of employees, contractors, and visitors who came onto site, including as part of the quarantining. The testing protocol was kept under regular review to ensure that it was fit for purpose and responded to the pandemic's trajectory.

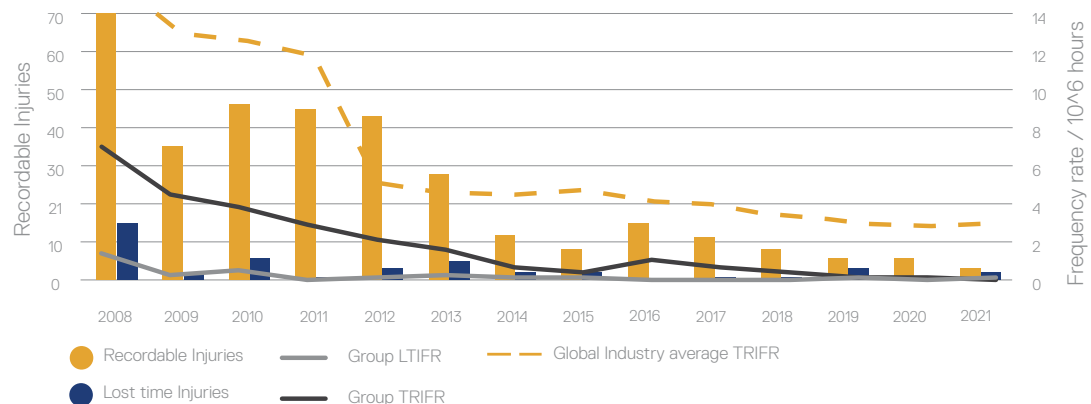
Phu Bia Mining Logistics driver, Mr Vilayphone Thiphimpha, checking the fuel level in a diesel tank prior to delivery to site

Safety performance

PanAust's total recordable injury frequency rate (TRIFR) and lost time injury frequency rate (LTIFR) continue to be significantly better than industry ⁽¹⁾ averages. In 2021, PanAust achieved an LTIFR of 0.15 (based on one million hours worked) from one lost time injury. This rate is 59 per cent lower than the Company's target of 0.37. PanAust's 2021 TRIFR of 0.22 was 85 per cent lower than the annual target of 1.54. At the end of 2021, the Frieda River Project achieved a record four years (1,482 days) total recordable injury free.

¹ ICMC Safety Performance Report: Benchmarking progress of ICMC company members in 2021.

PanAust's 2021 safety performance compared with industry averages ⁽¹⁾



Except for a slight increase in 2016, PanAust's TRIFR has been trending downwards since 2012. This is particularly commendable given the Company's increasing risk profile including entry into PNG and Myanmar and extending the in-house management of concentrate haulage into Vietnam.

PanAust Group recordable incidents (controlled work sites) ⁽²⁾

	2019	2020	2021
Employees			
Working hours	10,240,104	10,813,663	10,659,029
Fatalities	0	0	0
Fatal Injury Frequency Rate (FIFR)	0.00	0.00	0.00
High consequence work-related injuries ⁽³⁾	0	0	0
High Consequence Frequency Rate (HCFR)	0.00	0.00	0.00
Total recordable injuries	2	3	3
TRIFR	0.20	0.28	0.28
Lost time injuries	1	0	2
LTIFR	0.10	0.00	0.19
Occupational illness	0	0	0

	2019	2020	2021
Contractors			
Working hours	3,731,580	3,260,767	3,072,609
Fatalities	0	1	0
FIFR	0.00	0.31	0.0
High consequence work-related injuries	0	1	0
HCFR	0.00	0.31	0.00
Total recordable injuries	4	3	0
TRIFR	1.07	0.92	0.00
Lost time injuries	2	1	0.00
LTIFR	0.54	0.31	0.00
Occupational illness	0	0	0

	2019	2020	2021
Combined employees and contractors			
Working hours	13,971,684	14,074,430	13,731,638
Fatalities	0	1	0
FIFR	0.0	0.07	0.00
High consequence work-related injuries	0	1	0
HCFR	0.00	0.07	0.00
Total recordable injuries	6	6	3
TRIFR	0.43	0.43	0.22
Lost time injuries	3	1	2
LTIFR	0.21	0.07	0.15
Occupational illness	0	0	0

1 Industry average referenced from the ICMM Safety Performance Report; Benchmarking progress of ICMM company members in 2021.

2 Controlled work sites include data for both employee and contractor injuries and workhours; injury rates are the number of injuries for every million hours worked for the year.

3 High consequence work-related injuries are injuries where the worker, cannot, does not or is not expected to recover to their pre-injury health status within six months.

PanAust's recordable statistics include controlled activities and cover all work-related activities where PanAust can set safety, health, environmental and community standards and directly supervise and enforce their application. The statistics include contractors working at PanAust-controlled sites. All activities on PanAust-owned or leased sites regardless of who is carrying out the works is classified as controlled activities.

