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SUPPLY CHAINS AND SYSTEMIC CHANGE:

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MARKET SYSTEMS
DEVELOPMENT FOR
DECENT WORK

THE CASE OF A MINING MULTINATIONAL IN LAOS

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This paper is part of the ILO Lab 'Business Models for Decent Work' initiative. It is the first in a series of case studies that seeks to generate new knowledge around a central research question: *How can a market systems lens be used by lead firms to improve supply chain sustainability?*

Lead firms are buyers who exercise power by coordinating production vis-à-vis suppliers. By definition, lead firms have direct contractual relationships with Tier 1 suppliers, but not with the many sub-tier suppliers below them, many of which are micro, small and medium enterprises (MSMEs). Globally, MSMEs are a key driver of social and economic development, making up 90% of worldwide businesses and employing two-thirds of the global workforce.¹ However, this segment of companies is where the worst working conditions are often found: In hidden, hard-to-reach MSME suppliers who also present a business continuity challenge. Research shows more than a third of all supply chain disruptions are the result of problems with indirect suppliers.²

This case study on the multi-national mining company, PanAust Limited (PanAust), was conducted as a joint initiative with the School of Management at RMIT University. The paper analyses PanAust's sustainability approach using a Systemic Change Framework in order to understand the company's effects on its stakeholders, particularly MSMEs.

1. SMEs and decent and productive employment creation, ILO 2015. Estimates range from 80-95% depending on the region.
2. <https://www.cips.org/supply-management/news/2011/november/beware-of-risk-at-lower-tier-suppliers/>

1. INTRODUCTION

Modern corporate supply chains are complex. The process of transforming raw materials into a finished product involves many steps, specialisations and often spans a number of countries. When a company's operations run to thousands of suppliers and employees and affects the livelihoods of countless communities, it presents a major challenge to ensure sustainable practices throughout the chain.

Viewing global supply chains through a market systems lens can offer new perspectives on:

- The potential for commercial operations to make a long-lasting and large-scale contribution to improving social and environmental outcomes; and
- The evolving business strategies being deployed by lead firms, their decision-making processes, and how embedded they have become within the fabric of sourcing countries.



WHAT IS A MARKET SYSTEM?

Systemic problems require systemic solutions. Many of the issues facing the world today may seem intractable, but concerted - and increasingly, collective - action can shift the status quo and bring about concrete social and business benefits. However, this requires a new approach, one that moves beyond individual companies to consider the wider ecosystem in which they exist.

A market system is the inter-connected network of actors and factors that interact to influence core supply chain performance.³ The operating environment is divided in two:

- **Supporting functions.** A range of context- and sector-specific functions that inform, support and shape the quality of supply chain performance; such as information, skills, infrastructure, finance and access to markets.
- **Rules and Norms.** The legislative and regulatory environment, including policies, voluntary standards and social norms that guide day-to-day attitudes and conduct.

Supporting functions and rules are carried out by a wide range of organisations, from other businesses to financial institutions, trade associations, regulators and government agencies.

When certain rules or functions do not operate well, a market system 'constraint' is created that reduces the effectiveness of the system and harms people involved in the chain. A systemic change takes place when there is a lasting improvement in one or more constraints.⁴

Systemic change initiatives are designed to shift business strategies away from transactional and temporary 'band aids' towards transformational and long-lasting change⁵. More than just an analytical lens, a market systems approach provides a playbook to guide action – a way to both conceptualise and execute ways to move the needle on deep-rooted 'systemic' issues, helping companies navigate the choppy and changing waters of *who* to work with and *how* to collaborate.

This application of a market systems approach shares many similarities to the 'ecosystem of shared value' concept, as described by Kramer and Pfitzer (2016). Their *Collective Impact* movement shows how businesses face societal conditions that create multiple barriers which are beyond the control of any single company: Companies must therefore foster and participate in multi-actor coalitions to achieve financial success in a way that also yields societal benefits.⁶

4. Source: Helvetas
5. Market systems thinking emerged from industry-wide applications of the value chain approach, which was initially conceived as a way of helping companies examine all activities they carry out to create value for their customers, and see how they are connected. To-date, the market systems approach has mainly been used by international development projects.
6. <https://hbr.org/2016/10/the-ecosystem-of-shared-value>

This case study focuses on the mining company PanAust (see Box 2). It zooms in on their flagship copper-gold operation, the Phu Kham mine in the Lao People's Democratic Republic (hereafter, Lao PDR).

PanAust's sustainability initiatives cut across a broad range of outcome areas, such as:

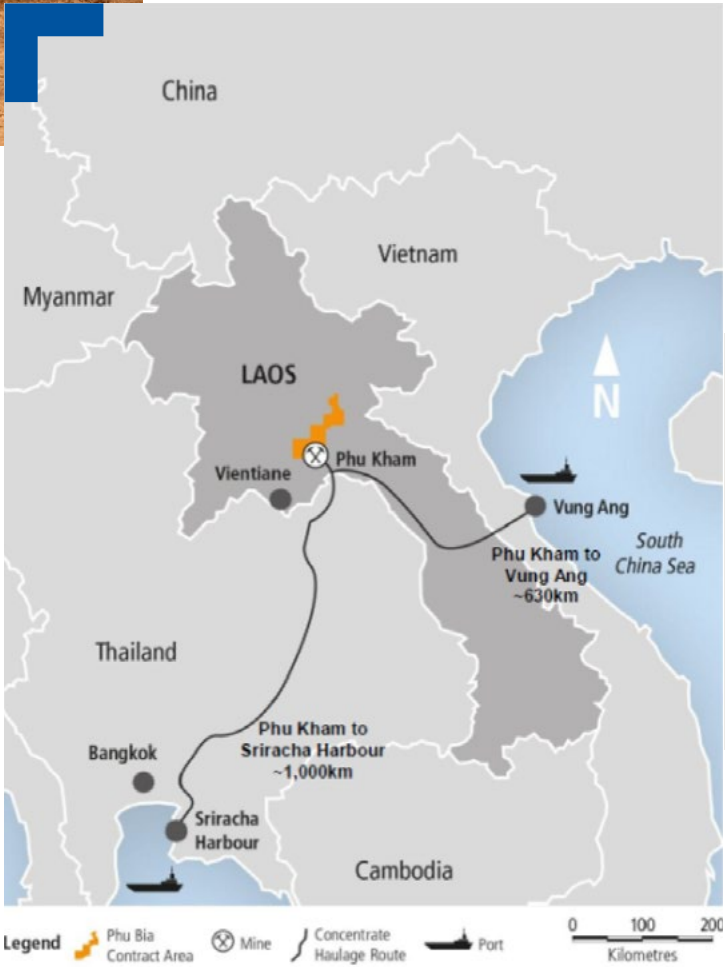
- **Economic development**, including upgrading local suppliers and women's economic empowerment
- **Social development**, including community health, girls' education, infrastructure, enterprise development and access to financial services
- **Corporate governance**
- **Health and safety**
- **Workforce training and development**

Environmental sustainability is another area of critical importance for PanAust, but is outside the scope of this paper, which focuses on social impacts.

The aim of this case study, however, is not to cover any one activity or outcome area: The detail of these can be found in the company's comprehensive annual *Business Review and Sustainability Report (2018)*. Rather, it is to examine how PanAust's overall approach to sustainability is being integrated as a core business *strategy*, and how this is operationalised internally to have an impact on its network of external stakeholders.

A Systemic Change Framework is applied retrospectively as the lens through which to analyse the effects of mine operations. Our focus is on how a subsidiary of a global mining company can lead to lasting changes in the micro, small and medium enterprise environment in a developing country context.

It should also be noted that this case does not represent the official ILO opinion or in any way can be seen as an endorsement by the ILO of PanAust practices.⁷



The **Lab** is a global initiative run by the ILO Enterprises Department and funded by the Swiss State Secretariat for Economic Affairs. The Lab (www.ilo.org/thelab) generates and applies knowledge on how a market systems approach can be used to further decent work outcomes.

3. 'Operational Guide to the Making Markets Work for the Poor Approach', Volume 2 DFID & SDC. The market systems concept is best summarised in "New approaches to old problems: Systemic change as a unifying objective", *Journal of Enterprise Development and Microfinance* Vol. 27 No. 1 March 2016

7. This also profiles the current sustainability strategy of PanAust and historical actions. It does not take a forward-looking view as to prospects for sustainability and the future direction of the company under private ownership. Indeed, it should also be noted that as of early 2019, many of the sustainability leads who the researchers directly engaged with in writing this case had left the company.



A SNAPSHOT OF PANAUST

PanAust is a mid-tier copper and gold producer in Laos, with pre-development and exploration assets in Laos, Myanmar and Papua New Guinea. It is an Australian incorporated company that is privately owned by Guangdong Rising H.K. (Holding) Limited.⁸ The company employs almost 4,000 people based in Laos, Papua New Guinea, Australia, Thailand and Myanmar, with corporate headquarters located in Brisbane, Australia. PanAust aims for a sustainable business model that is based on astute, responsible growth, and has been recognised for its sustainability and reporting performance at a number of international awards.⁹

In 2018 PanAust saw record production performance at its Phu Kham Copper-Gold Operation in Laos, where extractions of copper concentrate increased to over 76,000 tonnes. The company's turnover that same year was \$767 million, resulting in a profit after tax of \$74.5 million.

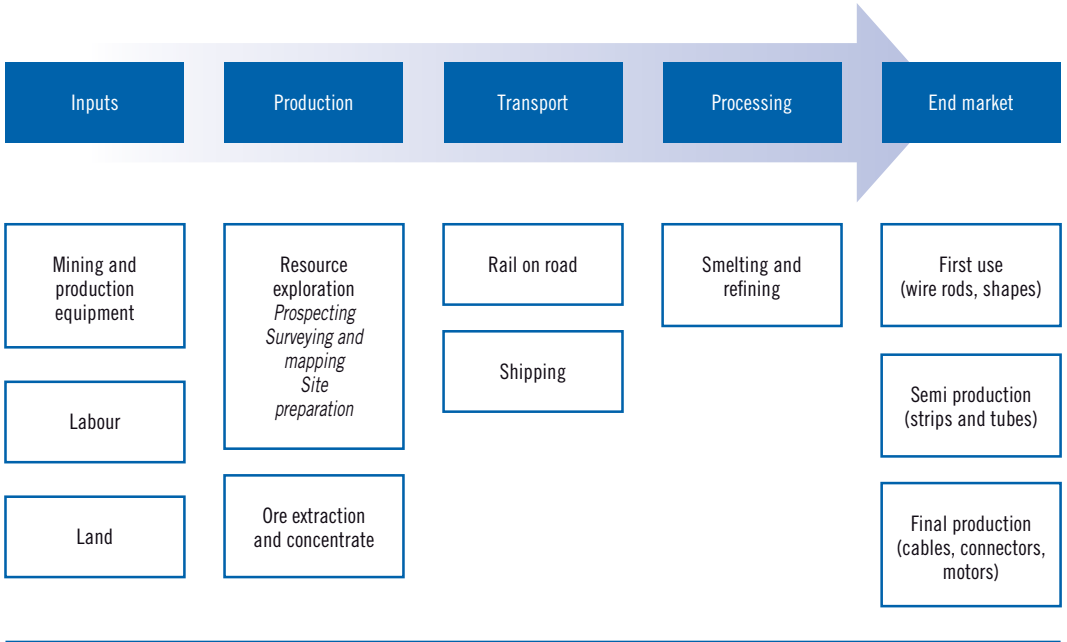
STAKEHOLDER THEORY

Stakeholder theory is an approach to business ethics and strategy which says that companies should be managed not just for their shareholders, but for wide stakeholder groups.¹⁰ Businesses therefore need to balance shareholders' financial interest against the interests of other stakeholders such as employees, customers and the local community.