Categories that are tracked, but do not form part of externally reported statistics, include influenced and monitored activities where PanAust does not have direct control over the activities but recognises these activities carry a high risk of exposure to injuries or incidents to PanAust employees, contractors or to members of the public exists. For influenced activities, PanAust requires contractors to have sufficient management structures and systems in place and to directly supervise the works as outlined in contract conditions and contractor management activities. PanAust also provides additional oversight of influenced activities through regular audits and site visits.

Monitored activities are like influenced activities but the level of risk exposure to injuries or incidents to PanAust, contractors or members of the public is lower. Monitored activities require contractors to have sufficient management structures and systems in place to directly supervise works as outlined in contractor conditions and contractor management activities however the level of oversight and auditing by PanAust may be less frequent.

Categories of control

Controlled

- › all work conducted by employees, visitors, consultants, and contractors on an active PanAust-owned or leased site including Operations, private easement, and exploration sites irrespective of whether PanAust or the contractor provides direct supervision of work activities (PanAust sets standards, has a high level of workplace visibility, provides oversight, and monitors outcomes)
- › all locations external to a PanAust-owned or leased site where PanAust employees directly supervise or conduct work
- › transport of the workforce on a public road is considered controlled where the work is performed by a PanAust employee or an appointed contractor on a private charter arrangement exclusively on PanAust's behalf
- › all product transport via PanAust operated and maintained vehicles
- › controlled incidents are reported internally as well as included in PanAust statistics.

Influenced

- › work conducted in either public or private locations, external to controlled sites, where PanAust influences the contractor's standards but requires the contractor to have sufficient management structures and systems in place to directly supervise the work to an agreed standard (outlined through the contract). The contractor's work at these sites is undertaken exclusively on PanAust's behalf
- › a site where higher-risk exposure exists (either to PanAust or the public) and the reputational exposure is too great to consider the contractor as monitored
- › a site that provides additional oversight through regular auditing and contract owner visibility in the workplace to ensure the work practices being implemented consistently address the nature of the risk the contractor creates for PanAust

- › haulage of PanAust product and public road maintenance performed by a third-party contractor on a dedicated contract for PanAust in the host country of operation
- › contractors (controlled and influenced) providing a private transport service to their own workforce (from a host community to a PanAust Operation or site)
- › contractors transporting high-risk dangerous goods (in bulk) on PanAust's behalf
- › influenced incidents are reported internally as well as included in PanAust statistics.

Monitored

- › sites in public or private locations and external to controlled sites where PanAust monitors the contractor's performance but requires the contractor to have sufficient management structures and systems in place to directly supervise the work to an agreed standard with minimal contract owner presence
- › Offsite work may only be designated as monitored where a lower reputational risk exposure exists
- › haulage of PanAust product external to the host country of operation
- › monitored incidents are reported internally but are not reported in PanAust statistics.

Uncontrolled

- › activities where PanAust has no influence (commercial public transport services) beyond the ability to select the provider based on performance
- › uncontrolled incidents are not reported in PanAust statistics.

In 2021, the most common work-related injuries for both employees and contractors were lacerations, sprains and strains, and contusions. These injuries accounted for 67 per cent of all work-related injuries throughout the year.

The most common work-related hazards included light vehicle incidents, heavy vehicle incidents, isolation and lockout incidents and

ground control incidents. This list has been compiled by reviewing the risk registers from across the Group for hazards with a high-risk rating and from actual incidents where there was a potential for a high consequence injury to occur.

A key area of increased risk for the Company is the volume of third-party trucks on the ADB9 road in Laos. The ADB9 road is the main logistics route for the transport of personnel and consumables to, and the export of copper concentrate from the Phu Kham Operation.

There has been a significant increase in usage of the ADB9 road over the last two years, with third-party truck movements up to at times around 200 movements per day. This significant increase has resulted in the following issues:

- › frequent road blockages
- › degradation of the ADB9 road surface
- › numerous near misses with Phu Bia Mining vehicles
- › road accidents with Xaisomboun public being involved.

There have been many engagements with the Xaisomboun provincial government and the third-party companies to try and address the issues in an equitable manner and further work is continuing in 2022 to reduce the risk to the Company from the increased volume of traffic on the ADB9 road.

Apart from the COVID-19 global pandemic, the main occupational illness risk for employees and contractors is malaria. This is consistent with the site risk registers where infectious diseases such as dengue and malaria are identified as a risk to ill health. In 2021, there were no cases of occupational illness recorded across the Group. This can be attributed to actions undertaken in both PNG and Laos to control vector sources. Actions included the removal of containers from around site to prevent accumulation of standing water, mosquito fogging of camp facilities, use of Permethrin-treated mosquito nets and laundering clothing on-site with a Permethrin treatment.



Unloading of community medical supplies at the Frieda River Project site



Contractor management

The Company works closely with local contractors with little to no mining experience to improve their safety culture.

This approach is not without challenges and contractor management continues to be a high-risk exposure area. While there were no high consequence contractor injuries in 2021, the Company remains vigilant of the safety risks in this area and continues its focus on closing gaps in its contractor workforce's safety performance.