2. THE GLOBAL MINING SUPPLY CHAIN

Figure 1 models the simplified steps to turn copper deposits into end products.¹¹ The supply chain structure of the mining industry differs greatly from other manufacturing sectors, making it much harder to differentiate between supply chain 'tiers'. In commercial-scale metal extraction the supply chain tiers are more integrated, and more dependent on an array of supporting functions such as infrastructure. PanAust's Phu Kham Copper-Gold Operation is managed by Phu Bia Mining Limited, a Lao registered company, 90% owned by PanAust with the Government of Lao PDR owning the remaining 10%. For the sake of this case study, Phu Bia Mining can be considered as Tier 1 of PanAust's supply chain.

Unlike global supply chains that rapidly shift their operations based on a fine sensitivity to market conditions – such as 'fast fashion' business models – mining requires greater capital expenditure with longer timeframes for returns on investment, meaning companies are often more rooted in their areas of operation.



Adapted from the European Copper Institute and the Duke Center on Globalisation, Governance and Competitiveness

Figure 1: The Copper Supply Chain

8. Guangdong Rising H.K. (Holding) Limited is a wholly owned subsidiary of Guangdong Rising Assets Management Co. Ltd (GRAM). GRAM is a Chinese state-owned company regulated under the State-owned Assets Supervision and Administration Commission, the People's Government of the Guangdong Province in China.

9. <https://panaust.com.au/sustainability>

10. <http://stakeholdertheory.org/publications/>

11. Gold is a precious metal whereas copper is a base metal, meaning its associated processing and end-market (sale and end-use) steps are different.

3. PANAUST'S STAKEHOLDER NETWORK

Stakeholders are the individuals, groups of individuals and/or organisations that are affected by or can affect a company's activities.¹² The stake that each of these different individuals or groups has in a particular aspect of business operations will vary and may change over time. This underlines the importance of stakeholder engagement throughout the lifetime of a mine operation, which is a key element of responsible business standards to which PanAust adheres, such as the International Council on Mining and Minerals and the IFC Performance Standards.¹³

PanAust seeks to build collaborative and transparent relationships with key stakeholders. The company holds ongoing dialogue through informed consultation and participation with governments and host communities close to its operations, projects and activities – which enables PanAust to understand issues and identify opportunities for those directly and indirectly affected by its business activities.¹⁴ The universe of stakeholders for the Phu Kham Copper-Gold Operation is mapped in Figure 2, below, showing actors across the layers of core business (internal to PanAust), extended enterprise (direct contractual relationships), and the wider operating environment of interested parties.¹⁵



Figure 2: PanAust's network of affected stakeholders

12. AccountAbility

13. IFC: Today, the term "stakeholder engagement" is emerging as a means of describing a broader, more inclusive, and continuous process between a company and those potentially impacted that encompasses a range of activities and approaches, and spans the entire life of a project

14. <https://panaust.com.au/stakeholder-engagement>

15. Adapted from James Moore's ecosystem layers in the 'Death of Competition'

4. TOWARDS SYSTEMIC CHANGE

The Lab's Systemic Change Framework is set out in Figure 3 below. PanAust's approach to sustainability was not designed using the Systemic Change Framework. Indeed, as will be explained below, the company's sustainability strategy is best thought of as emergent: Being iteratively built and adapted around the local context, rather than the result of a particular plan or approach. Nonetheless, the Framework provides a means of understanding the multiple layers of impact of mine operations on the local stakeholder network and vice versa. It poses five questions through which to understand the PanAust business model and the decision-making behind it:

- *What's the opportunity?* The potential to bring business benefits by contributing to solving social problems.
- *Where's the constraint?* Understanding the market system function or rule that is under-performing.
- *Why does the constraint exist?* Unpacking issues with the incentive and/or capacity of organisations to perform the function or rule.
- *Who will work together to overcome the constraint?* Identifying stakeholders who will be collaborators.
- *How will they solve it?* Mapping out concrete strategies and activities.



Figure 3: The Systemic Change Framework

1) What's the opportunity?

PanAust follows a long-term value creation strategy, meaning that social dimensions are integrated into their business objectives. Sustainability initiatives are not just implemented to fulfil a corporate social responsibility mandate, but are embedded throughout core business activities to respond to a complex operating context. Indeed, the company is incentivized to pursue social and environmental causes mainly because it sees concrete business benefits in doing so.