PanAust has a Group Contractor Management Standard that details health, safety, and environmental requirements for contractors and PanAust contract owners. The Company works with contractors to help them meet the requirements of the Standard by providing templates and direct access to supporting documentation on the Company's intranet and file-sharing sites. PanAust's contractor expectations are reinforced through training for contract owners and superintendents on how to implement the Standard.

Contractors are subject to regular audits of their facilities and activities. These audits involve a review of contractor risk registers, training programs and site compliance to safety management systems. In 2021, 13 audits of contractor HSE awareness were conducted, less than previous years due to COVID-19-related travel restrictions. Audits are scheduled for the year ahead to ensure proactive management of contractor performance. A key element of these audit is to ensure the participation of PanAust's contractor managers to consolidate their training and build stronger relationships with their contractors.

PanAust also supports Lao contractors by embedding maintenance and safety staff within larger long-term local contractor facilities that directly support the Operations. This approach has been in place for several years with encouraging outcomes – contractors have improved their maintenance practices and safety performance and focused on completing quality positive performance indicators. While the Company was unable to continue these activities in 2021 due to COVID-19 constraints, it introduced a training and certification scheme for mobile maintenance contractors in Phonsavan, which enables high quality local services to be delivered to regional PanAust exploration teams (see opposite).

However, in the three years prior to 2021 PanAust invested almost US\$500,000 into new workshops and upgrading contractor facilities located on PanAust sites. While there were no significant upgrades in 2021, contractor facility upgrades are planned for 2022 including new maintenance facilities at the Ban Houayxai Operations and workshop and warehouse upgrades to support the move to an owner-operator model for earthmoving contractors at both the Phu Kham and Ban Houayxai Operations.

In Laos, PanAust conducts quarterly contractor safety workshops as a forum for constructive two-way dialogue with PanAust's contractors. These workshops help contractors to determine their position on the safety spectrum and identify ways to improve their organisational safety culture. The workshops also provide an opportunity for PanAust to better understand the issues impacting contractor safety performance and how the Company can help them manage and mitigate these issues. The Company was unable to conduct contractor safety workshops in 2021 due to COVID-19-related travel restrictions and intends to resume these workshops in 2022.



The oil farm at the Phu Kham Copper-Gold Operation mobile maintenance facility for servicing of the mining and auxiliary fleets

Certification ensures safe, high quality, mobile maintenance support for PanAust exploration teams

For PanAust exploration teams working in remote areas, access to safe, high quality mobile equipment maintenance support is a challenge. In 2021 the Company addressed this operational constraint by certifying mobile maintenance facilities in Phonsavan, Laos to service its exploration teams in the region.

The certification scheme requires a physical inspection of the maintenance facilities to ensure compliance with PanAust's safety and operational standards and that necessary remedial action is taken. The Company also provides safety training for maintenance service personnel, including procedures such as pre-start 'Take 5' risk assessments and electrical isolation.

This support for local maintenance providers to improve their safety practices and operational capability makes an important contribution to the safety and efficiency of PanAust's remote exploration teams and their own safety culture.



Ban Houayxai Gold-Silver Operation Loss Prevention Officer, Mr Sengdeuan, performing blood alcohol content and temperature testing at the main entry and exit security gate during the COVID-19 pandemic

Fitness for work

The mining industry is an inherently high-risk business. A significant risk is associated with the operation of heavy equipment by a workforce working long rosters and shifts. Ensuring PanAust's site-based workforce is fit for work is crucial to helping prevent work-related injuries.

Being 'fit for work' means a person is physically and mentally able to carry out their work in a way that will not impact the safety of themselves or others. Fatigue, excessive alcohol use, drug use and unreported injuries or illnesses impact a person's fitness for work and pose risks to the safety of the workforce.

The workforce and site visitors have an interest in how fitness for work is managed due to the potential impacts on their own safety in the workplace. To help mitigate this risk, PanAust has robust process in place including the Group Safety Standard – Fitness for Work. The Standard outlines the minimum safe work requirements at PanAust sites and the programs that support these requirements. Additionally, the Company has an Injury and Incident Free (IIF) program in Laos that covers fitness for work and illustrates how existing safety systems and tools are interlinked and when applied correctly, minimise the potential for harm to people and the business.

The Company has a strict drug and alcohol policy that is mandatory for employees and contractors. This includes zero tolerance for illegal drug use, a 0.00 blood alcohol content (BAC) at all operational and exploration sites and a random drug and alcohol testing program. There is a process in place for the declaration of prescription medications staff may be taking and ample ability for self-testing of BAC prior to arriving at the workplace. Despite these controls, in 2021, there were 9 positive drug tests from 6,041 tests and 11 breaches of the 0.00 BAC policy, a much-reduced rate of testing from 2020 due to the smaller number of contractors engaged during the pandemic and the Company's own employees undertaking activities such as scheduled maintenance shutdowns.