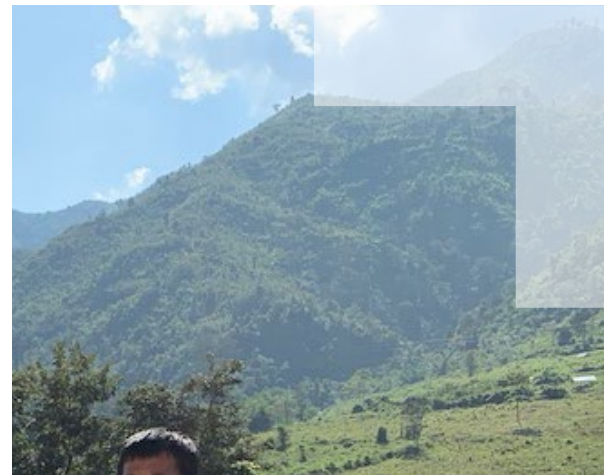
Supplier Development. First, addressing sustainability issues allows PanAust to better manage the **risks** associated with mining operations in Laos. Ensuring safety throughout the site, from facility operations to technical equipment and maintenance, avoids staff injuries and major incidents, which can often amount to large expenses and massive delays in operations. By reducing the amount of safety injuries and fatigue incidents, for example through training and knowledge building, the business can be more cost-efficient and increase its productivity. PanAust has also worked to extend the safety culture beyond core employees into suppliers and contractors. During a quarterly contractor safety workshop, Phu Bia Mining provides advice for a day on safety standards and performance and helps introduce good practices which are tailored to the respective levels of sophistication of suppliers.

Local Recruitment. Second, PanAust has set specific strategic visions that allow the company to better **manage costs** over time, as well as contributing to local human capital development. In mining operations employing an expatriate workforce often comes at a premium due to lack of local talent. PanAust has deployed a 'localisation' strategy to train the national workforce, enabling the business to reduce its operating costs by hiring less expatriates and trading more with local suppliers. This is important as the Phu Kham Copper-Gold Operation deposits are low grade, which means that for every ton of ore extracted, less than 1% contains copper or gold. Controlling costs is critical to ensuring a long-term return on investment.

Social Contracts. Third, building **mutually beneficial relationships** with government structures and local communities creates a social license to operate, while solving real needs. This was particularly important at the Phu Kham Copper-Gold Operation as there are two local villages on the doorstep of the mine site. From a community per-

spective, PanAust brought a level of funding and expertise that did not previously exist in the area. The Company's Community Development fund programs, for example, supports health and education in the villages surrounding the mine site by building schools and health clinics. The procurement of local goods and services, particularly to supply the large Food and Beverage (F&B) needs of the mine site, has had a catalytic effect on demand for local agricultural products and exposed producers to international quality standards. Many community-level activities are planned together with local authorities, creating a corporate social contract where PanAust, the government and community members all have obligations to each other for long-term community prosperity. From the company perspective, deepening relationships can avoid the obvious pitfalls of conflict with local communities that have plagued other companies' resource extraction activities and can contribute directly to the bottom line - avoiding costs of sourcing goods and services from sub-quality local suppliers, or expensive imports in a landlocked country such as Lao PDR.¹⁶

Brand Asset Management. Lastly, pursuing



16. Shared Value

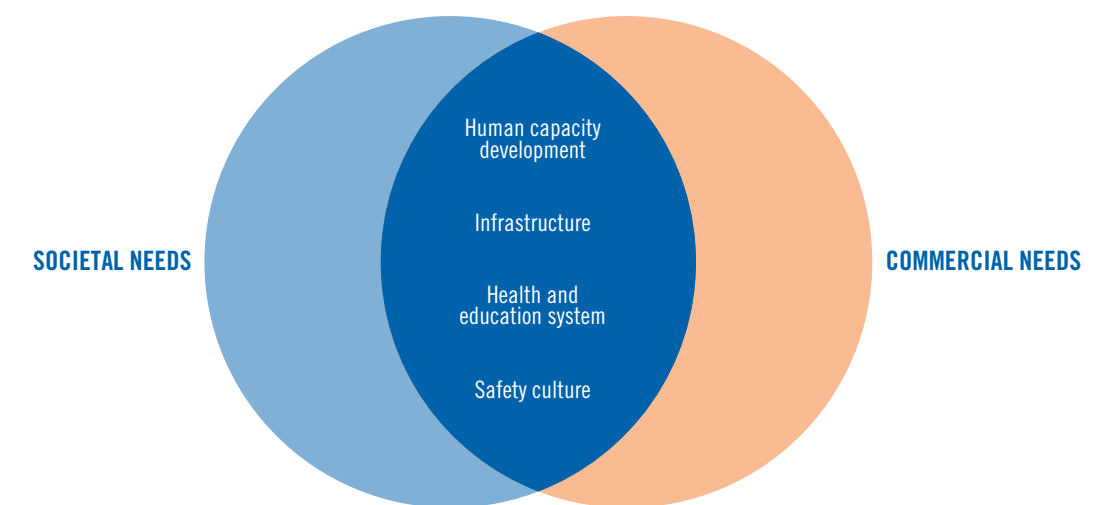


Figure 4: Spheres of Societal and Commercial Needs

a social objective and thus leaving a legacy behind can be beneficial for a company's **corporate reputation**, both regionally and worldwide. PanAust used to be a public-listed company before it was brought into private ownership. Under the previous ownership in particular, the company's sustainability record was critical as recent trends in ethical and socially responsible investment mean that investors look at the company's 'Environmental, Social and Corporate Governance' (ESG) record before investing. The policies Phu Bia Mining has implemented in Lao PDR can also be used to promote opportunities elsewhere. For example, PanAust is trying to increase its chances of operating in Papua New Guinea, so they brought relevant stakeholders including the government of Papua New Guinea up to the Phu Bia Mining sites to show them how the company operates.

A company's motivations to engage stakeholders may be varied but the key is in finding a business imperative to act in a way that responds to real societal needs – rather than seeing sustainability-related activities as purely a cost to be incurred.

“Experience in the mining industry tells me that you can't force a project on a community, they have to be prepared...you have to make sure they understand what's involved in the project, you have to listen to their genuine concerns, and where possible, address those concerns so that it's an acceptable outcome for them. There are examples...where projects have been forced on communities and you never develop the social licence to operate. There is unrest, blockades, protests, those sort of things. So...you're foolish to ignore the feedback you get from the people who live in that area because at the end of the day our mine development will have a big impact on them and you should try and make it a positive impact not a negative impact.”