All injuries and illnesses must be reported to the Company's medical clinics regardless of whether the person was injured at work, in one of the camp locations or while a person is on break. The Medical teams are then able to determine a person's ability to carry out their work duties in a safe manner. To encourage this reporting, the Company's has 24-hour medical clinics at its Operations in Laos and 24-hour access to medical support at its Frieda River Project site. Staff are encouraged to present at the clinics for free private consultations and treatment whenever they are feeling unwell. In 2021, there were 61,984 medical consultations in Laos and 655 medical consultations in PNG.

Managing fatigue is a critical aspect of being fit for work. PanAust has in place a comprehensive fatigue management system that includes the Group Fatigue Management Standard that covers the following topics:

- › fatigue risk assessments
- › roster and work hour oversight
- › work and workplace design
- › travel and transport assessments
- › accommodation, food and recreation facility assessments
- › education and information provision to the workforce.

In 2020 the Company rolled out the Caterpillar Driver Safety System (DSS) across its 777D mine fleet at the Phu Kham and Ban Houayxai Operations with the aim of reducing operator fatigue, which resulted in a 62 per cent reduction in fatigue events in the first 12 months. Given the success of this initiative, the Company extended the DSS to its concentrate haulage fleet in 2021 (see opposite).

Reducing driver fatigue in PanAust's logistics fleet

Considering the demonstrable success of the Caterpillar MineStar Detect DSS across PanAust's 777D mine fleet in reducing driver fatigue events – by 62 per cent in its first year – the Company approved the implementation of DSS across its logistics fleet.

Fatigue, in particular driver fatigue, is a serious safety concern for PanAust given the 24-hour cycle of its Operations.

In 2021, the DSS program was extended to the PanAust-owned logistics fleet of some 79 vehicles (including haulage trucks, personnel buses, and escort light vehicles), which operates between the mine sites and the logistics hub at Ban Thouay, Vientiane and the two ports in Vietnam and Thailand. The fleet transports people and hauls copper concentrate, fuels, and other general freight goods to and from the sites.

The DSS program involved the installation of cameras in the logistics fleet that monitored drivers' eye movements, alerting the driver of any microsleeps or concentration lapses as well as escalating alerts and footage to the logistics control room.

The implementation of this technology presented connectivity challenges. The logistics fleet could not rely on the Company-provided internal Wi-Fi network and instead utilised the mobile phone networks along the logistics routes.

The adoption of the DSS across the logistics fleet extends safety benefits of managing driver fatigue from the PanAust workforce to passengers, other road users and the communities that the fleet travels through.

Phu Bia Mining, Logistics convoy escort vehicle



Security management

PanAust is a member of the Voluntary Principles on Security and Human Rights (VPSHR) and has implemented clear guidance and procedures to manage the human rights aspects of security at its Operations and Projects.

Ban Houayxai Gold-Silver Operation,
Loss Prevention Department team
member conducting a vehicle search
at the camp's main gate

With the Company's ongoing presence in Laos, PNG, and Myanmar, PanAust's existing security processes, procedures and training will continue to be monitored for effectiveness and tailored to these jurisdictions.

PanAust has security staff assigned to its Operations in Laos. The Phu Kham and Ban Houayxai Operations are situated in Xaisomboun Province, which was historically the location of insurgent activities, largely arising from remnants of the Indo-China conflicts of the 1970s. While now stable, legacies of conflict remain. At times, regional security incidents have occurred near the Operations and around exploration sites. Periodically these incidents have resulted in temporary restrictions on operational and logistics activities.

Strict security protocols are established by the Company to pre-empt, and where required, respond to occasional regional security issues. Following the 2020 review of security protocols to ensure their currency for the Laos Operations and incorporate COVID-19 management during remote escort activities, PanAust continued the early and proactive initiation of these protocols. The protocols progressively restrict unnecessary remote work activities, workforce movements and operational activities based on proximity to operational areas and several risk factors. This is aimed at minimising the need for further response and/or the potential for conflict to impact the workforce.

The Lao People's Army (LPA) is required by the Government of Laos to have a presence at PanAust's Operations in Laos. In 2021, approximately 218 LPA personnel were assigned to Phu Kham and Ban Houayxai. The LPA's role is to support regional security external to PanAust's active working areas. They may also provide a presence alongside selected logistics routes and at Company exploration assets due to their criticality and/or vulnerability. This includes providing security escorts for remote work and along higher risk sections of the Company's transport and logistics route.

The Company works closely with the LPA through a Memorandum of Understanding (MoU) which outlines the Company's expected standard of behaviour and use of force expectations.

Prior to their deployment to the Company's sites and each time they are subsequently engaged, members of the LPA are required to complete a Company-provided induction program. The induction covers safety, the use of force as it relates to the laws of Laos, key components of the VPSHR underpinned by The PanAust Way, the Company's Values, and other behavioural guidelines.

The Company's Loss Prevention team perform unarmed access control, static security, and emergency response functions at its Phu Kham and Ban Houayxai Operations. Loss Prevention staff and contractors are required to complete training covering the VPSHR and appropriate use of force. The entire Loss Prevention team attended this training in 2021.

In 2021, 520 LPA and Loss Prevention employees and contractors completed the VPSHR training through their induction program.

2021 continued the downwards trend year on year in reported security incidents across the Company's Lao sites, with the lowest total annual incidents in eight years and no significant security incidents affecting the PanAust workforce or Operations recorded.

The Phu Kham Mine LPA continues to engage and pay incentives to local communities to construct, maintain and patrol fences at the site that exclude unauthorised entry to active mining areas.

In 2021, the Company also:

- › embedded LPA security with exploration and MRD teams working offsite in remote locations within the MEPA, with LPA superintendents at Phu Kham and Ban Houayxai now responsible for security functions for exploration and MRD activities. With experienced LPA personnel coordinating daily security activities, the Exploration and MRD teams can focus on identifying and confirming viable ore bodies in the MEPA; and
- › continued some key security-related audit activities in 2021 despite the pandemic, including of the internal gold room, random stock audits of the Phu Kham, Ban Houayxai and Ban Thouay warehouses and the (desk-based) quarterly petty cash and credit card expenditure audit. It was not possible however to conduct the usual annual port audit. While there were no further upgrades in 2021 to the Company's digital surveillance system following the 2020 changeover from analogue to enhanced digital cameras, further upgrades of this system are planned for 2022.

In PNG, private security contractors are used on an ad hoc basis as required. All security companies used in PNG are assessed for their ability to meet the PanAust requirements and commitments to the VPSHR. An MoU with the Royal PNG Constabulary that addresses the Company's obligation to the VPSHR is in place.



Phu Bia Mining auto electrical apprentice, Ms Nouyang, completing paperwork relating to a set task

Our people

PanAust acknowledges and values its multicultural workforce and the significant contribution its people make to its businesses' continued success.

PanAust's materiality process identified the main workforce focus areas for 2021 as:

- > protecting employee wellbeing, particularly in relation to COVID-19 response management
- > training and development.

In 2021, this was highlighted in the work the Company prioritised to protect the health, safety, and wellbeing of its people from the continuing impacts of the COVID-19 pandemic. The pandemic however did impact the Company's ability to deliver its regular people development commitments and programs throughout the year.

While PanAust's internal and external stakeholders did not identify diversity and inclusion as a material issue in its 2021 materiality review, the Company continued to actively encourage diversity and inclusion during the year and has robust programs in place, to support gender diversity.

The Company remained committed to its localisation strategy throughout 2021, in acknowledgement of the benefits in developing a skilled workforce that can contribute to national economic growth post-closure, bringing long-term lasting positive legacies.

Training and development also remained a priority, and key training programs to facilitate the attraction, engagement, development, and retention of a skilled workforce continued, albeit impacted by the COVID-19 pandemic.

The Company publishes and communicates a full suite of policies, standards and guidelines that provide employees with information about the practical application of the Company's Vision and Values. This includes an Employee Policy and The PanAust Way.

The Employee Policy and The PanAust Way, HR-related standards, inductions, training programs and the performance management cycle (including the annual employee development plan), help employees understand their responsibilities when working for PanAust. They also provide employees with an understanding of the Company's expectation of their behaviour when interacting with other employees and external stakeholders.

Employees by work location as at 31 December 2021

During 2021, as the COVID-19 pandemic continued, PanAust's workforce numbers remained relatively stable across its regional workforces, with casual and contractor labour decreasing slightly in Laos primarily because of travel restrictions, which caused the Company to use employees for work that might otherwise have engaged contract and casual labour.

Employees by work location as at 31 December 2021

Region	Total workforce	Total employees	Full time		Part time		Permanent		Fixed term		Casual	Total Contractors
			Male	Female	Male	Female	Male	Female	Male	Female		
Australia	44	35	24	10	0	1	22	12	1	0	0	9
Laos	4,998	3,544	2,805	739	0	0	2,601	650	204	89	255 ⁽¹⁾	1,199
Myanmar	36	16	11	5	0	0	0	0	11	5	0	20
Papua New Guinea	31	26	20	6	0	0	20	6	0	0	0	5
Thailand	24	24	16	8	0	0	7	7	9	1	-	0
Vietnam	2	2	1	1	0	0	1	1	0	0	-	0
Total	5,135	3,647	2,877	769	0	1	2,651	676	225	95	255	1,233

New employee hires and employee turnover

	Total	%	Gender		Age group <30		Age group 30 – 49		Age group 50 and over	
			Male	Female	Male	Female	Male	Female	Male	Female
Employee new hires										
Australia	9	0.25	8	1	0	0	8	1	0	0
Laos	347	9.51	257	90	119	74	131	15	7	1
Myanmar	1	0.03	0	1	0	1	0	0	0	0
Papua New Guinea	4	0.11	4	0	0	0	4	0	0	0
Thailand	0	0	0	0	0	0	0	0	0	0
Vietnam	0	0	0	0	0	0	0	0	0	0
Total Group Employees new hires	361	9.90	269	92	119	75	143	16	7	1
Total Group Employee hiring rate (%)	9.90	-	9.35	11.95	4.14	9.74	4.97	2.08	0.24	0.13
Employee turnover										
Australia	11	0.30	8	3	0	0	6	2	2	1
Laos	352	9.65	285	67	50	38	200	25	35	4
Myanmar	0	0	0	0	0	0	0	0	0	0
Papua New Guinea	5	0.14	5	0	1	0	4	0	0	0
Thailand	0	0	0	0	0	0	0	0	0	0
Vietnam	0	0	0	0	0	0	0	0	0	0
Total Group Employee turnover⁽¹⁾	368	10.09	298	70	51	38	210	27	37	5
Employee turnover rate (%)	10.09	-	10.36	9.09	1.77	4.94	7.30	3.51	1.29	0.65

¹ Note that the number of casual employees for Laos may include a small number of employees from Thailand and Vietnam.