PanAust Executive

This way, businesses can create real value: Not by having social and commercial objectives side-by-side, but by recognising their inter-dependence (see Figure 4).

2) Where are the constraints?

While Lao PDR halved its national poverty rate over the past decade, it remains one of the poorest countries in South East Asia with 23% of the population living on less than a \$1.90 a day.¹⁷ Economic growth in the country has been rapid, but poverty reduction is lagging behind GDP and inequalities are increasing, in particular between urban and rural areas.¹⁸

When PanAust operations in Laos first began in 2008, the situation was very challenging. One PanAust Executive described start-up as operating with a 'blank sheet of paper'. Phu Kham is located in a remote part of Laos, which was at the time under security restrictions. Living conditions in the local communities were often poor, with most occupying small houses built with bamboo and tin roofs.

There was little well-maintained **infrastructure**, with the lack of accessible roads inhibiting access to more lucrative markets both in Vientiane, the capital city, and internationally. As a result, there was limited industry and **market demand**, with just a few rubber plantations and a small river crossing.

In the region surrounding Phu Kham, many people had limited **technical skills** and

competencies in areas such as engineering. Both nationally and locally there was an absence of a **safety and health culture**, and few proper medical facilities to react and cure people. Additionally, although opening a business in Laos is relatively easy, micro and small businesses had varied obstacles to manage their operations due to cashflow issues and delays in payment from their suppliers, demonstrating a clear lack of **access to finance** for companies. Furthermore, the **business environment** was not conducive due to instances of smuggling and corruption, which hindered the trade of goods and services and created a high level of **informality**. With regards to formal **rules and regulations**, while the government had some expectations about what they wanted to see in terms of mining practices there were few rules to govern what mining operations should or should not do, meaning the regulatory environment was largely non-existent, and the authorities lacked enforcement capacity. Access to basic public services was limited.

These multiple market systems constraints can be mapped on a visual of under-performing functions and rules, grouped around the core supply chain:

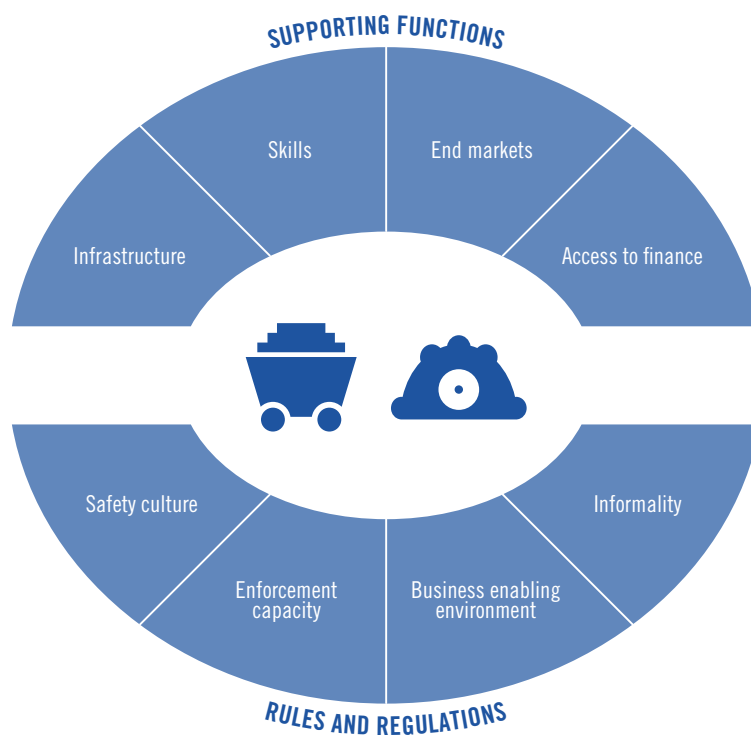


Figure 5: Under-performing functions and rules in the market system:

17. <http://povertydata.worldbank.org/poverty/country/LAO>

18. UNDP



3) Why does the constraint exist?

These market constraints had various underlying causes, which were often interlinked. For example, local communities cultivated agriculture land unproductively because of a lack of access to high value markets and due to poor infrastructure in the region, which was itself related to the lack of government funds assigned to the establishment and maintenance of roads, schools and medical facilities.

Zooming in on skills, the lack of access to adequately qualified local staff initially proved a constraint when trying to hire through the national workforce. This was connected to issues in the education system, and particularly the quality of technical and vocational colleges and their ability to train their students using the latest technologies. In order to bridge this gap and meet their localization strategy, PanAust invested heavily in workforce training and development through a mix of formal classroom and on-the-job training to build the capacity of national employees in technical engineering and geology skills, as well as the English language. Another challenge emerged when, even as hard technical skills improved, many staff had no training or experiencing in managing people – limiting their ability to move into supervisory roles. PanAust therefore introduced training on change management, presentation skills, how to manage people, and how to manage performance.

4) Who will work together to overcome the constraints?

Companies cannot – and often should not – move the needle on social issues by themselves. Not only are many of these issues outside of the core expertise of businesses, acting alone risks 'crowding out' those permanent local actors – such as national and local governments and community organisations – who do have the real mandate to lead on solving social issues. Part of the market systems approach is to work out whose job it is to perform the function or rule – and help them perform it better.

Collaboration is particularly important to ensure a positive legacy of the mine on social and economic outcomes. A mine closure plan is currently being developed with local authorities to address two major points: What

“The difference when we arrived is that we had very large groups of foreign expatriates almost running the mine site and we had a lot of local people unexperienced doing a lot of lower level work. Now 10 years later, a large group of our local people are supervisors, managers, they are crew leaders, they are doing complex roles, parts of our laboratory is Lao people so the difference is that when we first started is that they were at the lower level now they are at every level of the company and that's the big difference and we are quite proud of that. It took a lot of time. Now when we will close the mine, a lot of these people will go off and work in another company, being managers and executives etc. It is a big difference.”