Phu Bia Mining medical personnel administering COVID-19 vaccinations at the Ban Houayxai Gold-Silver Operation

Protecting employee wellbeing during COVID-19

PanAust's commitment to the wellbeing of its workforce is reflected in its values of integrity and respect.

In 2021, the Company's response to the COVID-19 pandemic included ensuring the health and safety of its people (see page 100), the health, safety, and wellbeing of its host communities (see page 46) and safeguarding its Operations against the impacts of COVID-19 (see page 89).

The Company therefore continued with many of the strategies for minimising infection risk that it implemented in 2020. The Company's extensive workforce vaccination program – which saw over 96 per cent of its workforce vaccinated – its rigorous quarantine and testing program and extended roster arrangements played a key role in minimising health and safety risks to the Company's workforce.

Importantly, PanAust's response also continued to focus on safeguarding the wellbeing of its people. Facilitation of travel and repatriation, flexible working arrangements, salary incentives, mental health initiatives, site roster changes and securing international travel arrangements were actions the Company took to protect the wellbeing of its workforce. As employees remained at site on longer rosters at Lao Operations to manage COVID-19 infection risk, the Company increased their access to social activities to promote wellbeing, in line with Government regulations and social distancing protocols. The Company-funded Employee Assistance Program, which is available to all employees, offers a wide range of counselling, mental health, and financial advice services.

The Company also continued to use both formal and informal communication channels such as Company-wide emails, news articles on PanAust's intranet, posters and presentations to disseminate important messages to the workforce, with the rollout of the vaccination program a key focus in 2021.

Importantly, given English is the second language to a significant portion of the workforce in Lao, wherever possible, messages were delivered/distributed in Lao and English to bridge the language barrier and ensure maximum comprehension.

Training and development

Training and development programs offered by PanAust contribute to the Company's long-term goals and diversity objectives and are considered as a mechanism that supports employee attraction, engagement, career development, and retention strategies. In 2021 the Company improved its online training content, which has had good employee uptake. Further details are on pages 104 to 106.

In 2021, the Company made improvements to its online training content for employees, which covers predominantly health and safety refresher and competency training.

This online delivery mode facilitates timely employee access to training that is relevant to their needs, significantly reducing the time and resources required to take workers offsite for face-to-face training and allowing self-paced completion of training modules.

As a result of convenience and ease of access and spurred by the extended roster periods of the pandemic that saw employees remaining on-site for longer than usual periods, there has been good uptake of online training among the Company's Lao employees.



Phu Bia Mining Medical Doctor, Dr Souliya Sotouky, conducting CPR training for Ban Thouay logistics facility personnel

Our people

Annual employee competency training

A core element of the Company's training and development strategy is its annual employee competency training. This training covers key skills for employees based at site and focuses on technical, leadership, role-specific and health and safety skills.

The completion of this training is mandatory, and employees must complete all training prescribed to them annually to ensure they are able to perform their roles safely and effectively. The Company regularly reports on completion of these annual training programs.

In Laos, an in-house training team delivers this competency training. A total of 103,612 hours of training was delivered in 2021, representing an average of more than 86 hours of training per employee.

2021 training by type

Training type	Hours delivered
Clerical and general work skills	12,022
High risk work, mining, processing, and mobile maintenance skills	50,993
Inductions and health, safety, and environment	19,997
Leadership development	5,752
Professional and technical skills	3,568
Trades and engineering skills	11,280
Total hours of training	103,612

Annual employee development plan

A significant part of the Company's training and development strategy is the annual employee development plan.

The annual process is designed to ensure employees in leadership roles have clear and actionable performance goals set for the year.

Managers and employees agree to goals at the commencement of the calendar year and meet periodically throughout the year to review performance before an employee is awarded a final evaluation score at the end of the calendar year.

The performance outcomes from this plan are directly linked to the payment of employee's short-term incentive bonuses and annual salary reviews.

Supervisory Skills Training Program

PanAust has established programs to develop an internal talent pipeline to support future Company growth and build a sustainable workforce.

Throughout 2021, the in-house training team in Laos focused on ensuring that high-potential Lao employees and team leaders completed the Supervisory Skills Training Program in addition to applicable technical/trades/engineering training relevant to their discipline.

The Supervisory Skills Training program is designed to support employees transitioning into more senior roles by providing existing team leaders, supervisors and high-potential employees with the training required for success in frontline leadership roles. Currently offered to Phu Bia Mining employees, the course – delivered in English and Lao languages – comprises 10 modules covering topics such as: leading work teams, performance counselling, problem-solving, conflict resolution, communication, and delegation techniques.