Phu Bia Management

will be done with the physical assets, and how will livelihoods continue to be supported when PanAust, as the main buyer of many goods and services, departs. Here, PanAust has worked to build the capacity of local government from the outset of mine operations, recognising that the community development vision may be a long-term goal – but several pieces of infrastructure will likely be transferred to the government immediately after the company leaves the country, such as warehouses and training centres.

While the company built schools and medical facilities, as well as training the necessary national staff to manage these entities, it accompanied these initiatives with capacity building projects with the government to enable it to better manage more sustainable development projects in the future with the help of competent consultants. Additionally, PanAust's current apprenticeship program is held at the Lao-German Technical College in Vientiane. The company provides occasional finance support and develops technical materials, which are then owned by the Lao-German technical college. The expectation of working together is that these materials and curriculum will be owned and carried forward by the government and potentially by NGOs in future.

LOCALISING SUPPLY CHAIN OPERATIONS

The majority of supplies to the Phu Kham Copper-Gold Operation come from outside the country due to the weak manufacturing capabilities in Lao PDR compared to its neighbours. Nonetheless, PanAust seeks to source locally where possible and to develop the capacity of local producers.

Aside from the occasional use for urgent or ‘rush’ jobs of small service providers, such as local electricians, and companies trading hardware materials like paint, by far the largest impact has been on food suppliers.

The mine sources approximately \$1 million worth of agricultural product annually from the surrounding communities, including vegetables, fish and chicken. When operations first started there was very little commercial agriculture, but this has grown over time – alongside improvements in product quality. PanAust has run education initiatives around better farming practices and animal husbandry to, in the words of a company executive “improve skills so that we can be the beneficiaries of those skilled people ourselves”.

5) How will they solve it?

The essence of strategy is making choices.¹⁹ Even by working collaboratively, some constraints – particularly those related to cultures or norms – can take decades to overcome.

PanAust did not set out with an all-encompassing strategy. They began operations in Lao PDR resolving issues “in front of their noses” and were very much focused on build-

BREAKING DOWN BARRIERS BETWEEN BUYERS AND SUPPLIERS

PanAust thinks of itself as an ‘in-sourcing’ company. This means that the organisation prefers not to use many layers of suppliers or contractors as far as possible, attempting to bring most functions in-house, even for tasks that might be considered low-skill. Unlike other mining companies, PanAust even employs its own housekeepers, cooks and cleaners rather than using an outsourcing company. The logic is that employees are easier to influence for process and procedure adherence. In a national context where there is a low level of health and safety awareness the company can better track whether safety and policies are really being put into practice.

Where contractors are used, they are ‘drawn into’ core business offers such as health and

safety trainings to ensure PanAust is not creating ‘islands of privilege’ among supply chain tiers.²¹ There are two large contractors in the Phu Kham Copper-Gold Operation for highly specialised tasks such as the dam wall maintenance. They provide equipment and labour to such service providers, but fully embed them in PanAust operations, and PanAust has spent a lot of time training them over the years. They have access to all of the same training that employees get.

The contractors are expected to have the same safety standards as PanAust standards, and so are trained in corporate policies and procedures. PanAust has sometimes even embedded supervisors into the operation to help them bring their safety standards up.

Systemic change does not mean solving every problem, but instead it is about focus on a strategic portfolio of interventions which, taken together, can positively transform the operating environment for both companies and their stakeholders.²⁰

ing towards a commercially viable site. This meant using and developing the resources and facilities that were available to them, including harnessing the local MSME potential.

Over time, these sets of activities grew into an emergent strategy that relied on an un-

19. Shared Value Leadership Summit, 2018

20. Some types of labour issues may not be suited to being addressed through a systemic approach, and need to be solved through public action alone

21. Many corporate responsibility, compliance and capacity building initiatives have focused excessively on Tier 1 suppliers or their own employees, at the expense of lower-tier suppliers. This can create ‘islands of privilege’ where just a few high-performers stand out in a sea of sub-standard suppliers



derlying philosophy of inter-dependence not independence, both in terms of supply chain service provider tiers (see Box 5) and collaboration across internal business units.

For example, creating a safety culture as part of PanAust’s operations in Laos has not been easy, but has involved nearly all departments to achieve the ‘Zero Harm’ safety objective. Human resources raised awareness on health and safety around the organisation, the community development department communicated with the local communities and health and safety practices have been integrated through all the companies’ internal and external operations. The company has had to educate not only the employees and contractors but also the surrounding population living in villages, on risk awareness and health and safety processes, teaching them the risks behind certain behaviours and the ultimate adverse outcomes they can bring. A zero-tolerance policy has greatly improved health and safety outcomes since the beginning of PanAust’s operations in Laos. If an employee does not comply with a health and safety process, he or she is not accepted to work. Thanks to these processes, PanAust’s total recordable injury frequency rate is significantly better than industry averages.²²

Phu Bia Mining can quickly escalate local issues to draw on group-wide PanAust expertise and action. For example, there was an issue with fatigue among heavy vehicle drivers who were on the road 10 hours a day on long routes. In response, PanAust set up a working group to bring in multi-disciplinary contributions across human resources, safety and health, mine operations, site services who provide accommodation, and the logistics who operate road freight network. They developed a group-wide fatigue standard, got training documentation prepared, and commissioned an external expert to assess the conditions provided for accommodation, shift rosters and diets and to look at some of the technology used to monitor fatigue. The work happened over an 18-month period, and it has now evolved to the point where the company has recorded a dramatic reduction of fatigue incidents in the workplace. Such outcomes have led PanAust to believe that controls that have been put in place in Phu Bia Mining are effective. The role of the working group is therefore not to manage the day-to-day, but to look at the high-level group-wide approach and make sure the company has an integrated approach and can focus resources on dealing with issues.

This holistic approach mirrors an organisational culture where different departments support sustainability objectives, rather than being siloed into one business unit. For example, mining operations support the objectives of the community development group and vice versa, leading to more collaborative and team-based solutions.

Finally, in lieu of pluralism in the union movement in Lao PDR – meaning that there is a single Trade Union mostly comprised of civil servants and employees in state enterprises – PanAust also set up an internal workplace representative committee to act as a platform for employee voice.²³ This committee meets quarterly with representatives elected for a term of two years. In the words of PanAust, “the Committee provides a mechanism by which both the Company and employees can constructively raise and resolve issues when differences arise”. According to the Charter and Operational Guidelines for the committee, the aim is to raise and resolve issues pertaining to safety, performance & productivity; whilst ensuring the company is adapting to any changes in the safety environment and worker needs.

23. For more on industrial relations environment in Lao see the ILO’s Decent Work Country Programme https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-phnom-penh/documents/genericdocument/wcms_446091.pdf

OVERCOMING REAL AND PERCEIVED BARRIERS TO GENDER INCLUSION

Women make up 19% of the total PanAust workforce, and 19% of all management roles across the company²⁴. While this compares favourably to benchmark female participation rates in mining companies in Australia (13.7%), PanAust management felt that more could be done.

As a result, PanAust undertook a ‘deep dive’ to first look at how many women were actually applying for roles. PanAust found that for some roles such as housekeeping or administration-type positions, there are plenty of female applicants. Even for mining operations roles there was a good percentage of female applicants.

In areas such as logistics, however, which moves metal concentrate from the mine site out to the port, there were very few female applicants. Company regulations meant that drivers need to have a heavy vehicle license and because they drive on public roads, applicants also need to have mechanical skills. Culturally, these were requirements that very few women in Lao PDR met.

The company then set about finding a work-around solution, in the words of PanAust Executive:

“We looked at it and we said “Okay, what can we do here around the licencing? Is there an opportunity to bring women in without the licence? Can we fast-track some licencing if we put some sort of intensive training in place? What can we do with the government around this?”

So that all happened and then we said, “Okay, perhaps we need to target the message to women”. We had some women within the logistics department who were in other roles, so we thought, “How about we look at them first?” Because they know the department, why don’t we see how they feel about driving the truck? That might give us a bit of a gauge”. And so, the overwhelming feedback from them was, “Well, yeah. I’m interested”... There’s (now) presentations out in the local communities specifically targeting women. So, this was all about bringing female drivers into the operation.”

As a result of that, we were immediately able to ...find (another) opportunity. We were looking at introducing a light vehicle fleet of coaster buses at site that didn’t require the same level of licencing. So, we were able to bring in a whole group of drivers as women, train them up on the coasters so that they get the time that they’re required to then go to attain their licence to drive the trucks.

So, some of the barriers that we had in place that we could see as the real barriers actually didn’t exist. There was this perception women don’t want to drive trucks. They don’t want to work at night. Once we looked at all of that and said, “They’re practicalities we can work around,” it was really successful.”

FEATURE PAGE: MINING AND THE SUSTAINABLE DEVELOPMENT GOALS (SDGS)

“Mining is a global industry and is often located in remote, ecologically sensitive and less-developed areas that include many indigenous lands and territories. When managed appropriately, it can create jobs, spur innovation and bring investment and infrastructure at a game-changing scale over long time horizons. Yet, if managed poorly, mining can also lead to environmental degradation, displaced populations, inequality and increased conflict, among other challenges.”

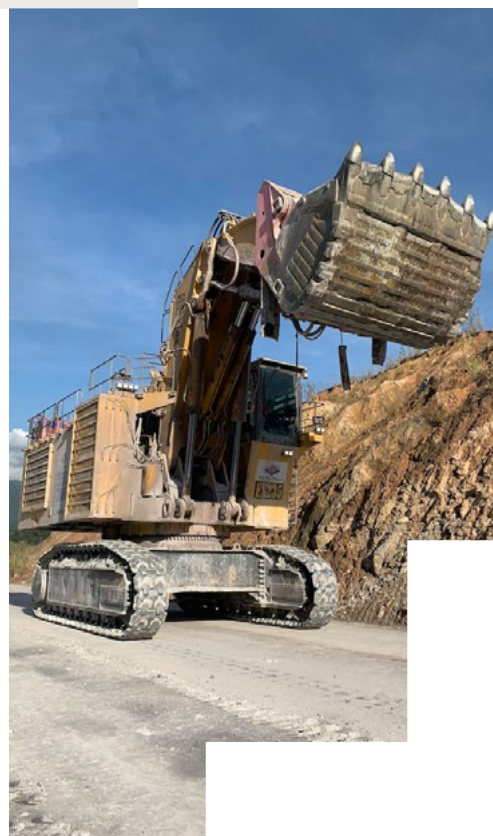
Mapping Mining to the SDGs

The importance of decent work in achieving sustainable development is highlighted by Goal 8, which aims to “promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. Mining can generate new economic opportunities for citizens and members of local communities, including jobs, training, and

business development relating to mining operations, associated service providers, and create new local economies linked to the mine.