Participants are required to complete 80 hours of structured training, case studies and practical exercises. In 2021, 87 employees (the majority of whom were Lao-nationals and included two women) graduated from the program.

Inviting and encouraging Lao-national women to participate in the Supervisory Skills Training Program continues to be a priority for the business. Since inception, more than 100 women have graduated from the Program.

Accelerated Trades Training Apprenticeship Program

In 2021, the Company continued the accelerated pathway Trades Training Apprenticeship Program in Laos designed to compress the time required to complete appropriate certification from five to three years while maintaining training quality and outcomes. The intent of the accelerated program is to have new tradespeople available for the Company prior to mine closure. Apprentices engaged across five key trade vocations including mechanical, automotive electrical, fabrication and welding, fitting and machining, and electrical.

There was no intake in 2021 of new apprentices, however the program continued with apprentices who commenced in 2020 and prior years that are yet to graduate. The apprenticeship program was delayed by eight months during 2021 as the technical college the apprentices attend in Vientiane was closed due to COVID-19 restrictions.

Upon successful completion of the Program, participants graduate with an Australian TAFE Certificate III trade qualification in their chosen discipline, a Lao High Diploma of Technical Trade Studies, and a Certificate of Technical English.

In 2021 a total of 67 apprentices graduated from the program including 55 men and 12 women.



Localisation and regionalisation strategy

PanAust remains focused on the localisation of its workforce.

The term 'localisation' refers to the transition of a position previously held by an expatriate employee, to a host nation employee. The strategy enables national employees to increasingly operate, maintain and manage the Company's Operations and Projects. This has the added benefit of meeting one of PanAust's long-term legacy objectives to develop a skilled workforce that can continue to participate in, and help grow, the national economy post-closure.

The strategy relies on the training and development of Lao-national employees to meet the requisite skills and competencies required to perform a role to the desired level. It links into the annual workforce planning process which predicts workforce numbers and identifies expatriate positions targeted for localisation.

In 2021, localisation in Laos remained at similar levels to prior years dropping slightly to around 92 per cent. This remains close to the highest level of localisation the Company has ever reported and demonstrates the success of the systems and programs in place and the ongoing commitment to its localisation objectives.

While the intent is to continue to increase the localisation percentage annually, given the size of the business and most of the remaining non-localised roles are highly specialised in nature, further increases will be challenging.

Breakdown of employee source by role category (Phu Bia Mining) 2021

Site/Country	Expatriates (%)	Total Laos (%)
Executives	100	0
Management	61	39
Supervisory/Professional	14	86
Experienced/Qualified Skilled Labour	2	98
Skilled Labour	0	100
Semi-Skilled Labour	0	100
Unskilled Labour	0	100
Total	8	92

The Company also continues to see a year-on-year improvement in the number of Lao-national employees in supervisory, professional and management roles, as outlined in the below table.

Lao-national employees in supervisory, professional and management roles

Description	2019	2020	2021
Number of Lao-national employees in management positions Stratum 2 and 3	49	61	75
Number of Lao-national employees in supervisory/professional positions Stratum 1E and 1F	683	733	786

In 2021 the Company maintained its focus on transitioning professional, leadership, and management roles to Lao employees, with a total of 428 Lao-national employees promoted (a slight decrease on the 2020 result of 441 promotions). Most notably, 86 were promoted to senior technical or team leadership roles, 14 were promoted to superintendent level and two were promoted to manager level.

At the Frieda River Project site, all roles are filled by PNG-national employees.

The fact the Company has met or exceeded operational and sustainability targets since 2015 with a decreasing expatriate workforce, reinforces the view that PanAust's employee development programs are working. It provides confidence that this approach will achieve similar results in new jurisdictions.

PanAust's 2021 Employee Awards winners

PanAust's annual Employee Awards, established in 2009, recognises that the Company's success depends on the commitment of its employees to demonstrating the Company's values in their work.

The objectives of the Awards, for which PanAust's employees across all the Company's Operations, projects, offices, and sites are eligible, are:

- > to demonstrate commitment to the Company's values of high-level performance, respect for people, and commitment to sustainable development in countries of operation
- > to promote good practice, continual improvement, and knowledge-sharing in all areas of Operations
- > to recognise and reward outstanding individual and team initiatives and achievements
- > to foster a cooperative and supportive team spirit, where all employees are motivated to contribute to Company success.

The Awards recognise both individual and team performance, with categories including Employee of the Year, Team of the Year and Outstanding Leadership or Safety Excellence. Employees are invited via channels including email, toolbox talks and on-site noticeboards to enter their nominations across the Award categories, which are judged by a panel of senior management representatives.

In 2020 the Awards, usually held at a Gala Ball in Vientiane and a highlight of the year, were postponed due to COVID-19 restrictions. The 2021 Awards were held as a virtual event given the prevailing pandemic and recognised both the 2019 and 2020 winners.

The 2021 Award winners included:

- > **Yongyeelee Kongxue**
2019 Employee of the Year
- > **Somchai Kuexaileng**
2020 Employee of the Year
- > **Valmai Alefay**
Outstanding Leadership 2019
- > **Paolor Chongvue**
Outstanding Leadership 2020.



Phu Bia Mining employees at the Ban Houayxai Gold-Silver Operation celebrating the 2021 Employee Awards

Blast hole drill rig located
at the Ban Houayxai
Gold-Silver Operation

Company ownership profile

Subsidiaries listed below are main operating and services companies.

Subsidiaries

Name of entity	Country of incorporation	Class of shares	Equity holding ⁽¹⁾ (%) 2021	Principal activities
Inca de Oro S.A.	Chile	Ordinary	66	Exploration
PanAust South America Services SpA	Chile	Ordinary	100	Services
Phu Bia Mining Limited	Laos	Ordinary	90	Exploration and mining
Wuntho Resources Company Limited	Myanmar	Ordinary	90	Exploration
PanAust Services (Myanmar) Company Limited	Myanmar	Ordinary	100	Services
Frieda River Limited	Papua New Guinea	Ordinary	100	Exploration
PanAust Services Pty Ltd	Australia	Ordinary	100	Services
PanAust Services (Thailand) Company Limited	Thailand	Ordinary	100	Services
Saisana Lao Resources Sole Co Limited	Laos	Ordinary	100	Services

1 Holding and dormant companies not included in listing.

Assurance Statement

Materiality Counts Independent Assurance Report to PanAust

Scope of Work

Materiality Counts was engaged by PanAust to provide independent limited assurance of its 2021 Business Review and Sustainability Report (the Report) to the scope of work outlined below. The Report covers PanAust's Operations for the 12 months to 31 December 2021, unless stated otherwise in the text. The work was performed using Materiality Counts' assurance methodology to ISAE 3000, the *International Standard on Assurance Engagements Other than Audits or Review of Historical Financial Information*. Materiality Counts interviewed a number of personnel and reviewed relevant data and documentation at PanAust's Operations in Laos, namely Phu Kham and Ban Houayxai. Data collation processes were reviewed, original records sighted, spreadsheets interrogated and calculations re-performed.

The subject matter for the assurance consisted of the following:

- > **Social performance:** Grievance management and delays in compensation; Community health and safety impacts – minimising the community impact of COVID-19.
- > **Environmental performance:** Energy and carbon management – climate change (energy use and Scope 1 and 2 greenhouse gas (GHG) emissions data – reasonable assurance); Land rehabilitation and closure.
- > **Our people:** Employee wellbeing (COVID-19 provisions for the workforce).
- > **Health and safety performance:** Health and hygiene – COVID-19 response.

The criteria for the assurance consisted of the following three elements:

- > Provision of a balanced representation of material issues in the Report.
- > Accuracy of the performance data and statements in the Report.
- > Validity of the self-declared Global Reporting Initiative (GRI) Standards core reporting.

Materiality Counts' Independence

PanAust was responsible for preparing the Report. Materiality Counts was responsible for expressing assurance conclusions regarding the material issues detailed above in line with the scope of work agreed with PanAust. During the reporting period, Materiality Counts did not work with PanAust on other consulting projects. Materiality Counts is an independent consultancy specialising in materiality determination, report development and assurance, stakeholder engagement and strategy development.

Our Conclusion

Materiality Counts concludes that, based on the scope of work and related limitations, for the specified subject matter, PanAust's 2021 Business Review and Sustainability Report provides a balanced representation of the material issues concerning PanAust, reports accurate performance information and satisfies the requirements of the GRI Standards core reporting for the 12 months to 31 December 2021.

Key Observations

Based on the scope of work, and without affecting our assurance conclusion, Materiality Counts identified good practice in the form of comprehensive documentation of COVID-19 support for the workforce and community in Laos and PNG; evidence of proactive community consultation on land required for site activities and road construction in Laos; and efforts to calculate energy and GHG emission savings from energy efficiency projects, given the number of variables involved. Areas for improvement include consistent use of community compensation data from the Finance Department as the most accurate source; review of community event classification to distinguish planned land acquisition from grievances; annual reconciliation of actual land disturbance and rehabilitation (could not be assured); and documentation of Government of Laos decisions affecting site activities (e.g. land rehabilitation). Revisions have been addressed and work has commenced on areas for improvement.

Materiality Counts congratulates PanAust on its continued commitment to sustainability reporting.



Materiality Counts, 11 November 2022, Melbourne, Australia

Materiality Counts has prepared this statement for PanAust in accordance with the standard practised by members of the consulting profession performing this type of service at the same time. No other warranty, express or implied, is given by Materiality Counts as a result of the provision of this statement. To the extent permitted by law, this statement is provided for informational purposes only, without the right to rely, and Materiality Counts will not be liable for any reliance which may be placed on this statement by a third party. This statement may not be used by any third party without Materiality Counts' express written permission.





A view of the Ban Houayxai
Gold-Silver Operation from ETL hill



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