During the case study research the core business operations of Phu Bia Mining were mapped relative to their alignment to SDG 8, including:

- **Catalysing direct and indirect employment.** Phu Bia Mining employs more than 3,000 staff, 91% of whom are Lao nationals. Some supplies come from the local communities, which has generated jobs and a new generation of entrepreneurs and companies, building small shops, farms and restaurants to respond to the demand generated by the company.
- **Skills development.** Metal extraction requires high core skills such as geology, metallurgy, engineering, few of which ex-



isted in Lao at the outset of operations. Through on-the-job and targeted training and a dedicated localisation programme to reduce dependence on expatriate staff, many Lao nationals who are currently working for Phu Bia Mining have the requisite skills and competencies both to perform their role, and to lead to future careers at home or abroad.

- **Train local suppliers how to meet corporate supply chain standards.** Exposure to Phu Bia Mining has led to Lao suppliers accessing new skills and knowledge, for example Phu Bia Mining taught general consumables and fruits and vegetables suppliers how to use management software and provided business ethics training.
- **Make bidding and opportunities available to local contractors.** Due to the complex nature of metal extraction, Phu Bia Mining has global suppliers from over 50 countries. However, the company works closely with local contractors who have little to no previous mining experience to provide access to commercial opportunities. Phu Bia Mining developed a local logistics contracting from the ground up, and introduced a new programme to recruit and train over 200 Lao drivers.
- **Provide safe working conditions:** Through the company’s zero harm philosophy, during 2018 alone more than 21,000 hours of safety inductions and health, safety and environment training was completed at Phu Bia Mining Operations in Laos. In 2017, no significant incidents or fatalities took place in any of PanAust’s controlled work sites.²⁵

The aim of this paper is not to conclude about whether the impact of mine operations is net positive. However, in the interest of

balance it is important to note that in addition to making a contribution to SDG 8 as outlined above, there are a number of potential negative impacts, many of which can be considered inherent in the presence of any large-scale mining operation. These include the loss of access to land, water quality and sediment build up.²⁶

5. CONCLUSION

The case of PanAust shows how business and social objectives can be pursued side-by-side over the lifetime of a mine operation. On the one hand, PanAust has clearly become deeply embedded into the social and economic fabric of a previously-underserved community. It has created multiple employment and income-earning opportunities, including building up whole markets around mine operations for food suppliers. On the other hand, the sheer scale of company impact has created a dependency problem: What happens when the lead firm leaves? Phu Kham Copper-Gold Operation is due to shut, and while many of the upskilled local workers will be able to find employment elsewhere, even abroad – creating remittance income – the small businesses and producers will not be as mobile. Metrics such as the very low staff turnover rate at Phu Kham, holding steady at 4-5% year on year, are impressive, but also speak to an issue of a lack of other local opportunities and limited economic diversification. As one PanAust Executive noted, *“there is going to be a gap...at the end of closure”*.

The extractive industry operates over very long investment time horizons, often in remote regions of the world that are lacking in human and economic development. This case

24. Panaust. 2017. *Sustainability report*.

25. A significant incident is a Level 4 or 5 impact from the PanAust Consequence Table (<http://www.panaust.com.au/sites/default/files/u12/PanAustConsequenceTable.pdf>) .

26. <https://panaust.com.au/managing-environmental-challenges>

“And even after our mines close in Laos, you’ll then have a population of people who can either work at other mining projects in Laos or in South East Asia...Those people will travel. They will go and work in Australia. We have Papua New Guineans working in Laos for us. They’ll work in Africa. So, they’re actually remitting cash income back to their home economy, and I think that’s what we’ll see in Laos. I’m also aware in Laos we’ve had people who have progressed through the leadership training program, have left our company but are now working with other organisations and they are the beneficiary of the skills development that comes, the confidence that comes trying to manage people or budgets or work programs. So, that’s another aspect that I think is a positive legacy because of the workforce training and development that occurs.”

PanAust Executive

study adds further weight to a claim in a recent FSG report that “companies must tie community prosperity to the present long-term needs of the business in areas such as a qualified labour pool, capable suppliers, and well-functioning community infrastructure”. However, our research is limited to one mid-sized multinational business in a single sourcing location.

Further research is required in particular to understand the lasting impact on stakeholders post-mine closure. The market systems approach places strong emphasis on the sustainability of any systemic change initiative: That is, the market capability to ensure that relevant, differentiated goods and services continue to be offered to and consumed by the poor beyond the period of an intervention.²⁷ When considering sustainability, the unit of analysis should not be the lead firm itself, but the wider system in which it is embedded. The market systems framework can therefore be usefully applied to the business models and strategies of other lead firms, both in mining and other sectors.

27. Op Guide V1

ANNEX A. METHODOLOGY

Research for this case study took place over a 4-month period from October 2018 to February 2019. It involved:

1. An initial desk review of key PanAust company documents in the public domain.
2. A review of over 40 non-public internal company documents including the mine closure plan, enterprise risk logs, committee meeting minutes and deep dive studies.
3. In-country interviews with the management teams of all key business functions in the Phu

Kham Copper-Gold Operation, alongside a sample of stakeholders including local schools and communities.

4. Seven interviews with corporate headquarters staff in Brisbane, Australia.

Data was analysed qualitatively using an inductive approach. Interviews were recorded and subsequently anonymised and transcribed. Data was then organised against the five key steps of the Systemic Change Framework. Descriptive coding was used to highlight blocks of text relevant to groups in the stakeholder ecosystem (employees, suppliers, communities, contractors and government) and social outcomes (incomes, workplace safety etc.).

The paper was written by ILO Lab. Ines Bentchikou and Matt Ripley were the lead authors, working together with co-author Dr. Maria Beamond from RMIT University. We are very grateful to Phu Bia Mining and PanAust Limited teams in Lao PDR and Brisbane, Australia, for providing their insights into the company’s operations and business model, as well as to Stephen Hartrich for providing a peer review of the document.



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